

Development and Validation of a Self-Sexualization Scale

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Abstract

The purpose of the study was to develop a scale to measure self-sexualization. There was a need for a new scale development, due to the lack of consistency in defining and operationalizing the concept, issues of validity inherent in the existing scales, and shortcomings in measuring the possible dimensions underlying the concept. The study population was young adult women between 21 and 29 years old, living in the U.S, and who were familiar with the American culture. The concept of self-sexualization was defined based on the definition of sexualization by APA (2009): the four conditions of sexualization by APA were adapted to define self-sexualization. A mixed-methods research design with nine steps was used to gather validity evidence in the process of scale development. Three content experts evaluated the test blueprint which included the definition of self-sexualization. Based on the expert's feedback on the test blueprint, a test specification and assessment items were developed. The assessment items were reviewed by three individuals who presented the study population before sending them to experts for review. Three experts reviewed the test specification and assessment items. Then, the revised items were reviewed by 10 individuals who represented the study population through interviews. Prior to moving into a qualitative method, a pre-test interview was conducted with four individuals. Internet based survey encompassing assessment items was pilot tested among the members of Amazon MTurk. From the field test, data from 601 participants were collected and was split randomly into two groups. With the first set of 301, a series of CTT, CFA, and IRT analyses were conducted to select items for the final scale. The structure of the final scale was verified using data from the remaining 300 participants.

The four scales assessing the four dimensions of self-sexualization resulted and produced empirical evidence for the scales. The first scale comprised of six items assessed the degree to which a woman has favorable attitudes toward sexual objectification of herself. The second scale comprised of five items assessed the degree to which a woman relates her sexual desirability to her self-esteem. The third scale comprised of six items assessed the degree to which a woman equates her physical attractiveness with being sexy. The fourth scale comprised of nine items assessed the degree to which a woman contextualizes her sexual boundaries at bars, clubs, or parties. Suggestions on how to use the scale, limitations of the study, and avenues for future research were discussed.

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CHAPTER 1: Introduction

This chapter provides the general context for the research topic, self-sexualization. The widespread phenomenon of self-sexualization is presented and unaddressed research problems are identified. Statements concerning the importance of addressing these unanswered research problems are also included.

Background

In Western society where “sex appeal has become a synecdoche for all appeal” and sex appeal has become greatly valued (Levy, 2005, p. 30), active and public exposure of one’s sexuality is common, especially among young women (Nowatzki & Morry, 2009). This active exposure of sexuality includes a range of behaviors such as women wearing low cut cleavage-revealing tops, crop-tops that emphasize midriffs, or tops with exposed backs that enable exposure of undergarments if worn. This active exposure is not limited to adult women. Every day wear for many adolescent girls includes wearing t-shirts emblazoned with phrases such as “up for it” and pants labeled “juicy” or “delicious” across their buttocks. It is not difficult for the crews of the television series, “Girls Gone Wild” to find college women eager to roll up their shirts to flash their breasts for the camera (Levy, 2005).

In addition to public displays of sexuality, how women manage their appearance is focused on highlighting sexuality. For example, interest and participation in genital waxing has flourished and there are at least eight different types available (Morris, 2004). As genital waxing increases the visibility of a woman’s genital area, genital plastic surgery has also gained in popularity to enhance its appearance (Plowman, 2010). Genital plastic surgery is but one option for cosmetic surgery along with breast implants,

liposuction, and facelifts (Destin Plastic Surgery, n.d.) all designed to increase attractiveness and by default, sexual appeal.

The trend to highlight one's sexuality is not limited to selection of body supplements or body modifications. The trend is reflected in people's values, beliefs, attitudes, and behaviors. Some people admire female models who gain notoriety primarily through their display of huge breast implants (Walter, 2010) and believe that being sexual results in both social power and popularity (Erchull & Liss, 2013). Some women attend pole dance classes or "cardio striptease" classes that are offered through fitness centers and marketed as empowering (Whitehead & Kurz, 2009). Spreading nude self-portrait pictures (i.e., nude selfies) via photo texts has gained popularity among young adults as well as teenagers (Ferguson, 2011). Some women engage in same-sex sexual encounters (e.g., kissing one other) in order to arouse male audiences (Yost & McCarthy, 2012).

Journalists and scholars have both noted the mainstreaming of both soft-core and hard-core pornography as a cultural trend (Nowatzki & Morry, 2009) and seem to agree on the idea that U.S. society has become hyper-sexualized (e.g., Attwood, 2009; Kammeyer, 2008; Levy, 2005; Lynch, 2012; McNair, 2002; Walter, 2010). They have introduced several terms to describe this phenomenon. For example, McNair (2002) used "pornographication" and "porno-chic" to refer to representation of pornography in mainstream art and within culture. Levy (2005) used the phrase "raunch culture" to describe the increasing popularity of pornography within mainstream culture. Lynch (2012) used the term "porn chic" to describe stylized pornographic imagery for young women. This stylized pornographic sexual imagery in a hyper-sexualized mainstream

culture is different from traditional pornography. The earlier is often staged and often celebrity-led (e.g., sex scenes in the Madonna's music video *Justify My Love*) while the later contains a real sexual act that is depicted by relatively unknown individuals (McNair, 2002).

While some researchers have grouped this trend into a broad category of behavior (e.g., Levy's [2005] raunch culture; Lynch's [2012] porn chic), McNair (2002) distinguished two hyper-sexualized cultural trends, excluding real pornography. One was the pornographic sexiness generated by professionals (e.g., actors, artists, filmmakers) and the other was sexiness generated by the behavior of members of the general public. Although sexual imagery within mainstream culture may have begun earlier, the staged celebrity-led pornographic sexiness clearly became evident in the early 1990s (Attwood, 2009; McNair, 2002). Some of the first signs was the appearance of celebrities naked or sexualized in popular media. For example, Demi Moore posed naked for the cover of a 1991 issue of *Vanity Fair*, a popular magazine, during pregnancy. She appeared wearing only body paint, in the following year. Indeed the practice gained momentum so quickly that it became relatively easy to locate celebrities, including athlete celebrities, appearing nude, near nude, or in sexualized appearances in almost every magazine (McNair, 2002). Madonna's book, *Sex*, published in 1992 is another example. In her book images and simulations of sex acts, including sadomasochism and anilingus, were featured as stylized and edited by a fashion magazine editor and photographer. At about the same time, Madonna released her fifth music album, *Erotica*.

The other hyper-sexualized cultural trend identified by McNair (2002) was the pornographic sexiness participated in by members of the general public, the ordinary Joe

or Jane. McNair (2002) used the term “striptease culture” to describe the so-called democratization of sexual self-exhibition and bodily exposure and introduced it as “a subset of a broader sexualization of mainstream culture” (p. 81). Members of the general public participate in the hyper-sexualized cultural trend in two ways. One way is to be a supportive and enthusiastic consumer of sexualized media content. Evidence of the public’s interest and support of sexualized content comes from the popularity of these images and the increases in monetary rewards received by those celebrities who are willing to sell their sexuality or use it to market other products. Referencing the earlier example of Demi Moore posing naked on a magazine cover, compared to her earnings in 1990, her earnings rose eight and one half times in 1992 (Davies, 2012). The 1992 issue of *Vanity Fair* with Demi Moore posing in body paint sold 63% more copies than the other 11 issues of the same year (IMDb, n.d.). Madonna’s book *Sex*, appeared on the New York Times Best Seller list, and sold over 150,000 copies on the first day of its release (Best sellers, 1992). Consumer’s favorable reaction to sexualized content has continued. There are some female celebrities who gained popularity primarily due to their amateur pornographic videos (e.g., Paris Hilton, Kim Kardashian) or large breast implants (e.g., Pamela Anderson).

In addition to being supportive consumers, members of the general public participate in the hyper-sexualized cultural trend as active creators or performers of the hyper-sexiness. These behaviors include sexual self-exhibition and bodily exposure. People may model the sexualized imagery located in the media as well as create independent sexualized content (e.g., amateur pornography videos). They also may live hyper-sexualized lives as a life style choice (e.g., engage in the hook-up culture)

including creating personal sexual content. For example, women participate in professional boudoir photography or pinups, flash their breasts at public events, manage their appearance to feature mainstream pornography (e.g., wearing T-shirts labeled “porn star,” dressing like prostitutes for Halloween).

Self-sexualization in relation to dress and appearance. Sexualization imposed by others is “a ubiquitous phenomenon, occurring in clothing, appearance-enhancing products and procedures, media, and messages from peers and parents” (Levin & Kilbourne, 2008, p. 55). Similarly, self-motivated sexualization or self-sexualization can occur through various behaviors in several aspects of life. However, it is almost inevitable that a discussion of sexualization relates to the human body. Most self-sexualization practices involve doing something to one’s own body. As making modifications to the body or supplementing the body is an act of dress (Roach-Higgins & Eicher, 1992), self-sexualization behavior can include dress decisions intended to highlight aspects of the body linked to sexuality and sexual behavior (e.g., wearing a body fitted dress, wearing a top that accentuates breasts, getting breast implants, wearing bottoms that detail undergarments, waxing, tattooing). There are also instances wherein an item of dress itself, not in combination with the body, can be linked to sexuality. Some researchers (Montemurro & Gillen, 2013; Lynch, 2012) have labeled this category of dress items as provocative dress or sexualized clothing. Examples include thong underwear, lacy underwear, or transparent garments. In addition, how the dress item is worn on the body can link the item to sexual behavior (e.g., wearing a V-neck top backwards to expose cleavage, wearing items that are extremely tight).

Lynch (2007) expanded the definition of provocative dress to include sexual body revealing behaviors, such as female flashing of the breasts. The definition is an expansion of Kennedy's (1993) definition of provocative dress which defined provocative dress as signifying sexual suggestiveness and/or consisted of body exposure that strayed from social norms. The essence of Kennedy's definition of provocative dress was that it accounted for the setting and the norm in which the dress was worn. This suggested that any dress could be provocative in a specific context. Thus, behaviors such as flashing one's breasts in a public social setting can be included as provocative dress because the behavior results in body exposure that is inconsistent with acceptable norms for body exposure. Manifestations of self-sexualization including the use of dress can take four forms: Wearing of dress, altering of dress and/or body, molding of body, and performing. Description of each manifestation is discussed in detail in Chapter 2.

Problem statement. There is debate between the two different views on self-sexualization. One view sees it as a positive phenomenon which reflects sociological progression as well as women's liberation and empowerment (McNair, 2002; Peterson, 2010). For example, Peterson (2010), in her work with adolescent girls, argued that women may experience empowerment when they attract attention with sexuality. She further argued that experimentation with sexual roles and fantasies, even pornographic sexual expressions, is empowering because seemingly negative experiences are learning experiences. Thus, her view was that women need to have "the opportunity to "practice" sexuality by trying on different versions of sexual selves" (p. 312).

The other view sees it as a negative; that is, it is a false sense of empowerment, a pursuit of image-based sexuality that is not a true reflection of one's sexual pleasure.

Lamb (2010), in response to Peterson (2010), argued that this narrow version of sexuality (i.e., pornographic sexual expressions) may provide feelings of empowerment but the feelings are not necessarily authentic signs of empowerment, because pornographic sexuality is a false, commodified version of sexuality marketed by multibillion-dollar businesses.

Similar to Lamb (2010), Levy (2005) and Lynch (2012) pointed out that the sexuality performed by women is designed for male attention and not for the expression of individual sexuality. Levy (2005) further explained that self-sexualizing individuals pursue image-based sexuality, that is, perform a sexually desirable image by displaying oneself as a pleasurable sexy toy or object. When women display themselves as sex objects, the sexuality is not necessarily about sexual pleasure. An example Levy (2005) used to illustrate this image-based sexuality is the sex video of Paris Hilton. In the video, she enthusiastically and sexually posed in front of the camera. However, when she physically engaged with her partner, she looked bored and even talked on her phone!

Along with the arguments mentioned above on whether self-sexualization is a positive or not, only a few empirical researchers have investigated issues related to self-sexualization (e.g., Liss, Erchull, & Ramsey, 2011; Nowatzki & Morry, 2009; Whitehead & Kurz, 2009). One of the reasons for limited empirical studies is that researchers have not yet come to a consensus on a definition of self-sexualization. Accordingly, standardized operationalization of the concept is also not yet in agreement. A few researchers have been interested in how to measure or operationalize the concept of self-sexualization (e.g., Erchull & Liss, 2013; Liss, Erchull, & Ramsey, 2011; Nowatzki & Morry, 2009; Smolak, Murnen, & Myers, 2014). Their efforts have resulted in four

measures (see details on each measurement in Chapter 2). These four measurements access different aspects of self-sexualization. Some of these measurements assess motivational aspects of self-sexualization or attitude towards self-sexualization, while others assess manifestations of self-sexualization. Furthermore, none of these existing measures attempted to explore or examine the dimensionality of the concept.

Because of lack of consensus on one definition of self-sexualization and all of the existing measures fall short in identifying and capturing the concept of self-sexualization, there is a need to define self-sexualization and to develop a new comprehensive measure that captures all of the dimensions of the concept, if there are any. Not having a reliable and validated measure contributes to difficulties in interpretation of research findings (Schriesheim, Powers, Scandura, Gardiner, & Lankau, 1993). The absence of accurate measurements may also lead to researchers attaining different conclusions from a particular topic of interest (Barrett, 1972).

Focus of Research

The evidence of a hyper-sexualized cultural trend is becoming increasingly apparent in several countries across the world (e.g., pole dancing class offered to public in South Korea). However, research on hyper-sexualized culture has focused on relatively affluent Western society, to the exclusion of non-Western society. Accordingly, the primary focus of this study is on Western society in hopes of expanding the research to non-Western society. Particularly, the population of interest of this study is limited to people in the U.S. Because little is known about any potential cross-cultural differences, this research reviewed literature regardless of specific culture.

The focus of this research is women who participate in and embrace the hyper-sexualized culture. In hyper-sexualized culture, pornographic imagery is chic and sexual appeals are highly valued. If you are a participant in this culture, you engage in multiple behaviors that are designed to enhance your sexual appeal and sexuality. The degree of involvement in such behaviors can vary; however, women who actively participate in the hyper-sexualized culture can be categorized as self-sexualizers.

Self-sexualizers are women who voluntarily impose sexualization to themselves. The degree in which a woman voluntarily imposes sexualization to herself is measured by creating a scale which contains four dimensions (see “Section 1. Definition and Manifestation of Self-Sexualization” in Chapter 2 for details): A self-sexualizer thinks of herself as a sexually desirable object, believes her value comes from her sexual appeal, equates her physical attractiveness with being sexy, and accepts inappropriate sexuality that is imposed on her by others.

Purpose of Research

The primary purpose of this study is to develop a scale to measure self-sexualization which holistically reflects the underlying constructions of the concept. In order to do so, the definition of self-sexualization first needs to be established. When defining the concept, research on dimensionality of the concept is explored. Then, the dimensionality of self-sexualization is explored with a hypothesis that the concept is a construct that can be quantified using a scale rule.

To begin development of this measure, the four conditions of sexualization outlined by the American Psychological Association (2007, p. 2) task force were applied. The four conditions are: willingness to treat people as things for sexual use, valuing

others solely based on their sexual appeal, holding the belief that physical attractiveness equates to sexiness, and inappropriately imposing sexuality on others (e.g., child pornography). Taking the four conditions of sexualization into self-sexualization, self-sexualization is voluntary imposition of sexualization to oneself with corresponding four conditions. To properly measure self-sexualization, a scale needs to capture all of these components.

The scale being developed aims to examine the well-being of self-sexualizing individuals. By using the scale to measure self-sexualization, its relation to several other psychological, mental, and physical aspects of individuals can be explored. Possible variables that can be examined in relation to self-sexualization include self-objectification, self-esteem, body satisfaction, eating disorder, relationship satisfaction, and intention for risky appearance management.

Significance of Research

The development of a self-sexualization scale is important for several reasons. First, defining the concept as the first step of a scale development would provide a clear understanding of the self-sexualization

Second, the measurement of self-sexualization will provide insight for assessing and distinguishing the dimensionalities of self-sexualization. In addition, whether certain components of self-sexualization are better at explaining a particular behavior or attitude over other components can be explored.

Third, a well-established measurement of self-sexualization enables new research on antecedents of self-sexualizing. Since the APA task force first published their report on the sexualization of girls (2007), sexualization has received considerable attention by

researchers. Having an accurate measurement of self-sexualization will help researchers collect quantitative primary data for empirical evidence of the relationships between self-sexualization and other variables.

Fourth, the findings of future research using this self-sexualization scale will enable valuable contributions to the ongoing debate concerning the outcomes of self-sexualization. For example, researchers may be able to address the extent self-sexualization predicts either positive consequences (e.g., increased self-esteem, increased sexual pleasure) or negative consequences (e.g., increased body shame, increased perceived risk of rape). The findings can also be reported to government and public decision-makers, including public school districts. Controversial issues can be explored, such as whether teaching 10-year-olds that “sex and sexuality are positive forces for change and development, as a source of pleasure” is a good idea, as suggested by the International Planned Parenthood Federation of America in their Stand and Deliver report (International Planned Parenthood Federation, 2009, p. 38).

The last significance of this study is the application of the item response theory approach in the field of apparel. Apparel scholars have used classical theory test (see “Classical test theory” in Chapter 3 for details) in development of a scale. However, the item response theory is considered as a superior alternative to classical test theory and has received exponential growth in recent decades in other field of studies, such as education and psychology (see “Item response theory” in Chapter 3 for details). Introducing the application of item response theory to a scale development would contribute to the knowledge of item analysis in the field of apparel.

Overview of Research

This plan for research in the current chapter, Chapter 1, provides illustration of the hyper-sexualized cultural trend as background of the research, as well as the contradicting arguments on the impacts of women participating in the culture through self-sexualization. In order to empirically examine the impacts of self-sexualization, a need for a valid scale to measure self-sexualization is identified. Expected contributions to literature which potentially contribute to future decision making are also described.

In Chapter 2, a literature review highlighting extant knowledge of self-sexualization is presented. It includes definitions and manifestations of self-sexualization as well as a discussion of concepts related to self-sexualization. Strengths and limitations of existing measures of self-sexualization are also discussed.

In Chapter 3, the methodology used in the development of a new self-sexualization scale is described. The scale development stages are presented, rationale underlying each stage, method of data collection, and analysis methods are outlined.

In Chapter 4, the outcomes of the scale development and validation are reported. The presentation of outcomes corresponds to the order of the method in Chapter 3. The outcomes are the collection of the evidences that support the plausibility of the developed scale.

Lastly, Chapter 5 provides a summary of the research findings and discusses the use of the developed scale. Remaining steps in further validating and exploring the scale are also discussed for future research.

Definitions of Key Terms

Self-sexualization: Voluntary imposition of sexualization to the self.

Self-sexualizer: An individual who self-sexualizes (i.e., who meets at least one of four aspects of self-sexualization).

Sexualization: Sexualization occurs when “a person’s value comes only from his or her sexual appeal or behavior, to the exclusion of other characteristics; a person is held to a standard that equates physical attractiveness (narrowly defined) with being sexy; a person is sexually objectified – that is, made into a thing for others’ sexual use, rather than seen as a person with the capacity for independent action and decision making; and/or sexuality is inappropriately imposed upon a person.” (APA, 2007, p. 2). Any one is sufficient indicator of sexualization.

Self-objectification: Internalization of an observer’s view of self as object. An individual who self-objectify oneself treats himself or herself as an object to be looked at and evaluated on the basis of appearance. Self-objectification is results to habitual monitoring of one’s appearance, in other words, self-surveillance (Fredrickson & Roberts, 1997).

Sexual objectification: Sexual objectification occurs when a woman’s sexual parts or functions (or a woman’s body, body parts, or sexual functions; Fredrickson & Roberts, 1997) are separated out from her person, reduced to status of mere instruments, or else regarded as if they were capable of representing her” (Bartky, 1990, p. 35).

Sexual subjectification: Sexual subjectification can be interchangeably used with sexual self-objectification in this study. Sexual subjectification refers to willingly and knowingly engaging in sexual objectification of oneself with playfulness.

Objectification: The condition or process of degrading a human being to the status of a physical thing (Nussbaum, 1995).

Sexuality: Capacity for sexual feelings or the quality of being sexual.

Physical attractiveness: Aesthetically pleasing to the senses on the basis of physical attributes.

Dress: The assemblage of both body modifications of the body (e.g., piercing, hair styling, muscle building, plastic surgery) and supplements to the body (e.g., clothing, accessories, jewelries) (Roach-Higgins & Eicher, 1992).

CHAPTER 2: Literature Review

This chapter is divided into three sections. The first section provides a description of literature on self-sexualization and self-sexualizing behaviors. The second section identifies key concepts related to the definitions of self-sexualization. The third section provides information about existing measurements developed in the area of self-sexualization.

Section 1. Definition and Manifestation of Self-Sexualization

In this section, an expanded definition of self-sexualization is presented based on the four conditions of sexualization presented by the American Psychological Association (2007). Then, manifestations of self-sexualization are addressed in relation to dress and appearance to have a clear indication of how self-sexualization is expressed.

APA definition of sexualization and self-sexualization. The APA (2007) task force identified four conditions of sexualization. Any one of these four conditions is sufficient for sexualization to occur. The first condition of sexualization is when a person is viewed as an object for other's sexual use. Interacting with a person for the primary purpose of having sex (e.g., a hook-up) is an example.

The second condition of sexualization occurs when a person is held to a standard that equates physical attractiveness with being sexy. Asking a partner to exercise for the primary purpose of being sexually desirable is an example of this condition. The third condition is when a person's value comes from his or her sexual appeal or behavior. An example of this type of sexualization is when an individual is treated more favorably (e.g., higher in status) than another due to his or her sexual appeal. The final condition of

sexualization occurs when sexuality is inappropriately imposed upon a person. An example of this type of sexualization is having a young child wear a thong swim suit.

Interestingly, the APA (2007) task force defined self-sexualization as treating and experiencing oneself as a sexual object. This definition of self-sexualization, however, captures only one of the four conditions wherein sexualization is believed to occur: the sexualization condition where a person is viewed as an object for other's sexual use.

As an attempt to include most of the conditions of sexualization, Hall, West and McIntyre (2012) in their definition of self-sexualization noted that self-sexualization is not only present in situations wherein a person is viewed as an object for other's sexual use but also when a woman assumes "that her individual value comes primarily from her sexual appeal and behavior" and when a woman assumes "that her sexiness is equivalent to a narrowly defined level of attractiveness" (p. 3). This definition captures three out of four conditions of sexualization. However, these researchers still did not include situations wherein sexuality is inappropriately imposed upon a person.

Hall, West, and McIntyre may not have included this last condition of sexualization because the essence of self-sexualization is subjectification of one's sexuality by one's own choice, unlike a condition of sexualization where sexual objectification is imposed by others. In the same vein, both Gill (2008) and Attwood (2009) described self-sexualization as sexual subjectification and explained the alteration from sexual objectification where women had no agency to sexual subjectification where playfulness, freedom, and choice are present. A woman who knowingly engages in sexual subjectification, that is real self-sexualization, not only seeks men's attention but

also does it to please herself – however, the pleasure may come from getting a man’s approval.

Definition of self-sexualization. In this research, self-sexualization is defined as the voluntary imposition of sexualization to the self. All of the APA’s (2007) four conditions of sexualization are included as defining conditions of self-sexualization (see Table 1). Particularly, the first condition is adapted to sexual subjectification instead directly taking the definition of self-sexualization by APA (2007). In addition to the first three conditions, acceptance of inappropriately imposed sexuality is included because situations exist wherein sexualization is imposed on another. For example, consider a situation wherein a heterosexual woman is asked to participate in girl-on-girl kissing. If the woman accepts this request, this behavior exemplifies this last condition of self-sexualization. Another example of a self-sexualizing behavior that falls into this last condition is when a woman accepts both verbal and physical sexual abuse (e.g., accepts being called a slut, accepts unwanted sexual touching).

In addition to acceptance of inappropriately imposed sexuality, voluntary self-imposition of inappropriate sexuality as part of one’s own standard of sexuality is also included in this last condition of self-sexualization. Inappropriate sexuality refers to socially and morally improper and unacceptable sexual beliefs and behaviors (Queensland Health, 2011). Engaging in sexual activities in public spaces is an example of this condition of self-sexualization. (For the description of acceptance of inappropriate sexuality, see Chapter 2 “The fourth dimension: Acceptance of inappropriate sexuality.” The changes in this dimension were presented in the Chapter 4, “Results from Expert

Review of the Preliminary Test Blueprint.” Also see “Revision of the fourth dimension” for a brief outline of the changes.)

Consistent with the reasoning of the members of the APA (2007), any one of four conditions of self-sexualization is sufficient for an individual to be viewed as engaged in self-sexualizing behavior. Thus, throughout this research, an individual who is involved in at least one of the four self-sexualization conditions is referred to as a self-sexualizer.

Table 1. Adaptation of the definitions of sexualization to the definition of self-sexualization. The conditions of sexualization are adapted from the APA (2007). The definition of self-sexualization is based on the conditions of sexualization (APA, 2007) as well as the definition of self-sexualization by Hall, West, and McIntyre (2012).

Sexualization	Self-Sexualization	Possible item for self-sexualization scale
1. A person is sexually objectified.	1. A woman knowingly engages in sexual subjectification where playfulness, freedom, and choice are present.	If I give a man a lap dance, it is for my fun experience.
2. A person's value comes only from his or her sexual appeal or behavior, to the exclusion of other characteristics.	2. A woman thinks her value comes primarily from her sexual appeal or behavior.	My self-esteem is influenced by how sexually desirable I am.
3. A person is held to a standard that equates physical attractiveness (narrowly defined) with being sexy.	3. A woman thinks her physical attractiveness equates with being sexy.	To be attractive, I need to be sexy.
4. Sexuality is inappropriately imposed upon a person.	4. A woman accepts inappropriate sexuality (include both acceptance of inappropriate sexuality as one's own standards of sexuality and acceptance of inappropriate sexuality imposed by others).	I joke about improper sexual touching that happened to me.
Any one of these four conditions is sufficient for sexualization to occur.	Any one of these four conditions is sufficient to self-sexualize.	

Manifestations of self-sexualization. Dress often plays a central role in many self-sexualizing activities. Even when the activity is not dressing the body per se or appearing in a sexualized manner (e.g., sexting, pole dancing), the body and dress is often featured. For example, sexting often includes written description of one's body shape to

communicate one's sexuality and pole dancing can involve wearing specific items of dress that may be sexualized, such as high heels (Donaghue, Kurz, & Whitehead, 2011). The following section presents descriptions of self-sexualization practices among women manifested via dress and appearance management.

Self-Sexualization: Wearing. Exposure of women's intimate body parts is nothing new in fashion. Many young women use skin exposure to accentuate their sexual appeal as research indicates women and men have some understanding of how to use clothing to communicate specific social signals concerning sexuality. For example, Grammer, Renninger, and Fischer (2004) conducted a study to assess women's awareness of the sexual signals that can be communicated through their clothing. Their study was conducted in a dance club setting with 351 females in Austria. The researchers used several methods including gathering photographic evidence of clothing worn to the club and data from a self-report questionnaire. The questionnaire asked about demographic information, relationship status, use of hormonal contraceptives, their motivations for going to the club (e.g., hangout, flirt, sexual intercourse), and their outfits (e.g., natural, modest, bold, sexy).

These researchers analyzed the amount of bare-skin and skin exposure presented through participant's use of both sheer and tight clothing. Skin exposure of the participants ranged from 23% to 30% of their body surface. These women related their skin exposure through clothing to their sexuality. Specifically, participants who exposed their skin self-rated their clothing as sexy and bold. They also reported that their clothing was less modest compared to others whose use of clothing covered more skin surface than did the clothing they wore.

Similarly, researchers have also demonstrated that some women use clothes to attract sexual attention from men as well as to communicate their sexual desire (Montemurro & Gillen, 2013). These researchers investigated how clothes were used as markers of sexuality among women. They conducted in-depth interviews with 95 women who ranged in age from 20 to 68 years. The participants were recruited via snowball sampling as well as through fliers posted on and around a college campus. The interview questions included discussion of how women expressed their sexuality, a right or wrong way to be sexual, and if participants thought the way women showed their sexuality changed over time. Interviews averaged 100 minutes in length and were audio recorded.

The researchers found strong evidence of physical appearance, specifically how women dress, when women express and show their sexuality. Almost all participants referred the use of clothing, along with body language and makeup, to communicate their sexual desire as well as to attract sexual attention of others. Participants were aware of the role of dress in non-verbal communication and were concerned about the appropriateness of their clothing and messages they sent to others through their choice of clothing. Many participants were aware of the possibility of receiving the wrong type of attention from men (e.g., attention from a person who only wants casual sex) and the possibility of sending an unintended message through their clothing. Married women in particular were concerned about wearing clothing that was too body revealing because the clothing might send the wrong message relative to their sexual interest and availability. They were also concerned about their children's clothing and the messages others might infer when viewing it. At the same time, a false interpretation of sexy clothes was acknowledged as a possibility. One of the participants mentioned that

wearing sexy clothing might actually present one's taste and preference rather than simply one's sexual interest, desire for sexual attention, or availability.

The use of dress items that expose intimate parts of the body may be interpreted by some as a sign of potential sexual interest or desire for sexual attention (e.g., Montemurro & Gillen, 2013). However, because of the ambiguous nature of exactly who the intended receiver of the sign is, this type of appearance is unlikely to be an explicit invitation for sexual interaction (Moor, 2010). Moor (2010) investigated women's motivations that underlie their decisions to wear body revealing clothing and compared that information to men's interpretations of the intent of the women as indicated by their clothing choices. The study, conducted in Israel, included men (40%) and women ($n = 321$) who were undergraduates and between 18 and 24 years old. All participants received a questionnaire containing a photo of a woman wearing body-revealing clothing. The woman in the photo wore low-rise (e.g., three inches lower than the belly button) tight jeans and a short top that exposed her cleavage and much of her breasts. The questionnaire items asked participants to indicate their interpretation of the motivation of the woman wearing the clothing (i.e., desire to feel attractive, intends to have sexual interaction). Women were also asked to indicate their personal style of dress and their sexual victimization history. Men were asked to indicate whether they are aroused by women in revealing clothing.

Men were likely to interpret the motivation for the women's appearance as a desire for sex whereas women were likely to identify the motivation as willing to use their sexuality to gain affection. In addition, findings from the women's self-reported motivations for wearing revealing clothing indicated that the majority of women wore

revealing clothing because they liked the look (82.1%) and wanted to look attractive (72%). Only few reported that they wore body revealing clothing to seduce men (5.3%), to arouse men (3.2%), to be stared at (2.3%), or to be touched (2.1%). However, men's interpretation of the motives for women to wear body revealing clothing was to evoke sexual advances from them (55.6%) or to arouse them (53.2%). Some male participants thought that it was always to arouse them (30.6%) or provoke sexual advances from them (20.2%). More than half of the men (58.1%) reported that they felt aroused most of the time when they viewed women in revealing clothing and about one third of male participants (29.8%) reported that seeing women in revealing clothing always aroused them.

In terms of sexual victimization experiences, no significant differences were identified between women who reported they wore revealing clothing and women who did not. In addition, both men and women rejected the belief that wearing revealing clothing leads men to lose their self-control and commit sexual violence. They also agreed that a woman who wears sexy clothing has not consented to being touched by men.

The women who participated in Moor's research may seem different from women who self-sexualize. One of the conditions of self-sexualization is to think of oneself as an object for others' sexual use and only a few women who wore body revealing clothing in Moor's research indicated that they wanted sexual encounters. However, although female participants in both Grammer, Renninger, and Fischer's (2004) study and Montemurro and Gillen's (2013) study were aware of sexual signals they could "send" through their choice to wear body revealing clothing, according to the women in Moor's (2010) study,

these sexual signals are not necessarily intended to be acted upon indiscriminately by men.

However, it is possible that women who wear revealing clothing might wear the clothing because they believe that their attractiveness is primarily a result of their sexual appeal. As indicated from Moor's (2010) study, the participants indicated that their motivation for wearing the revealing clothing was to look attractive. It is also possible that women who wear revealing clothing may believe that it is only their sexual appeal that gives them value as human beings. If this is the case, their choice to wear sexy clothing would meet one of the conditions for self-sexualization and their behavior could be viewed as self-sexualizing.

Self-Sexualization: Altering. Another form of sexualized behavior related to dress is alteration of one's clothing and/or body. For example, women may raise their skirts or roll up their shirts in order to highlight a body area and by default, their sexuality for a short time at a particular situation. Women can also alter the body to emphasize their sexuality through hair removal or through other body modifications.

Flashing. Spontaneous alteration of one's clothing is another way to self-sexualize for some women. Lynch (2007) investigated the female flashing behavior where women either take off or roll up their shirts to show their breasts in public. To gather data, the researcher conducted participant observation fieldwork at four university homecoming celebrations, interviewed male and female students ($n = 51$) who had attended at least one homecoming celebration, and interviewed three male police officers who worked the event. Data also included 20 unrecorded interviews with students as well as fieldwork. In addition, a content analysis of nine years of yearly police videotapes

from 1995 was conducted. Among the interviewed female students ($n = 37$), nine of them had flashed at least once during a homecoming celebration, eight of them had been pressured to flash, ten of them were with a friend who flashed, and ten of them observed flashing behavior by others.

Participants compared the flashing behavior to exotic dancers' stripping in strip clubs except the exposure was public, unlike exotic dancers who take off their clothing in somewhat private settings. Exotic dancers received more "credit" for their body exposure, because their exposure was centered in a staged performance, done for work, and happened in secured surroundings. When participants were asked to discuss who might be more likely to flash, they indicated that probably women were those who wear provocative dress in a bar.

The female flashers reported that their flashing behavior was unplanned, most often forced, and influenced by alcohol consumption. However, male participants of the homecoming celebration indicated they believed that women came to the site planning to flash. All flashers also reported having negative feelings about their behavior after flashing. They were concerned about being seen by someone they knew as well as images of them that might be shared on the Internet. They also recalled violent force used by men. Yet, most of the flashers had engaged in flashing behavior more than once. Flashers also reported flashing was a way to gain attention. Specifically, some participants talked about feelings of being accepted, popular, and special as a result of their flashing.

The researcher concluded that the flashing behavior is male-driven. Female flashers are socialized to self-objectify for men's sexual gaze. Thus, flashing behavior

can meet two conditions of self-sexualization: presenting oneself as a sexual object and seeing one's value in terms of sexual appeal.

Waxing. Self-sexualization can occur through alteration of the body's surface through acts of dress such as waxing. For instance, to achieve one aspect of the ideal female body, that is, to have hairless skin, hair removal has been widely practiced by many American women on a daily or weekly basis. Hair removal has become a norm for women, and for some men, and hair should be removed or shaped on almost every body part (e.g., legs, arms, armpits, eyebrows, eyelashes, upper lip, chin, pubic area) except the head (Toerien, Wilkinson, & Choi, 2005). There are numbers of products and techniques for hair removal including shaving, waxing, tweezing, lasering, and use of depilatory creams and gels.

When it comes to pubic waxing, there are several options (Morris, 2004): the bikini line, the full bikini, the European, the triangle, the moustache, the heart, the landing strip, the Playboy strip, the Brazilian wax, and the Sphynx. For example, the bikini line wax refers to removal of hair that might be exposed when wearing a swimsuit, while the Playboy strip refers to removal of all genital hair except for a landing strip of a long narrow rectangle of hair. The Playboy strip is named after the soft-porn *Playboy* magazine because the wax style was featured by the magazine's models (Labre, 2002). The Brazilian wax in particular (i.e., complete removal of hair on genital area including labia and anus) is often compared to body alteration in achieving appearance of porn stars in pornography who completely shave their pubic hair for detailed genitalia shots (Jeffreys, 2005). This type of waxing is sometimes called the Hollywood style or the Sphynx style.

Because removal of the pubic hair enables female genital to be visible, pubic waxing is considered to have a great sexual visual effect for men (Morris, 2004). It can be also seen as a rendering of a childlike look by removing physical signs of adulthood and resulting in an image of virginal innocence (Morris, 2004), so that the end result may seem to support women's submissiveness, dependency, and inferiority (Labre, 2002). In this case, the behavior links to one common theme in pornography where women are portrayed as naïve and as innocent girls such as the Lolita look (Morris, 2004). It may also qualify as self-sexualization as the behavior meets the condition where inappropriate imposed sexuality is accepted and applied to oneself for the purpose of arousing men.

Self-sexualization: Molding or shaping. Many women engage in re-shaping their bodies to achieve a desirable appearance, through dieting, exercising, or plastic surgery. Although this type of re-shaping appearance can be categorized under alteration, this section is focused on modification of body shape by alterations to the muscular and skeletal system.

Plastic surgery. One of recent trend of body modification in a hyper-sexualized culture, often inspired by pornography, is female genital cosmetic surgery. This surgery includes a range of procedures primarily to produce genitalia that have an aesthetically pleasing appearance (e.g., labiaplasty, perineoplasty, vaginoplasty) and referred to as designer vaginas (Braun, 2005). Previously, female genital cosmetic surgery was done primarily by sex workers and nude models, or women for medical reasons due to infection or pain. However, these procedures have become increasingly popular among typical women for aesthetic purposes (Goodman, 2011). Lynch (2012) explained that this

trend of having female genital cosmetic surgery is due to the women who look up to pornographic images.

Braun (2005) identified cultural influences on the decision to undergo genital cosmetic surgery. Braun explained that cultural influences (e.g., images in advertising) encourage women to self-assess and survey their aesthetic value compared to some absolute standard. The standard makes some genital areas ugly while making others pretty. Braun noted that women mostly used pornographic images as their reference point for a desired genital look. The researcher also noted the link between the popularity of the Brazilian wax and the increase of female genital cosmetic surgery.

A common form of plastic surgery is breast implants. Thinness has become an aspect of ideal beauty since the 1970s, however, the beauty standard has evolved to a voluptuous ideal since the 1990s and on into the 21st century: a thin body with large breasts (Lynch, 2012). Because this voluptuous ideal with thinness rarely occurs in nature; in other words, only a few women may naturally have this type of body shape, cosmetic surgery (e.g., breast augmentation, liposuction) is required to transform one's body into this ideal body shape.

Solvi, Foss, Soest, Roald, Skolleborg, and Holte (2010) investigated motivations for breast augmentation. Their participants were recruited during their consultation at a private plastic surgery clinic by staff members at the clinic during the weeks before their surgery. The researchers interviewed 14 Norwegian patients between 19 and 46 years of age. Two of them were single and the rest of them had a partner. Nine of those who had a partner had children. The interview lasted between 60 and 90 minutes. The interview questions were shaped based on participants' personal experience. Women who described

themselves as having small breasts used the terms “establish” or “repair” as their motivation. Women with medium size breasts used the terms “improve” or “restore” to describe their motivation for the surgery. The researchers also found several factors influenced the motivations. The fundamental motivation across all women was a drive for femininity, specifically, a drive to be an attractive woman, because patients thought of themselves as having a masculine appearance or lacking in feminine appeal.

As motivations for the surgery, the participants reported dissatisfaction with their breasts, low self-esteem, experiences with both negative and positive comments on their breasts, negative experiences with clothing (e.g., a bikini wear), and dissatisfaction with their sex life due to the look of their breasts when naked. In addition, some eliciting factors that influenced the final decision for the surgery were found. These factors included information presented by the surgeon (e.g., risk of the surgery), knowing patients who previously had the surgery, money to support the surgery, media which present the pros and cons of surgery (e.g., makeover TV shows), and desire to be attractive to a romantic partner.

The use of terms such as establish, improve, repair, and restore to describe one’s body indicates that these women hold the view that their bodies were not acceptable as is (Tiggemann & Kenyon, 1998). As in the findings reported by Braun (2005), these women compared their bodies to a certain standardized beauty ideal, even if the ideal was inspired by pornography. This type of behavior reflects the self-sexualization condition where women hold to the narrowly defined level of attractiveness that equates attractiveness with being sexual.

Self-sexualization: Performing. Manifestation of self-sexualization is not limited to use of dress. Self-sexualization can occur through sexually performative behaviors. Self-sexualization can be performed during face-to-face interactions as well as through images used in virtual environments. This form of self sexualization includes practicing sexy behaviors such as mimicking sexual behaviors from pornography, sending nude pictures of oneself to others, posting a sexualized picture of self on the Internet, and participating in boudoir or pinup photography (i.e., highly sexualized photography taken in a studio by professionals).

Yost and McCarthy (2012) explored one dimension of self-sexualizing behavior, heterosexual women's same-sex kissing at public parties. The researchers were interested in the prevalence and the meaning of the behavior. In order to document the prevalence of the phenomenon, the researchers sent a questionnaire to all full-time students enrolled at a college. Out of a total of 2,120 students, 789 students participated in the survey (37.22%). Female students accounted for 61.85%, male students were 37%, and some did not indicate their sex (1.15%). The questionnaire contained six questions to assess the popularity of the phenomenon, such as whether the individual participated in the phenomenon and frequency of observing the phenomenon. In addition, women who had kissed other women in parties were recruited to explore their motivations and the social context of the experiences. Women who indicated that they had engaged in the behavior from the initial questionnaire completed an additional questionnaire. Among these ($n = 77$), 22 were interviewed. The questionnaire included open-ended questions asking for a description of the experience in detail (e.g., why did you kiss another girl at a party?). The interviews lasted between 30 and 45 minutes.

The results showed a high prevalence of women's same-sex kissing at public parties. Participants (69%) reported that they witnessed the phenomenon on a college campus and 33.1% of female participants reported that they had engaged in same-sex kissing behavior at a party. The results also revealed several motivations for engaging in the behavior. The most frequently mentioned reason for kissing other women was to gain male attention (56%). Some engaged in the kissing to appear sexually attractive and others to entertain and please the men in the room. In addition, some women did it just to get attention from the men in the room while others wanted to signal their sexual availability hoping for men to approach them. Some of them used the kissing behavior as a method to encourage men to make the first move, instead of having to directly initiate contact with a man.

The next frequently mentioned reason for kissing other women was for fun (43%). Participants thought that kissing other women adds a fun element to a party. They claimed that kissing people is a fun experience in general and they choose to kiss a woman because it does not go any further in terms of a sexual encounter. Kissing another woman was a safe choice as they are not sexually attracted to each other; however, kissing a man may send an unintended message, such as being an invitation for additional sexual activity.

Alcohol was the next most cited reason for the same-sex kissing behavior (42%). Participants recalled that they were drunk when they engaged in the kissing. Female bonding was also listed as a motive (26%). They liked to share the experience with their good friends, yet some of them (21%) indicated that they did it because they did not want to hurt their friend's feelings. Participants also listed a desire for sexual experimentation

(23%) and to shock others (22%). Some participants (16%) used kissing another woman as a means to acquire something (e.g., access to bathroom, money, alcohol, beads) or to distract from unwanted sexual advances initiated by men.

Similar to female flashers, heterosexual women who engaged in same-sex kissing behavior reported that their behaviors were designed to garner male attention and for men's pleasure. The sexual act was not for their own sexual pleasure but to please the male audience and add a fun aspect to the party. Thus, the same-sex kissing behavior meets a condition of self-sexualization, that is, where a woman presents herself as a sexual object.

Self-sexualization can also occur in cyberspace. Similar to sexualized images of women in magazines, self-sexualizers take pictures of themselves in a sexualized manner and share them online. Pictures implying nudity with the breasts or genital area covered by a hand or an object as well as photos displaying sexual availability by depicting women lying on a bed wearing only underwear with a sexually alluring facial expression are some examples of self-sexualized photographs. Hall, West, and McIntyre (2012) were interested in self-sexualization performed in social networking sites (SNS). The researchers analyzed female personal profile pictures on MySpace.com to assess how frequently women self-sexualized. A total of 24,000 photographs were included in their data analysis and the sample were selected from women who posted themselves as single or divorced and stated that they were looking for a relationship. About 45% of the personal profile pictures on MySpace.com had some aspects of self-sexualization. The most frequently used self-sexualized method was body display and it was observed in 20% of the sample photographs. The body display pictures included body exposure by wearing

revealing clothing, underwear, or swimwear and it also includes implied or partial nudity. Display of subordination was the next frequently used self-sexualizing method (17.03%). The pictures of subordination included individuals' laying on the ground or on a bed, positioning low camera angles, showing passive sexual readiness, and positioning one's body to receive sexual contact. Lastly, displaying oneself as an object was also found (7.64%). These objectification pictures include body exposure with the face removed or concealed and exposing only certain body parts (e.g., breasts, buttocks, legs, back).

This type of behavior, that is, posting a sexualized self-portrait photograph for a profile, meets a condition of self-sexualization. Women who participate in this behavior separate their body parts or their sexuality from their persons. They also show subordination in sexuality which has been associated with hostile sexism (e.g., seeing women as an inferior) as well as benevolent sexism (e.g., believing that women need to be protected by men) (Glick et al., 2000). This behavior also reflects the condition of self-sexualization wherein a woman accepts inappropriate stereotyped sexuality that is imposed on her.

Section 2. Self-Sexualization and Other Related Concepts

This chapter began with introducing the definition of self-sexualization. Then, several manifestations of self-sexualization in relation to dress and appearance through wearing, altering, molding, and performing were presented. The next section compares the four conditions of self-sexualization to other related concepts to increase validation of the scale for self-sexualization. Each condition of self-sexualization is examined by comparing it with other related concepts and measurements.

The first dimension: Sexual subjectification. The first dimension of self-sexualization is sexual subjectification – knowingly engaging in sexual subjectification where playfulness, freedom, and choice are present. There are three key concepts to understanding this dimension. Treating others as objects (objectification), treating others as sexual objects (sexual objectification), and thinking of a oneself as an object (self-objectification) are related to understanding what it means to treat oneself as a sexual subject (self-sexualization).

Objectification. The first concept to understand self-sexualization is objectification. Objectification of a human being is the condition or process of degrading a human to the status of a physical thing (Nussbaum, 1995). In social science, objectification occurs when a human being is treated like a thing instead of as a thinking, and feeling being (Fredrickson & Roberts, 1997; Nussbaum, 1995). For example, if employers objectify their employees, they regard them as tools who exist primarily for the purpose of employers' benefits. Similar to the mechanical parts of a car, objectified employees might be considered as resource objects that are easily replaceable and changeable. When an individual is objectified, their feelings, emotions, and experiences are excluded when relating to that individual. Objectified humans are less than human.

Objectification of humans can take several forms. Nussbaum (1995) presented seven notions that are involved in the objectification of humans. The first is when a person is treated as a tool for another's purpose. This type of treatment is labeled instrumentality. An example of instrumentality is pretending to be a friend to someone to use them as a means to achieve something else. For example, you might pretend to be friends with someone else who owns a car because you want a ride home. This

relationship will not continue to exist when you no longer need a ride home or there is nothing to get from the friend.

Another example of instrumentality is the aforementioned example of an employer viewing employees as resource objects for the purpose of generating a profit. The view that individuals can be interchanged with other non-human resources (e.g., a machine can replace a human, one human is as good as another) meets the second criteria of objectification, fungibility. This view can co-exist with the view of an individual as a resource, instrumentality.

The third notion of objectification is when a person is treated as if he or she is lacking in autonomy and self-determination. This notion is labeled denial of autonomy. An example of denial of autonomy provided by Nussbaum (1995) is the treatment of some young children by their parents. Parents often treat their children as if children have no independence or ability to be self-determined. When parents set a goal (e.g., becoming a violinist) for their child and put a process in place to achieve that goal (e.g., send their child to music lessons), they are viewing their child as dependent beings, in other words, denying their child's autonomy. While this may be appropriate at a young age, it would not be appropriate as the child matures.

The fourth notion of human objectification is ownership. Ownership issues occur when a person is determined as being owned by another or considered as able to be bought and sold. Parental treatment often involves some aspects of ownership. Parents may see their children as "owned" by them as they have produced them and provide for them. In addition this view can be reinforced by outsiders who view parents or treat them as if they own their children (e.g., whose child is this? Who is responsible for this child?

Where are the parents?). This ownership view of a child may continue until the child is financially independent or until a child moves out of the home. Another example of ownership is slavery or human trafficking.

The fifth notion of human objectification is when a person is treated as if he or she is lacking in agency or activity. This notion is labeled inertness. If a person is solely valued for his or her physical appearance, discounting capabilities or skill sets, the person is regarded as inert. For example, a fashion model may be treated as a clothes hanger, receiving directions for posing from a photographer or fashion show director, negating his or her ability to contribute to create an appropriate look/mood or position his or her body for a photograph or walk on a runway.

The sixth notion of human objectification is when a person is determined to be lacking in boundaries, integrity, and capable of being damaged. In this notion, the person becomes a target perceived as something wherein violation is permissible. This notion is labeled violability. Viewing other individuals as objects that can be damaged or abused (e.g., I can hit you) as may be present in the case of assaults, is an example of violability.

Sexual assault is another example in which the notion of violability is salient. Sexual assault also involves other objectification notions including denial of subjectivity. Denial of subjectivity, the last notion, is when it is determined that the individual's feelings and experiences need not be considered, relative to the objectifier. In the case of sexual assault, an attacker ignores the outcomes linked to the victims (e.g., feelings, emotions, physical injury) relative to the attackers' feelings and experiences from the assaults.

Researchers have left open the question of whether any one notion is sufficient to label a situation as human objectification (Calogero, Tantleff-Dunn, & Thompson, 2011; Nussbaum, 1995). This lack of closure may be because the use of the term objectification is not always clear and consistent. Nussbaum (1995) suggested that objectification is “a relatively loose cluster-term, for whose application we sometimes treat any one of these features as sufficient, though more often a plurality of features are present when the term is applied” (p. 258). Slavery, for example, is not a simple inert objectification notion. Slaves may not necessarily represent a fungible notion of objectification, as they may have skills that can be easily replicated by alternatives. Yet, the notion of instrumentality is inherent to slavery (i.e., as a tool for another’s purpose). In addition, slavery is a classic example of the ownership objectification notion where a person can be bought or sold.

These seven notions described what can happen when a person is treated as a physical thing. When this objectification occurs in a sexual realm, it is labeled sexual objectification. In addition, researchers agree that sexual objectification is one of the common forms of objectification (Calogero, Tantleff-Dunn, & Thompson, 2011) which involves several, if not all, Nussbaum’s (1995) notions of human objectification.

Sexual objectification. Sexual objectification is one of four conditions of sexualization (APA, 2007). It occurs “when a woman’s sexual parts or functions are separated out from her person, reduced to status of mere instruments, or else regarded as if they were capable of representing her” (Bartky, 1990, p. 35). Later, Fredrickson and Roberts (1997) re-cited this definition making a slight change from “a woman’s sexual parts or functions” to “a woman’s body, body parts, or sexual functions” (p. 175) in their research on self-objectification.

The definition of sexual objectification has two features: detachment of body parts (or sexual parts) from a person and the representability of body parts or functions of body parts for the person. The first feature of sexual objectification may lead to all seven notions of objectification (Nussbaum, 1995). For example, when a body is treated as a physical thing, the body can be used as a tool for another's sexual purpose – either decorative for the purpose of sexual arousal or for a functional purpose (e.g., masturbation). Also, the body can be interchanged with other non-human alternatives such as sex toys. When the body is interchanged with other non-human alternatives for a sexual purpose, this case of sexual objectification is directly related to the first condition of sexualization identified by the APA (2007): A person is sexually objectified.

On the other hand, the second feature of sexual objectification, the representability of body parts or function of body parts for the person shares similarity with the second and the third conditions of sexualization (APA, 2007). If a person is degraded by another to the level of a body part as if the body part alone has the most value to the exclusion of other characteristics of an individual, this practice reflects the idea of a person's value coming primarily from her sexuality or sexual appeal (the second condition of sexualization). For example, a person may treat a woman with favor because of her erotic appearance.

A person may not receive favorable treatment (e.g., entry to a club for free), however, if the representative body parts of sexual appeal are not equivalent to some agreed upon or standardized ideal sexuality (e.g., not wearing a provocative dress or not having large breasts). The person is held to a standardized ideal and critiqued based on

the standard. In this case, any discrimination that occurs based on a narrowly defined level of sexual attractiveness meets the third condition of sexualization.

Sexual objectification can occur both directly and indirectly to a person. Direct sexual objectification experiences involve interpersonal interaction and often include violence which may or may not include physical contact (e.g., sexual assault, sexual staring). Direct sexual objectification can be placed on a continuum that indicates the severity or intensity of an event. This interaction can occur at any point during the lifespan from childhood through adulthood (e.g., child trafficking, sexual abuse in marriage).

An individual can also indirectly experience sexual objectification. An indirect sexual objectification experience occurs when an individual comes into contact with sexual objectification without interpersonal interaction. Indirect sexual objectification occurs through a range of agents. For example, people can experience indirect sexualization by watching a music video wherein a person is portrayed as a decorative sexual object.

Constant sexual objectification is generally considered as a primary environmental antecedent to internalization of sexually objectified experiences (Calogero, Tantleff-Dunn, & Thompson, 2010). This internalization of sexually objectified experiences is named *self-objectification* (Fredrickson & Roberts, 1997). The following paragraphs present the process of self-objectification and compare it to the concept of self-imposed sexual objectification, the first dimension of self-sexualization.

Self-objectification. Objectification theory (Fredrickson & Roberts, 1997) was proposed as a framework for understanding the consequences of being women in a

culture in which the female body was sexually objectified. The theory posited that when women experience constant sexual objectification, they internalize such experiences.

When the internalization happens, women begin to see themselves as objects to be looked at and evaluated based on their appearance. The authors have termed this internalization of objectification as self-objectification. They argued that one of the primary results of self-objectification is constant body monitoring, in other words, self-surveillance. Self-objectification also results in individuals placing a greater emphasis on their physical appearance than on their physical and mental competencies. Because of the emphasis on physical appearance outcomes of self-objectification can also include feelings of body shame and anxiety, reduced opportunities to be fully absorbed in one's activities, and decreases in awareness of internal bodily states. These negative experiences may also contribute to mental health problems such as depression, sexual dysfunction, and eating disorders (see Figure 1 for a model of objectification theory).

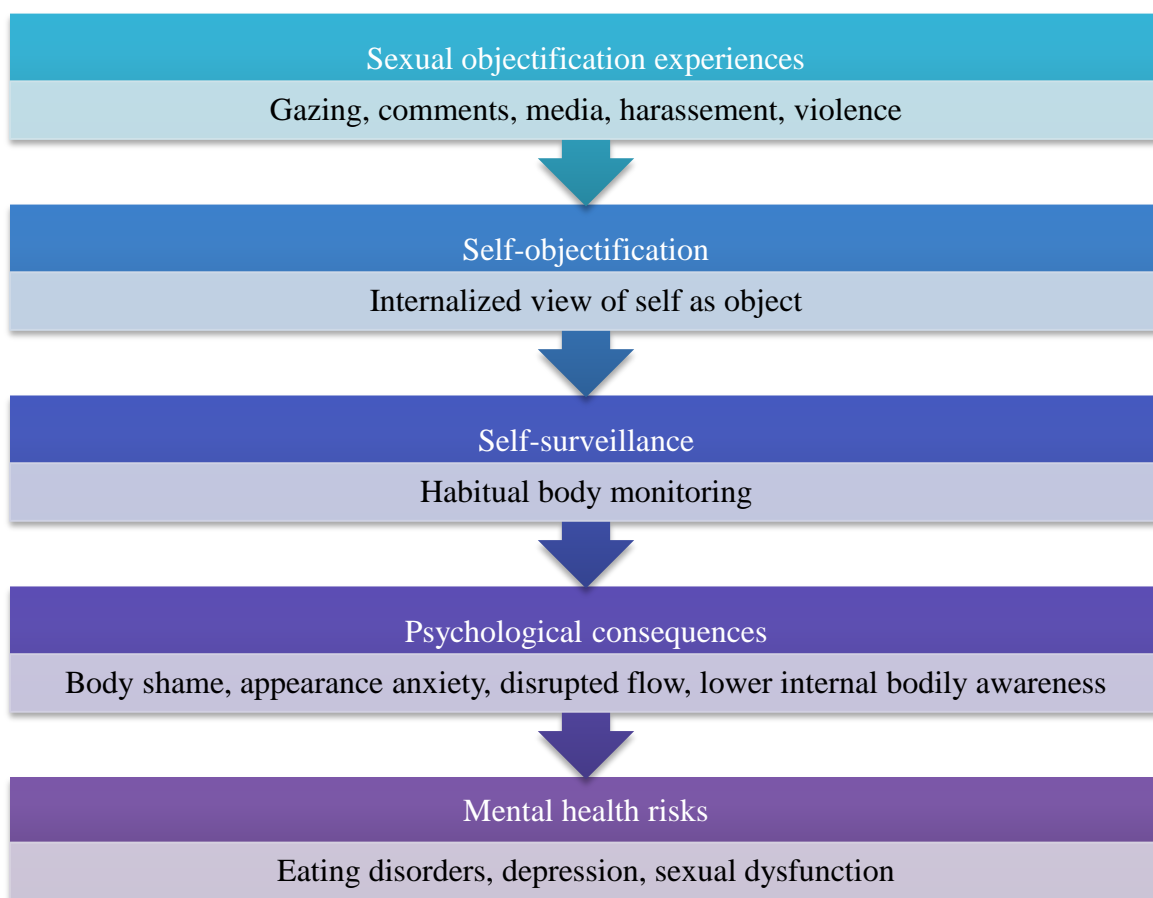


Figure 1. Model of objectification theory (Fredrickson & Roberts, 1997).

Early studies of self-objectification. In the earliest experimental study of objectification theory, Fredrickson, Roberts, Noll, Quinn, and Twenge (1998) conducted a series of experiments to examine relationships between self-objectification, body shame, eating behavior, and math performance. In the first experiment, 72 female undergraduates participated with the goal of examining if self-objectification increased body shame and restrained eating. In the second experiment, the previous experiment was replicated with one additional dependent variable, math performance. In this experiment, 42 female and

40 male undergraduates participated with the goal of examining gender differences in the effects of self-objectification on body shame, restrained eating, and math performance. They manipulated self-objectification states by having participants wear either a swimsuit (heightened self-objectification condition) or a sweater (non-heightened self-objectification condition). Along with manipulating the level of self-objectification (i.e., state of self-sexualization condition), the researchers measured the level of participant's self-objectification (i.e., trait of self-objectification).

The results demonstrated significant effects of self-objectification (i.e., both state and trait of self-objectification) on body shame, when controlling for the participants' size. The higher the participants' self-objectification score, the higher the reported body shame. However, the trait of self-objectification was not a significant predictor of body shame when the interaction effect between state and trait self-objectification was controlled. In addition, the state of self-objectification was influenced by the trait of self-objectification; Participants who scored high in self-objectification indicated high body shame in the heightened self-objectification condition.

On the other hand, no significant effects were found for either state or trait self-objectification or for BMI on restrained eating behavior. However, body shame showed a significant relationship with restrained eating behavior; Participants indicating body shame were more likely to show restrained eating behaviors (i.e., ate most but not all of a chocolate chip cookie). No male participants engaged in restrained eating behaviors.

Gender differences in self-objectification were significantly revealed in math performance. In the heightened self-objectification condition (wearing a swimsuit), women scored lower on math performance than in the low self-objectification condition

(wearing a sweater). However, male students' math performance was not influenced by objectification state.

Subsequently, the study was replicated by Hebl, King and Lin (2004) who tested the effect of state self-objectification and trait self-objectification with diverse ethnicities (e.g., Caucasian, African American, Asian American and Hispanic) as well as examined gender differences. In their study, self-esteem was also assessed and Hershey's "Choco-Buttons" were used to examine restrained eating behavior. Their findings replicated earlier results as participants in the heightened self-objectification condition tended to show high body shame. The effect was stronger among women than men regardless of ethnic group except for the African American women. African American women were the least influenced by the objectification condition.

Participants in the heightened self-objectification condition reported low self-esteem and low self-esteem was more evident among women than men. African Americans were the least influenced by heightened self-objectification and Asian American group were the most influenced. Unlike the original study by Fredrickson, et al, (1998), there were no significant differences based on either gender or ethnicity for restrained eating behavior. However, all participants in the heightened self-objectification condition as compared to the low self-objectification condition demonstrated lower math performance regardless of their ethnicity or gender.

While the aforementioned researchers were interested in the effect of state self-objectification (i.e., situational context), Miner-Rubino, Twenge, and Fredrickson (2002) were interested in the trait of self-objectification (i.e., stable individual attribute). The researchers examined the relationship between trait self-objectification and mental health.

A total of 98 female undergraduate students participated and were asked to fill out a self-report questionnaire containing items assessing trait self-objectification, body image, body dissatisfaction, body shame, depression, and several personality traits. The higher an individual scored on self-objectification, the more likely she was to have a high degree of mental health problems. Participants high in self-objectification also reported more body shame, more anxiety (i.e., neuroticism), and more symptoms of depression. Although self-objectification was not related to body dissatisfaction, body dissatisfaction had a significant correlation with depression.

Both the original study by Fredrickson, et al, (1998) and the later study by Hebl, King, and Lin (2004) demonstrated some of the consequences of being in a heightened state of self-objectification. In addition, Miner-Rubino, Twenge, and Fredrickson's (2002) study demonstrated correlations between trait of self-objectification and mental health problems. As proposed by objectification theory, if these negative consequences of self-objectification result from constant sexual objectification, would the effects be the same for women who choose to display their sexuality and voluntarily increase their probability of having a sexually objectifying experience? In other words, when either overt or subtle sexual objectification experiences are intended and expected, even enjoyed by an individual, does its influence remain negative?

Sexual objectification among self-sexualizers. A small number of researchers have found that women respond to sexual objectification experiences in different ways. Ronai and Ellis (1989) conducted a study with women who stripped for a living (e.g., women who intentionally displayed themselves as sexual objects for work). The purpose of the study was to understand strategies used by table dancers when they interacted with

their customers. Data were primarily from the personal experiences of the author of the study who worked as a stripper to pay tuition. Additional data were collected through on-site observation of a strip dance club located in Florida, U.S. Researchers reported that some dancers enjoyed the feeling of “conquering and being in control,” while others felt “degraded and out of control” (p. 282).

Similar responses were reported in a study with employees at Hooters, a restaurant where female employees are sexually objectified. Moffitt and Szymanski (2011) were interested in the experiences of women where sexual objectification is promoted and allowed. Data collection occurred via observational methods (i.e., five observational periods) conducted in two restaurants and through interviews with 11 heterosexual women working at Hooters. The interviews lasted about 45 minutes and were audio recorded and transcribed. The interview questions centered on motivations and experiences of working at Hooters as well as any changes experienced since they began working at Hooters. From the interview, researchers found both positive and negative experiences working in this sexually objectifying environment. Some women reported that their self-confidence and self-esteem increased and they became outgoing as a result of working in the environment. Others reported uncomfortable experiences from receiving “powerful contradictory messages and felt unable to act on either” (p. 78) and experiencing a “bad vibe” and “creepy” customers (p. 85).

Even though some women reported that they felt “good,” “in control,” or “enjoyed” being sexually objectified, these positive feelings were not necessarily long lasting. This raises the question of whether is it possible that those feelings resulted from a sense of false empowerment (Liss, Erchull, & Ramsey, 2011). In sexually objectified

situations, women may feel they have the power to evoke men's positive judgments and desire while men have the power to judge (Lynch, 2012). Women's feelings of empowerment are granted by men through receiving approving looks, attention, and complementary comments on their appearance but only if their physical appearance conforms to narrowly defined standards (APA, 2007).

Self-objectification and self-sexualization. The first dimension of self-sexualization, a woman knowingly engages in sexual subjectification is based on the APA definition of self-sexualization, that is, treating and experiencing oneself as a sexual object. The APA definition of self-sexualization is comparable to the concept of self-objectification. While the APA definition of self-sexualization was inspired by Fredrickson and Roberts's (1997) definition of self-objectification, the definition of self-objectification by Fredrickson and Roberts (1997) was inspired by Bartky's (1990) definition of sexual objectification (see p. 41 of this manuscript). Both concepts are similar in their conceptual definitions. The conceptual definition of each concept contains the notion of objectification of the self – one refers to seeing oneself as an object from an observer's perspective (i.e., self-objectification), while the other refers to thinking of oneself as a sexual object to be used by others (i.e., self-sexualization by the APA). However, it is possible that the “object” in the definition of self-objectification includes a sexual component because the theory of self-objectification claims internalization of experiences wherein a person is treated as a sexual object. For example, if a self-objectifier places importance on physical attractiveness (e.g., symmetrical features), a self-sexualizer may place greater emphasis on sexual attraction (e.g., large breasts). In one way, the concept of self-objectification is broader than self-sexualization for it

includes general appearance, while self-sexualization has a focus limited to sexuality. However, when seen another way, self-objectification is narrower than self-sexualization because it does not include, as self-sexualization does, three other dimensions (i.e., the locus of an individual's value, definitive standards of sexual attractiveness, and acceptance of inappropriately sexuality).

According to self-objectification theory, sexual objectification is a precondition of self-objectification. A woman adopts the objectified view, when she is constantly exposed to environments where women are sexually objectified, either directly (e.g., staring) or indirectly (e.g., watching a music video where a person is portrayed as a decorative sexual object). The theory does not distinguish possible positive experiences from sexual objectification (e.g., feelings of acceptance or being desired by men) from negative experiences. Regardless of whether the experience was positive or negative to her, she internalizes the sexually objectified experience.

In case of self-sexualization, however, the APA (2007) claimed that a person internalizes the socially accepted and approved standards of sexiness when that person learned that sexualized behavior and appearance is rewarded by society overall and by close others (e.g., peers). According to the APA (2007), it is the desire for social approval and benefits derived that motivates women to self-sexualize. Women may receive the benefits from self-sexualization directly from her own experiences (e.g., avoid punishment, such as a ticket, when she sexually exposes herself) or indirectly through the media (e.g., watching a celebrity receive approval as a result of her sexual appeal). Yet, this claim still needs empirical evidence in order to be conclusively supported.

The first dimension of self-sexualization, sexual subjectification, can be seen as an extension of the definition of self-sexualization provided by the APA (2007). In sexual subjectification, a woman still treats herself as if she were a sexual object, yet the treatment is willingly and freely chosen by the woman. A self-sexualizer believes that sexual subjectification is pleasurable and playful especially in conditions wherein she succeeds in receiving men's praises for her sexual desirability.

The second dimension: Value from sexual appeal or behavior. The second dimension of self-sexualization is that a woman thinks her worth comes primarily from her sexual appeal and behavior, to the exclusion of other personal characteristics. This dimension refers to the importance of sexuality in an individual's thoughts about self.

A contingency of self-worth. A contingency of self-worth is comparable to the concept of the second dimension of self-sexualization. A contingency of self-worth refers to the domain or domains on which a person's self-esteem is based (Crocker & Wolfe, 2001). A person must satisfy the domain in order to have high self-esteem. For example, if a person's contingency domain is in academics, then successes and failures in academic performance will determine how valuable the person perceives oneself. The person must excel in academics to have a sense of self-worth.

Crocker and Wolfe (2001) identified seven domains of self-worth contingencies among college students. They are appearance, social approval, academic competency, success in competition with others, family support, virtue, and God's love. A person can simultaneously hold several contingencies of self-worth and the relative importance of each may vary by contingency.

Although sexuality is not listed as one domain of contingency by previous researchers, self-sexualizers (i.e., those placing primary value on their sexuality) may list sexual appeal or behavior as one contingency of self-worth. For them, sexual appeal is an important domain of self-worth and this domain must be satisfied to have high self-esteem. They may also base their self-esteem on other contingencies besides sexuality, such as others' approval, but their self-esteem would be also dependent on sexual appeal or desirability.

Sexual esteem. Although sexual esteem seems similar to self-sexualization, these two concepts are different. Sexual esteem is defined as a tendency to favorably evaluate one's sexual competence in relationships (Snell & Papini, 1989). In other words, sexual esteem is defined as the degree to which an individual thinks of oneself as a good sexual partner.

It is possible that a woman thinks of herself as a worthwhile person because of her sexual competency. However, it is also possible that a woman feels competent in her sexual ability, regardless of how valuable sexual competence is for her. It is equally possible that a woman valued her sexual appeal, regardless of how good she thinks of herself as a sexual partner. In any case, whether she values her sexual appeal may not be related to her sexual competency (i.e., sexual esteem). Self-sexualizers are individuals whose self-worth is based on sexual appeal, no matter how competent they are as sexual partners. (Figure 2 highlights the possible differences between self-sexualizers and sexual esteem).

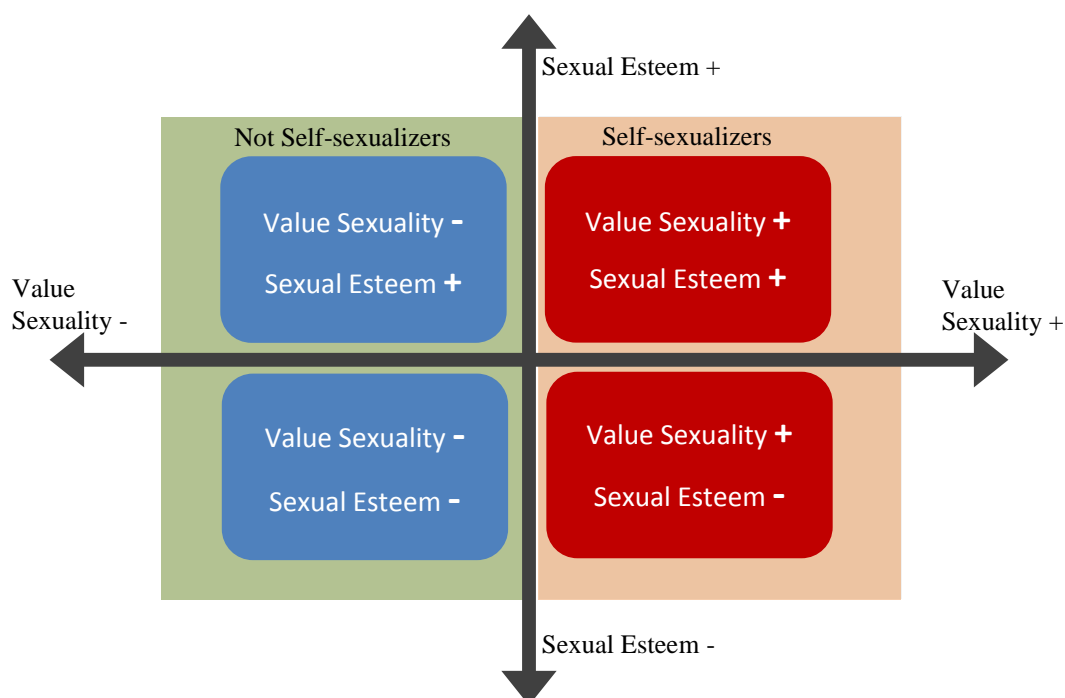


Figure 2. Self-sexualization and sexual esteem. The x-axis represents the value of sexuality. The y-axis represents sexual esteem. Red colored groups represent self-sexualizers.

The third dimension: Equates physical attractiveness with being sexy. The third dimension of self-sexualization is that a woman thinks that to be attractive one must be sexy. Or put another way physical attractiveness is equivalent to sexiness. It is possible to manage appearance to be attractive in an aesthetically pleasing way by wearing proper attire for an occasion (e.g., beautify, charming, elegant, graceful, stylish). However, the self-sexualizers consistently direct their appearance management efforts to highlight their sexual appeal as the only way to appear attractive. Similar to this distinction, Smolak, Murnen, and Myers (2014) described the differences between an attractive appearance and a sexual appearance. They suggested three characteristics of attractiveness: a well-groomed appearance (e.g., clean hair), within the boundary of

social norms (e.g., average size body type), and looking “natural” (p. 2). On the other hand, they identified a sexy appearance as emphasizing sexualized body parts, such as breasts or buttocks. Self-sexualizers believe that they are not attractive unless they wear sexy clothing or modify their bodies to highlight their erogenous traits.

There are several potential explanations for this equation of physical attractiveness with being sexy. The mass media is an effective vehicle for communicating the ideal appearance of women (e.g., Kim & Ward, 2012; Ward & Friedman, 2006). Yet, as noted previously, in the hyper-sexualized culture that we live in, stylized images of attractiveness in the media are frequently equivalent to pornographic sexiness. It is difficult to find images of women in media that are not sexualized (Machia & Lamb, 2009). Therefore, it is possible that massive exposure to images of women in the media increases the potential to experience portrayals of sexualized women as “attractive” women.

Cultivation theory. Although images of women are sexualized and stereotypical, a majority of women seem to endorse the images. Cultivation theory, developed by Gerbner, Gross, Morgan, and Signorielli (1994), discusses television’s influences on viewers’ beliefs and attitudes. According to the theory, spending a large amount of time living in virtual reality by watching television contributes to viewers’ conception of social reality. Unlike a short-term effect, the viewers’ conception grows or is cultivated in the process of massive and long term exposure of television reality. Thus, heavy exposure to a narrowly defined version of attractiveness in the media encourages viewers to accept a certain type of attractiveness as a true representation of reality.

The theory explains that highly stylized, stereotyped, and repetitive images portrayed on television serve as an impactful source of information for socialization. Socialization is a learning process wherein people obtain habits and values within their culture (Baumrind, 1980). The theory also argues that this cultivation process will heighten when individuals' direct everyday experience is congruent with the virtual reality presented on television. For example, let's imagine that a person saw a woman appearing in body revealing dress and getting out of receiving a speeding ticket in real life. Then the person saw a television scene where a woman in body revealing dress received free merchandise. In this example, the person's real life experience was congruent with the virtual reality on television. If this were the case, the cultivation process would be strengthened because of the close fit between real life and virtual life.

Along this same line of thought, even with heavy television consumption, some individuals will be less susceptible to cultivation due to moderating factors such as religious beliefs or due to their education. Let's take the aforementioned example of a person who saw the television scene of a woman getting out of a speeding ticket. If the person knew that flirting or bribing insults the integrity and may offend the police, then, the person's real life would not be congruent with the virtual reality on television. In this case, the cultivation process is less effective.

The fourth dimension: Acceptance of inappropriate sexuality. The fourth dimension of self-sexualization is that a woman accepts inappropriate sexuality which includes inappropriately imposed sexuality. When the APA (2007) explained the inappropriate imposition of sexuality, they especially related it to children being imbued

with adult sexuality. However, as the APA (2007) acknowledged, inappropriate sexuality can be imposed upon anyone.

By definition from *Collins Thesaurus of the English Language*, inappropriate refers to improper, unacceptable, unsuited or ill-suited, and incongruous. Inappropriate sexuality includes socially improper and/or morally unacceptable sexual beliefs and behaviors, such as sexual degradation, sexual aggression, verbal and physical sexual abuse. It also includes disinhibited sexual behaviors, such as prostitution, exposure of genitals, or masturbation in a public place (Queensland Health, 2011).

The fourth dimension of self-sexualization refers to acceptance of inappropriate sexuality as part of one's own standard of sexuality. This includes accepting excessive display of sexual affection in public spaces as well as disinhibited sexual exposure in public. For example, a student at the University of Southern California made the news as she publicly engaged in sexual intercourse on the roof of a campus building in 2011 (Lopez, 2011). Voluntary participation in flashing one's breasts in public bars can be categorized as a type of disinhibited sexual exposure. Role-playing in depictions of rape is also an example of acceptance of inappropriate sexuality.

In addition to self-imposition, acceptance of inappropriate sexuality also includes acceptance of inappropriately sexuality imposed upon oneself by others. This includes acceptance of (e.g., laughing at) sexually degrading jokes, sexual harassment, and sexual behaviors that are forced by others (e.g., anal penetration, flashing behaviors when forced). The popularity of Tucker Max, a young male blogger who posted his hook-up stories on his website, illustrates a type of sexual degradation acceptance. He has a large male and female fan base for his books and movies, even though his stories include

leaving a sex partner naked on the street, calling a sexual partner a cum dumpster, and hiding a friend in his closet to videotape his having sex with a woman (Lynch, 2012). Lynch (2012) explained that he used humor as means to excuse his misogynic stories. Freud (1960) called this type of humor as hostile humor because it insults a person, reveals flaws, and puts the person into destruction or suffering. Mutual participation in hostile humor entails joining in with the insulting of a target person. It provides a cathartic reduction of aggression for the target of the jokes while concealing the destructive motives of the instigator.

Acceptance of sexist humor. Researchers have studied the relationships between enjoyment of sexually assaulting humor, rape supportive attitudes, and tolerance of sexual harassment (Ryan & Kanjorski, 1998). For example, Ryan and Kanjorski (1998) were interested in understanding why individuals enjoyed sexist jokes and how such enjoyment linked to other variables including rape myth acceptance, acceptance of interpersonal violence, adversarial sexual beliefs, likelihood of rape, and various forms of aggression (e.g., psychological, physical, sexual). A total of 399 undergraduate students (57% were female, 92% were Caucasian) participated in their research. Among men, enjoyment of sexist jokes positively correlated with all variables except for partner injury. Male participants who enjoyed sexist jokes were more likely to accept rape myths (e.g., believe women are inviting rape when they talk and act sexy), accept interpersonal violence (e.g., believe being roughed up is sexually stimulating to many women), have adversarial sexual beliefs (e.g., believe sexual relationships are fundamentally exploitative), be interested in rape (e.g., possibility to force someone to engage in a sexual act if they could be assured of no report or punishment), and to be psychologically

(e.g., call a partner fat or ugly), physically (e.g., push a partner), and sexually aggressive (e.g., insist on oral or anal sex) to partners than men who did not enjoy sexist jokes. Not surprisingly, men who enjoyed sexist jokes were also likely to believe it was acceptable to tell sexist jokes, were likely to tell the jokes, and viewed the jokes as not offensive.

For women participants, women who enjoyed sexist jokes were more likely to accept interpersonal violence and have adversarial sexual beliefs, although the correlations between enjoyment of sexist joke and other variables were lower when compared to male participants. Similar to men, women who enjoyed sexist jokes were also likely to believe it was acceptable to tell the jokes, were likely to tell the jokes, and indicated the jokes were not offensive. Compared to men, however, women in general were significantly less likely to think the jokes were acceptable and indicated they were offensive. Interestingly, women did not differ from men in their likelihood to share the jokes.

Tolerance for sexual harassment. Similar to the research on enjoyment of sexist humor, Reilly, Lott, Caldwell, and DeLuca (1992) investigated tolerance for sexual harassment with other variables. They examined the relationships between adversarial sexual beliefs, likelihood to rape, adherence to rape myth, experience as a sexual victimizer and tolerance for sexual harassment. A total of 920 undergraduate students (58% were female, 90% were Caucasian, 95% were never married, 96% were heterosexual) participated in the study. Students from 23 classes across diverse majors (e.g., management science, psychology, English, nursing) at the University of Rhode Island were asked to fill out a self-report questionnaire during class time. The researchers found that male participants who were tolerant of sexual harassment (e.g., believed that it was

natural for a male to make sexual advances to a female he finds attractive) were likely to hold adversarial sexual beliefs, being accepting of rape myths, be high in likelihood to rape, and have experience as a sexual victimizer (e.g., have experience with using some level of coercion or force). For the women, participants who tolerated sexual harassment were also likely to hold adversarial sexual beliefs and accept rape myths.

Self-sexualizers may share some similarities with those who accept degradation of women through jokes or who tolerate sexual harassment. Although research about women who intentionally and playfully put on inappropriate sexuality (e.g., playing a role in a scene from rape pornography) has not yet been conducted, it is possible that self-sexualizers are less offended by sexist jokes or stories (e.g., stories by Tucker Max) if the person lives a hyper-sexualized lifestyle (e.g., participates in the hook-up culture, a fan of Tucker Max blogs).

Section 3. Existing Instruments Related to Self-Sexualization

Some researchers have been working on the development of measures of self-sexualization. Some assessments directly measure self-sexualizing behaviors whereas others measure beliefs or attitudes toward self-sexualization. These assessments types of assessments include the sexualizing behavior scale (SBS) developed by Nowatzki and Morry (2009), the enjoyment of sexualization scale (ESS) developed by Liss, Erchull, and Ramsey (2011), the sex is power scale (SIPS) developed by Erchull and Liss (2013), and the self-sexualization behavior questionnaire for women (SSBQ-W) developed by Smolak, Murnen, and Myers (2014). Following is detailed information on each of these measures including why each assessment does not meet the current need. (Information about existing instruments is summarized in Table 2).

Sexualizing behavior scale (SBS). Nowatzki and Morry (2009) developed the sexualizing behavior scale. The scale is designed to assess intention to participate in sexualizing behaviors and acceptance of sexualizing behaviors for women. The scale was developed to examine links between sexually objectifying media consumption, internalization of ideal body images, self-objectification, and self-sexualizing behaviors. The researchers did not present detailed information about scale development procedures nor did they share information on the reliability and validity of the scale. The SBS contains 20 activities. Ten activities are relevant to sexualizing behaviors, while the other activities are adventure activities (e.g., bungee jumping, caving excursion). A range of sexualizing activities was included: Activities related to clothing choice (i.e., wearing clothing labeled “porn star,” wearing an item with the Playboy bunny logo), alternation of dress (i.e., flashing breasts for the Girls Gone Wild videos), body modifications (i.e., having breast implants), purchasing behaviors (i.e., purchasing a female nude calendar for your boyfriend), and other behaviors (i.e., taking a pole-dancing or strip class, participating in a wet T-shirt contest, going on spring break parties, dancing provocatively with female friends at a club, attending a female nude dance bar with boyfriend or male friends). The mean scores of these sexualizing activities were calculated for the results. Participants were asked to indicate how likely they were to participate in the activities as well as how appropriate they thought the activities were for women in general. The activities were listed in random order when participants responded to the scale. Responses were made on a 5-point scale ranging from 1 (not very likely or not at all appropriate) to 5 (very likely or completely appropriate).

Researchers used the SBS as a dependent variable and examined its relationship with five other variables – media consumption, internalization of ideal body images, and the following traits: self-objectification, sexism, and hyperfemininity. A total of 207 female undergraduate students between 18 and 24 years old participated in the study. Participants were Caucasian (86%). Participants answered the questionnaires in a classroom setting. The researchers found that participants who consumed more media containing sexually objectified images showed a higher intention to participate in sexualizing behaviors. The media consumption also had a significantly positive relationship with acceptance of sexualizing behaviors for women in general. Hyperfemininity had a significantly positive relationship with sexualizing behaviors, while sexism did not.

Researchers tested a structural equation model to examine the mediation effects of internalization of ideal body images and self-objectification on the relationship between media consumption and sexualizing behaviors. Both ideal body image internalization and self-objectification were significantly related to media consumption but they did not mediate the link between media consumption and sexualizing behaviors. Although the SBS can be a useful tool in the measurement of behavioral intention, this scale did not capture underlying beliefs and attitudes of the concept of self-sexualization that lead to specific self-sexualizing behaviors. For example, the scale assesses if a woman would participate in a wet T-shirt contest but not whether she thinks of herself as a sex object to be displayed or to what extent she equates her self-worth to her sexual appeal.

The SBS contains a wide range of self-sexualization behaviors that occur in the hyper-sexualized culture (e.g., taking a pole-dancing or strip aerobics class, attending a

strip club with male friends). Just as the researchers were able to find an association between media consumption and personal traits (i.e., hyperfemininity, sexism) related to sexualizing behaviors, the SBS has the potential to provide an explanation of the participation and embracement of hyper-sexualized culture where pornographic depiction of women is considered chic. For the same reason, however, researchers have criticized the SBS for containing only extreme sexualizing behaviors because they may not apply to young adults if they may not even have had the opportunity to experience them (Smolak, Murnen, & Myers, 2014).

Enjoyment of sexualization scale (ESS). While the SBS assesses acceptance of sexualizing behaviors for both the self and for other women, the enjoyment of sexualization scale developed by Liss, Erchull, and Ramsey (2011) was designed to measure the subjective sense of enjoyment received when an individual experienced sexualized attention. The purposes of their study were to both develop and validate the ESS and to explore whether the enjoyment of sexualization protects against the negative consequences of self-objectification. The ESS scale was developed in study 1, a construct validity check was conducted in study 2, and the empirical test using the ESS as a variable in relation to self-objectification was conducted in study 3.

These researchers defined self-sexualizing behaviors as “behaviors that encourage their own sexualization, such as pole dancing” (p. 55). They operationalized the enjoyment of sexualization as enjoyment of appearance-based attention from men. Before they conducted study 1, they developed 12 assessment items. Limited information about the procedures taken to arrive at the 12 items was presented. They stated that the 12-item

assessment was developed based on a review of literature on women's enjoyment of the male gaze as well as informal discussions with young women.

A total of 212 women participated in study 1, the development of the ESS measure. Their average age was 18.72 years, they were heterosexual (97.2%), Caucasian (83.5%), and self-identified as in either the middle (49.1%) or upper-middle socioeconomic class (42.5%). They were recruited from a psychology department subject pool in a university and their participation was a mandatory course requirement. They completed a 30-minute online questionnaire of the ESS. Responses to each item were made on a 6-point scale ranging from 1 (disagree strongly) to 6 (agree strongly).

An exploratory factor analysis (EFA) with oblimin rotation was conducted. They retained eight items loaded on one factor out of two factors for the final version of ESS, because the first factor accounted for 41.7% of variance. The eight items were: It is important to me that men are attractive to me; I feel proud when men compliment the way I look; I want men to look at me; I love to feel sexy; I like showing off my body; I feel complimented when men whistle at me; when I wear revealing clothing, I feel sexy and in control; and I feel empowered when I look beautiful. The average score of all eight items was 3.82 with a standard deviation of .87 and the internal consistency was reported as .85 (i.e., Cronbach's alpha).

A total of 227 women participated in study 2, the construct validity check of the ESS. Their average age was 21.37 years (range from 18 to 25 years) with a standard deviation of 2.36. Participants were heterosexual (100%), Caucasian (81.1%), self-identified as in either the middle (44.2%) or upper-middle socioeconomic class (30.4%), and completed either some college or had earned a bachelor's degree (85.2%). They were

recruited through a social networking site (i.e., Facebook) posting. Participants completed an online questionnaire measuring six variables, including the ESS, at times and locations convenient to them. The other five scales included in the questionnaire were the objectified body consciousness Scale (OBCS; body surveillance, body shame and appearance control beliefs), self-objectification questionnaire (SOQ), the interpersonal sexual objectification Scale (ISOS; perceived body evaluation by others and unwanted sexual advances by others), the contingencies of self-worth Appearance subscale (CSW-A), and the sexualizing behavior scale (SBS).

A confirmatory factor analysis (CFA) with maximum likelihood estimation was conducted and confirmed the unidimensionality of the ESS. The average score on all eight items was 4.03, a little higher than the average score in study 1 (i.e., 3.82) with a standard deviation of .91 and the internal consistency of .86. Positive correlations between the ESS and all other scales (i.e., SOQ, ISOS, CSW-A, SBS) were found, except with a subscale of the OBCS, belief that one can control appearance. The correlations were less than .50 indicating the ESS construct was distinct from other scales.

After developing and examining validity of the ESS, study 3 was conducted to investigate the role of the enjoyment of sexualization – whether the enjoyment reduces the negative consequences of self-objectification. A total of 282 women participated in study 3. Their average age was 25.45 years with a standard deviation of 9.8. They were heterosexual (81.9%), Caucasian (83.5%), self-identified as in either the middle (48.2%) or upper-middle socioeconomic class (35.3%), and completed either some college or earned a bachelor's degree (92.2%). About 19% of them were students in psychology courses at a university and received partial course credit for participation. The remaining

participants were recruited online via a snowballing method from academics list serves and entered into raffles for retail gift cards. Students completed an online questionnaire comprised of eight variables in computer labs. The eight variables were: the ESS, the OBCS (i.e., body surveillance and body shame), attitudes towards stereotypical role of women (attitudes towards women scale; AWS), hostile and benevolent sexism (ambivalent sexism Inventory; ASI), attitudes towards traditional feminine norms (conformity to feminine norms inventory; CFNI), attitudes and behaviors associated with disordered eating (eating attitudes test; EAT), self-esteem (self-esteem scale; SES), and depression (center for epidemiologic studies depression scale; CES-D). Other participants completed the same online questionnaire at times and locations convenient to them. The internal consistency of the ESS in study 3 was reported as .86.

Prior to testing the role of the enjoyment of sexualization, the researchers examined correlations between the enjoyment of sexualization and other variables. The results showed several significant positive associations with the enjoyment of sexualization (e.g., OBCS, AWS, ASI, CFNI, EAT). To investigate the prevention effect of the enjoyment sexualization from negative consequences, interaction effects in regression analyses were examined. The results showed significant interaction effects between the ESS and the two subscales of the OBCS (i.e., body surveillance and body shame) in predicting negative eating attitudes (EAT): Women who enjoyed sexualization and surveyed their bodies tended to have negative eating attitudes as compared to women who did not enjoy sexualization. Women who enjoyed sexualization and were high in body shame were also likely to have negative eating attitudes as compared to women who did not enjoy sexualization. No other interactions were found relative to self-esteem or

depression. Thus, the moderating effect of the enjoyment of sexualization as a prevention of negative consequences was not supported.

Although the ESS had acceptable internal consistency reliability, the ESS seems to have some limitations in its validity. The researchers gathered some evidence for both convergent and discriminant validity by examining the correlations with other similar concepts (i.e., OBCS, SOQ, ISOS, CSW-A, SBS). However, whether the scale has both content validity as well as construct validity is in question. Content validity is concerned with whether an instrument covers all dimensions of the concept that is measured and no aspect is left out. Construct validity is concerned with whether an instrument reflects concepts and corresponding theoretical framework (Frankfort-Nachmias & Nachmias, 2008).

Specifically, the researchers operationalize the ESS as enjoyment of males' sexualized and appearance-based attention. The concept of enjoyment relates to a feeling or condition of pleasure. However, the item "it is important to me that men are attracted to me" relates to what a person values. Similarly, the item "I want men to look at me" is also related to a need or a desire instead of a pleasurable emotion. Also, this item may not have a direct relationship to attention based in sexualization. Instead, the item may cover a general desire for being appreciated, chosen, or socially desirable. Furthermore, the other item "I feel proud when men compliment the way I look" may not relate to sexualized attention. Not all appearance-based attention is sexualized attention.

In the case of "I love to feel sexy," the item is relevant to the emotion of pleasure, but it may not have a direct relationship with males in particular or with attention. It is true that feelings of being sexual often occur in interaction with or in the presence of the

opposite sex. However, it is also possible that women can have feelings of sexiness without receiving sexualized attention from men. If the item were stated as “I love to feel sexually admired by men,” then it contains the enjoyment from sexualized attention from men component. Finally, the item “when I wear revealing clothing, I feel sexy and in control” contains two ideas (i.e., is a double barreled question): Feeling of sexiness and feeling of being in control. This two pronged question may have confused participants when they responded to it. For example, one may feel sexy but not necessarily have a feeling of being in control.

Besides validity issues, the ESS was not intended to assess the core concept of self-sexualization. Rather, the scale may measure a motivation for self-sexualization. It is possible that the enjoyment received from male attention serves as a motive to embrace sexualized experiences. In addition, although the researchers used a “pole dancing” example when they defined self-sexualization (p. 55), the scale did not include any items that reflect participation in a hyper-sexualized culture.

Sex is power scale (SIPS). In the two years since the ESS has been published, a second instrument was developed. The sex is power scale was developed by Erchull and Liss (2013). These researchers also developed the previously mentioned ESS measurement. Their research goal was to develop and validate the SIPS scale which was intended to measure women’s subjective sense of power gained through using their sexuality.

Researchers developed an initial 13 item assessment. Limited information about the procedures taken to arrive at the 13 items was presented. Among the 13 items, three were from the previous ESS measure (Liss, Erchull, & Ramsey, 2011). Researchers

stated that these three items were not included in the final ESS because the items did not load on the primary factor and had low factor loadings. In addition to these three items, researchers developed 10 additional items. How these items were developed was not described.

A total of 232 women participated in study 1 for the SIPS. They were recruited through personal visits to women's residence halls at a university in the east-coast U.S. Participants' ages ranged between 18 and 23 years. Their average age was 19.22 with a standard deviation of 1.24. They were heterosexual (94.0%). Most of them were Caucasian (78.0 %) and self-identified as in either the middle (48.3%) or upper-middle socioeconomic class (41.8%). They completed a paper questionnaire of the 13-item SIPS and were offered candy as an incentive. Responses to each item were made on a 6-point scale ranging from 1 (disagree strongly) to 6 (agree strongly).

An EFA was conducted. The 13 items initially loaded on three factors. Except for the first factor, the researchers claimed that the two other factors were "conceptually indistinguishable as both dealt with beliefs about how women in general may use their sexuality and beauty to gain power over men" (p. 41). Because of this reason, the researchers fixed a two-factor solution. This decision resulted in the 12 items. Among the 12 items, seven items loaded on one factor and this set of items was named the self-sex is power scale (S-SIPS). Items in this factor assessed beliefs that a woman gains power by using her beauty and sexuality. Items included: I use my body to get what I want; I can get what I want using my feminine wiles; My sex appeal helps me control men; If a man is attracted to me, I can usually get him to do what I want him to do; I like to use my

womanhood to my advantage; My sexuality gives me power; and I lead men on sometimes, but it makes me feel good.

The other factor included five items and was named the women-sex is power scale (W-SIPS). Items in the second factor assessed the belief that women in general use their beauty and sexuality to gain power. Items included: A beautiful woman can usually get what she wants; Beauty gives women power; Men are easily manipulated by beautiful women; Women can use their looks to control men; and Women can control men through sex. The internal consistencies were reported as .87 and .82 respectively.

In study 2 the researchers confirmed the factor structure of the SIPS with 217 women. Participants were recruited through a social networking site (i.e., Facebook) using a snowball sampling method. Their ages ranged from 18 to 25 years. Their average age was 21.37 with a standard deviation of 2.36. Participants were heterosexual (100%), Caucasian (81.1%), self-identified as in the middle (44.2%), upper-middle socioeconomic class (30.4%), or working class (21.7%). The majority of them went to some college or had completed more than two years of college (85.2%). Participants completed an online questionnaire containing the 12-item SIPS. The fit test for the two-factor solution from study 1 was conducted with CFA using M-plus with maximum likelihood estimation. The results showed acceptable model fit and item loadings. The internal consistencies of both S-SIPS and W-SIPS were .91 and .83 respectively. The correlation between the S-SIPS and W-SIPS was .59.

A total of 131 women participated in study 3 designed to support the convergent and discriminant validity of the SIPS. They were recruited from introductory psychology classes at a university located in the east-coast U.S. Participants received partial course

credit as an incentive. Their ages ranged from 18 to 40 years. Their mean age was 19.42 with a standard deviation of 3.13. Participants were heterosexual (96.2%), Caucasian (73.3%), and either in the middle class (51.1%) or upper-middle class (42.0%). In a classroom setting, participants completed questionnaires which consisted of five measures: The SIPS (both S-SIPS and W-SIPS), the ESS, the ambivalent sexism inventory (ASI; hostile and benevolent sexism), the objectified body consciousness scale (OBCS; body surveillance and body shame), and the interpersonal sexual objectification scale (ISOS; perceived body evaluation by others and unwanted sexual advances by others).

The S-SIPS showed positive relationships with the ESS, benevolent sexism of ASI, body surveillance of the OBCS, and body evaluation experiences by others of the ISOS. The W-SIPS was positively related to the ESS, both the benevolent and hostile sexism parts of the ASI, and both the body evaluation experiences by others and the unwanted sexual advances by others of the ISOS. The correlations with any scales were between .18 and .62, which indicated that the S-SIPS and W-SIPS were distinct constructs from each other as well as from other similar constructs (i.e., ASI, OBCS, ISOS).

Similar to the ESS, this scale does not directly assess the core concept of self-sexualization. The SIPS may capture one possible motivation or purpose for engaging in self-sexualizing behaviors, yet the scale does not include other conditions where self-sexualization occurs, such as whether or not a self-sexualizer presents herself as a sexual object. A woman who believes that she can gain power by using her sexuality may participate in self-sexualizing behaviors.

Another issue of the SIPS is its validity. The item “I lead men on sometimes, but it makes me feel good” from S-SIPS seems irrelevant to what it is supposed to measure; the item does not reflect a belief about sexuality to gain social power. To appropriately capture the intended concept, the item needed to be focused on the power gained by using sexuality.

Self-sexualization behavior questionnaire for women (SSBQ-W). Later, Smolak, Murnen, and Myers (2014) developed a scale to assess personal hygiene and grooming activities engaged in to appear sexually appealing. The scale is named the self-sexualization behavior questionnaire for women. The purposes of the study were to investigate gender differences in conceptualization of self-sexualization and to develop a scale to measure self-sexualization. The researchers defined self-sexualization as “intentionally engaging in activities expressly to appear more sexually appealing” (p. 1). The researchers conducted focus group interviews to gather information about self-sexualizing behaviors to generate assessment items for the questionnaire in study 1. Then the SSBQ-W was developed and its validity was examined in studies 2 and 3.

In study 1, a series of same-sex focus group interviews were conducted with a total of 31 female and 25 male undergraduate students at an arts institution. Their ages ranged from 18 to 22 years. They were Caucasian (over 80%). Interviews averaged an hour in length and were audio recorded. Participants were asked seven questions regarding norms of sexy behavior among students in general (e.g., what are the kinds of things women do to look sexy to men? What kinds of things do women do on a daily or regular basis to look sexy?).

From the focus group interviews, 12 behavioral norms regarding grooming to

improve perceived sexiness were found (e.g., wear cologne, remove genital hair). There were gender differences in ways to be sexy. For women, there were specific behaviors to be sexy such as wearing low-cut clothing, wearing special underwear, or removing body hair. There were substantial transformational efforts for women to appear sexy, apart from simply being attractive. On the other hand, men engaged in some behaviors to be sexy (e.g., body hair removal) but primarily paid attention to their hygiene.

In study 2, the researchers generated initial assessment items for a measure of self-sexualizing behaviors (19 behaviors for women and 18 behaviors for men) based on the results of their focus group interviews. Each item was designed for participants to respond to using a 5-point scale ranging from 1 (never) to 5 (always). Then, researchers had a total of 564 students at two liberal arts colleges (one in the Midwestern and the other in the Southeastern U.S.) complete an online questionnaire which consisted of the initial self-sexualizing behavior scale (SSBQ-W) along with measures of body surveillance, body shame, sexual consciousness, sexual assertiveness, body appreciation, and benevolent sexism. Participants were recruited through an e-mail notice and received class credit. The majority of them were female (71.5%), heterosexual (82%), and Caucasian (72%). The researchers reported that students at these colleges are typically from 18 to 23 years old.

After the preliminary analysis with the initial assessment items of the self-sexualizing behavior questionnaire for women (SSBQ-W), the researcher deleted five items which had truncated response ranges at the low end of the scale. With the remaining 14 items, EFA with quartimax rotation were conducted and resulted in 10 items loading on one factor with a Cronbach's alpha value of .83. The remaining items

were: wears cologne/perfume/scents, styles hair, removes or trims genital hair, wears tight or fitted clothes, wears dressy shirts and pants, wears shorts or short skirts, wears a low cut blouse or dress, wears a special bra, wears high heels, and wears specific jewelry. The researchers also had separate groups of female students (140 at Time 1 and 87 at Time 2) take the SSBQ-W two times, 2 to 3 weeks apart. Results of both stability and reliability were good.

The researchers continued to examine construct validity with the results from EFA. The SSBQ-W was compared with six other scales: two subscales of the objectified body consciousness scale (OBCS; body surveillance and body shame), two subscales of the sexual awareness questionnaire (SAQ; sexual consciousness and sexual assertiveness), the body appreciation scale (BAS; acceptance of and respect for one's body) and a subscale of the ambivalent sexism inventory (ASI; benevolent sexism). Results showed positive associations with the SSBQ-W, except for the BAS. The correlations coefficients were between .15 and .57. Furthermore, the correlations between the SSBQ-W and the other scales revealed substantial unshared variances indicating discriminant validity of the SSBQ-W from these other scales measuring related concepts.

The researchers went through the same process with the development of the self-sexualizing behavior questionnaire for men (SSBQ-M) which consisted of 12 items. However, the researchers stated that the results of the EFA were ambiguous and the reliability of the scale was not well supported. As a result, the researchers did not move forward with the SSBQ-M to the next phase (i.e., CFA, convergent and divergent validity).

A total of 93 female students participated in study 3. They completed an online

questionnaire which consisted of the SSBQ-W, the SBS, the ESS, the conformity to feminine norms inventory-appearance scale, hyperfemininity scale, and self-objectification questionnaire, as well as the body surveillance and body shame scales used in study 2. Students were recruited at the same two liberal arts colleges and received course credit for their participation. The majority of them were Caucasian (72%). Their ages ranged from 18 to 40 years with a mean of 20.68 years and a standard deviation of 2.64.

To conduct CFA, the researchers combined data from two different studies: data from the 93 participants in study 3 with the data from the 140 participants in study 2 (at time 2). The CFA was conducted with maximum likelihood estimation using STATA. After adding nine item error covariances, the model fit of the one factor solution was acceptable. Similar to study 2, the correlations between the SSBQ-W and other variables indicated adequate discriminant validity of the SSBQ-W from other related variables. There were substantial unshared variances and correlation coefficient values were below .50. The SSBQ-W had a significant positive association with the ESS, self-objectification questionnaire, body surveillance, and conformity to feminine norms inventory-appearance scale. The coefficient values of these associations were between .29 and .50. The SSBQ-W was not significantly correlated with the SBS, hyperfemininity, and body shame measures.

The SSBQ-W was true to the definition of self-sexualization as intentional engagement in activities to appear sexually appealing. This scale can be useful to understand general grooming activities to achieve sexual attractiveness. Participants were asked to indicate how often they engaged in specific grooming activities in order to “look

sexy.” However, some of activities could be seen as part of regular appearance management routine (e.g., wear cologne, style hair) rather than an intention to appear sexy. As the researchers indicated as one of limitations of their study, there is still a need to compare results when the grooming activities were to “look attractive,” rather than to “look sexy.”

In addition, the SSBQ-W has limitations in assessing self-imposed sexualization as defined by the APA (2007). For example, take the “seeing oneself as a sexual object” component of self sexualization. Women can manipulate their appearance to appear sexy without thinking of themselves as a sexual object. Because the researchers defined sexualization as grooming activities to appear sexy, the SSBQ-W is limited in its ability to gauge individuals’ values, attitudes, and behaviors (other than grooming) that reflect participation in a hyper-sexualized culture.

In addition to issues of validity inherent in some of these scales, all of the existing measures concerned with self-sexualization fall short in measuring all dimensions of the concept of self-sexualization as defined by the APA (2007). Moreover, the existing measures do not agree on the domains of self-sexualization. Although the definition of self-sexualization by the APA (2007) is widely referenced by researchers, no attempt has been made to capture the full domains of self-sexualization in a single measure. Thus, based on the definition of self-sexualization by the APA (2007), the content of self-sexualization was identified. Then, a new scale to measure self-sexualization will be developed according to the content identified.

Table 2. Existing instruments in the literature of self-sexualization.

Category	Literature	Description	Definition of self-sexualization	Reliability ^{a,b}	Sample size	Item	Scale
Sexualizing Behavior Scale (SBS)	Nowatzki and Morry (2009)	One's own likelihood of participating in sexualizing behavior (Sexualizing Behavior) and acceptance of the behavior for women in general (Sexualizing Acceptance).	None given. Implied from the definition of sexualization by APA (2007).	IC: none given	None given.	10 items (e.g., Taking pole dancing or strip aerobics class)	5-point scale from 1 (not very likely) to 5 (very likely)
Enjoyment of Sexualization Scale (ESS)	Liss, Erchull, and Ramsey (2011)	The subjective sense of enjoyment received when an individual received sexualized attention.	Behaviors that encourage their own sexualization, such as pole dancing.	IC: .85, .86, .86	Study 1: 212 women, questionnaire; Study 2: 227 women, questionnaire; Study 3: 282 women, questionnaire	8 items (e.g., I love to feel sexy)	6-point scale from 1 (disagree strongly) to 6 (agree strongly)
Self-Sex Is Power Scale (S-SIPS)	Erchull and Liss (2013)	Use of sexuality to gain power.	None given.	IC: .87, .91, .89	Study 1: 232 women, questionnaire; Study 2: 217 women, questionnaire; Study 3: 131 women, questionnaire	7 items (e.g., I use my body to get what I want)	6-point scale from 1 (disagree strongly) to 6 (agree strongly)
Self-Sexualization Behavior Questionnaire for Women (SSBQ-W)	Smolak, Murnen, and Myers (2014)	Behaviors explicitly aimed at being sexy, not simply being attractive or well-groomed on a daily basis.	Intentionally engaging in activities expressly to appear more sexually appealing.	IC: .83, TR: .82, .70	Study 1: 25 men and 31 women, focus group; Study 2: 403 women and 155 men, questionnaire; Study 3: 93 women, questionnaire	10 items (e.g., Wear shorts or short skirts)	5-point scale from 1 (never) to 5 (always)

^aIC, internal consistency (Cronbach's alpha).

^bTR, Test-retest

CHAPTER 3: Method

This chapter presents the procedures followed for developing and validating an assessment to measure all dimensions of self-sexualization that can be administered to young women. To achieve this research purpose the following procedures were followed: 1) development of a preliminary test blueprint from the literature review, 2) evaluation of the preliminary test blueprint, 3) development of the test specification with initial assessment items, 4) the first cognitive interview for developing assessment items, 5) evaluation of the test specification with initial assessment items, 6) the second cognitive interview for evaluating initial assessment items, 7) a pre-test, 8) pilot tests, and 9) a field test followed by cross-validation.

Test Development

According to the *Standards for Educational and Psychological Testing* (hereafter referred to as the *Standards*) by the American Educational Research Association, American Psychological Association, and the National Council on Measurement in Education (2002), the term test refers to an instrument for correctness or quality evaluation and the term assessment refers to a process for test information integration, while the terms scale or inventory are commonly used for measures of attitudes, interest, and dispositions. The *Standards* used the term test to refer to any type of evaluation device or method. Test development then, is the process of producing a scale of self-sexualization as well as gathering evidence for the validity and the reliability of such a scale following the procedures outlines in the *Standards*. Validity of the self-sexualization scale was established using both theoretical and empirical evidences.

For this research, the term “test” is correspondingly and interchangeably used with the term “scale” to mean a measurement device. Thus, the word “test takers”

were interchangeably used with “interviewees” when test takers were interviewed about the test (or the scale). The word “test takers” was also interchangeably used with “participants” when test takers took a test (i.e., questionnaire scales) to represent survey participants or when they were interviewed to represent interview participants.

Scaling approaches in test development. A hypothesis formulated in development of a scale is that the construct of interest is a property that can be quantified using a scaling rule (Crocker & Algina, 2006). Thus, self-sexualization is hypothesized as a construct that can be quantified and the quantified score can be located on a scale – a psychological continuum. A scaling approach used for this self-sexualization scale is the subject-centered method. The aim of the subject-centered approach is to locate individuals at various points on a continuum according to the amount of the property each individual possesses.

Development of the Preliminary Test Blueprint from the Literature Review

In general, the development of a psychological test starts with a statement of the purposes of the test (AERA, APA, & NCME, 2002). The purposes are followed by a description of how the test scores are intended to be interpreted, the appropriate population that the test will be applied to, and the construct to be measured with the test (the *Standards*, 1.2).

The primary purpose for which the test scores will be used is to locate young women at different points on a continuum of self-sexualization. The test scores are intended to assess the relative degree of which a young woman voluntarily sexualizes herself in comparison to an average woman from the sample population. The test scores are not intended to be interpreted as a measure of the ability to engage in sexualization of the self nor as competence in presentation of one’s sexuality. The test

scores also are not intended to be interpreted as a measure of mental health or personality disorder.

Although self-sexualization can occur at any point during the lifespan from childhood through adulthood, this study focuses on development of a scale intended to assess self-sexualization within young adult women between 19 and 29 years of age and living in the U.S. The scale is intended for use with this population because public sexual expressiveness and other self-sexualizing behaviors (e.g., female flashing of the breasts, sexting) by young women are common within this age group and members of this age group are exposed to environments high in sexualizing behavior (e.g., dance bars, college hook-up culture, sexy music videos, dating reality television shows). In addition, the U.S. has been repeatedly identified as a hyper-sexualized society (e.g., Attwood, 2009; Kammeyer, 2008; Levy, 2005; Lynch, 2012; McNair, 2002; Walter, 2010). The scale may not be suitable for use with other age groups and people from different cultural backgrounds unless the scale has been validated with those other populations (the *Standards*, 1.4).

Because no attempt has been made to understand self-sexualization in multiple dimensions, the literature related to self-sexualization was reviewed and the potential four dimensions of self-sexualization were proposed based on both APA's definition of sexualization and self-sexualization. The transition from the conceptual to the observational level of self-sexualization is illustrated in Figure 3. This serves as the frame for the development of the preliminary test blueprint.

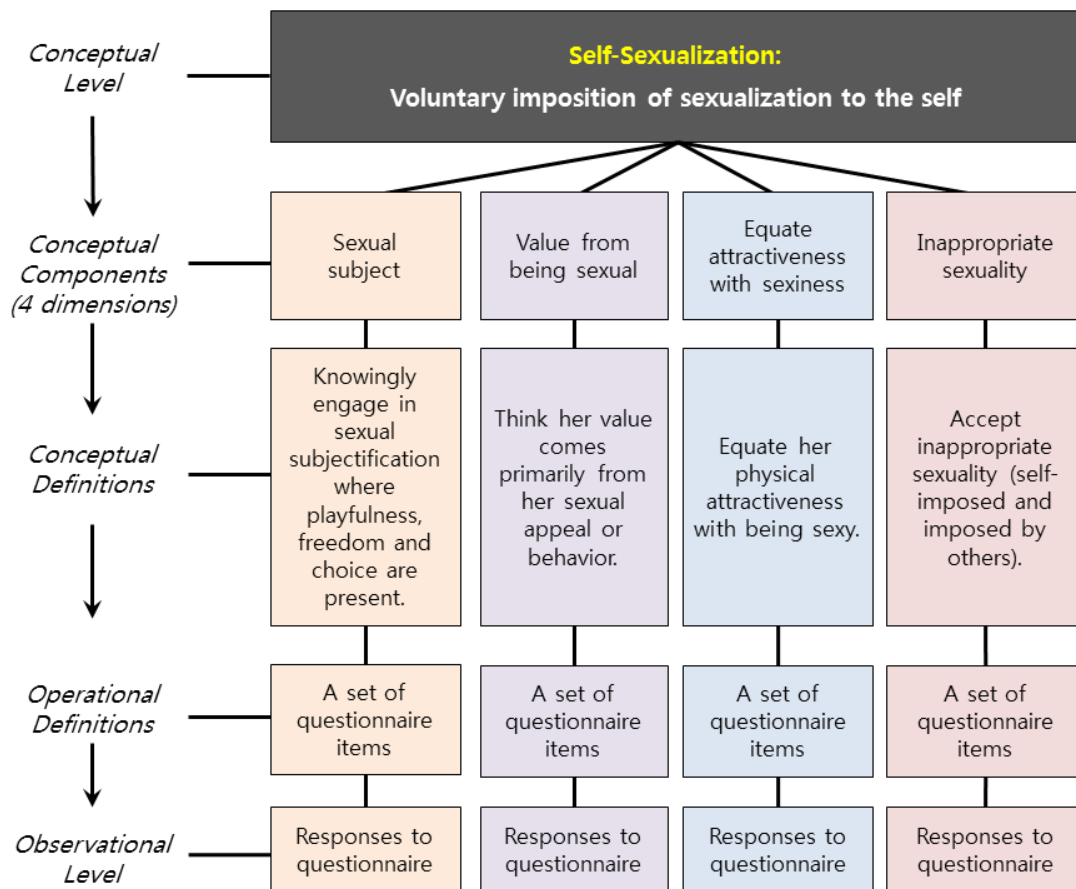


Figure 3. Illustration of the transition from the conceptual to the observational level of self-sexualization.

Expert Review of the Preliminary Test Blueprint

The primary test blueprint was reviewed by experts. Experts were asked to review the adequacy of the test blueprint for its ability to represent the content domains of self-sexualization. Expert review provides content-relevant validity evidence (AERA, APA, and NCME, 2002). Content validity is concerned with whether an instrument measures all aspects of the concept and no aspect is left out (Creswell, 2009). Because the opinions and decisions of expert reviewers provide validation, participants and procedures for selecting experts are described in the following paragraph (the *Standards*, 1.7). The invitation letter to experts, the consent

form, and the evaluation form for the test blueprint are presented in Appendix A-1, A-2, and A-3.

Potential reviewers were selected based on their expertise and research interests (the *Standards*, 3.5). Reviewers' expertise is in dress and the body, cultural influences on dress, social psychology of dress (i.e., particularly in areas of self-presentation and self-concept), or in cultural analyses (i.e., specifically the hypersexualized culture). Three experts at the University of Minnesota and five external experts were contacted to review the preliminary test blueprint developed from the literature review.

After approval to conduct the research was granted by the Human Subjects Committee of the Institutional Review Board (IRB), experts were contacted for their input. To recruit the eight potential expert reviewers, e-mail invitations were sent. For those who agreed to review the test blueprint, a preliminary test blueprint and a review form were sent. The review form included ratings (i.e., extremely disagree, somewhat disagree, slightly disagree, neither disagree nor agree, slightly agree, somewhat agree, extremely agree) for their agreement on the definitions of self-sexualization and the test blueprint. Open-ended questions for suggestions were followed after ratings (e.g., Do you have suggestions for improving the test blueprint? Please describe). Based on the feedback from the experts, the definitions and the test blueprint were revised. Expert's reviews and changes made were presented in the result section.

Among the eight experts contacted, three of them agreed to review the preliminary test blueprint. The first reviewer is a professor in the retail merchandising program at the University of Minnesota whose expertise is social psychological aspects of clothing. She has conducted many research projects and written books on

the field of fashion, including the social psychology of dress. She also has experience advising on measurement development.

The second reviewer is a professor in the textiles and apparel program at the University of Northern Iowa. Her expertise is in self-sexualization among women. She is actively involved in research on sexual misconduct on campus settings and gender issues. She is the author of a book on the cultural phenomenon of sexualization.

The third review is a professor in the social psychology at Drake University. Her expertise is in self-sexualization and self-objectification. She wrote her dissertation on motivations and distinctiveness in women's self-sexualization. She has widely published on the content of sexualization and sexual objectification in social sciences.

Development of the Test Specification

Developing a test specification required specifying the test design including the formats for response and the scoring procedures (the *Standards*, 3.6). Decisions regarding the test specification were included below.

Survey mode. An Internet based survey was created. Assessment items were presented in a questionnaire posted online. Visual design elements play important roles in Internet surveys (and mail surveys) compared to telephone survey (Dillman, Smyth, & Christian, 2008). Visual design and layout (e.g., even spacing for answer choices) followed guidelines suggested by Dillman, Smyth and Christian (2008). Specifically, when presenting the even numbered Likert-scale rating options, wording options (e.g., slightly disagree, slightly agree) were presented without specific numbers assigned to each response option (e.g., slightly disagree with 4, slightly agree with 5), because numbering gives impressions of weight although it may not be true

to the response options. For example, the number 5 could give the impression of being in the middle point in the rating scale, although there was no neutral middle point with even numbered Likert scale.

Norm-referenced test scores. The test is norm-referenced. A norm-referenced test score identifies whether an individual scored higher or lower on the test than other individuals who have taken the test (e.g., percentile ranks). Taking this approach means relative score interpretations are of primary interest, unlike criterion-referenced where absolute score interpretations are of primary interest (AERA, APA, and NCME, 2002). Criterion-referenced test scores are used to indicate absolute levels of performance of the test takers without referencing a norm group. An example of a criterion-referenced test is a driver's license test. The driver license test scores examine whether the test takers have minimal competency in driving.

The self-sexualization scale to be developed is not intended to measure absolute levels of self-sexualization but rather to assess individual's relative position in comparison other individuals who have taken the same scale. The test scores of this scale convey rank information. In other words, the meaning of the score of self-sexualization measurement is a rank within distributions of scores in comparison to the average scores of test participants.

A self-reported test. The measurement of self-sexualization is a self-report test due to the dispositional nature of self-sexualization. That is, it is assumed that no one knows better about personal beliefs, values, attitudes, and opinions than the individual.

Ordinal closed-ended format responses. Researchers decide on a response format based on the purpose(s) of a test as well as domain(s) of a test. Among several response formats, a Likert scale format is planned to measure the degree of self-

sexualization among women. A Likert scale is a widely used response format assessing attitude, beliefs, and opinions that fall along a continuum from positive to negative (DeVellis, 2012). Use of a Likert scale overcomes the challenges of the use of dichotomous items (either 0 or 1; true or not true) by assessing the intensity to which individuals' agreement with a statement.

Accordingly, both positive and negative sides were stated (i.e., To what extent do you personally believe the statement is TRUE or NOT TRUE). The highest weight of response to an item was assigned 10 and 1 was the lowest weight. The highest weight of response read "completely true," followed by "extremely true," "largely true," "moderately true," "slightly true." The lowest weight of response read "completely not true," followed by "extremely not true," "largely not true," "moderately not true," "slightly not true." For negatively worded items (e.g., I do not care whether I am sexually desirable or not), the weights were reversed.

A 10-point Likert scale assessing individuals' beliefs was later changed to an 8-point Likert scale assessing individuals' agreements (e.g., "complete agree" to "completely disagree") as results of expert's feedback on test specification (see Table 9) and the pre-test (see "Results from pre-test").

Scoring procedures. For scoring individual's degree of self-sexualization, the total sum score was initially proposed. That is, values of all items checked within a domain was summed up to compute an individual's score. However, as a result from expert's review on test specification, this scoring procedure was later changed to scoring the average value to represent the individual's location on a continuum of self-sexualization (see Table 9). The values of all items checked within a domain were averaged. The higher the score, the higher the degree of self-sexualization.

Instrument Development

The instrument item pool was developed per the preliminary test blueprint. Existing measures of related concepts were referenced in the development of the item pool. For example, assessment items from other contingency domains (e.g., appearance, social approval; Contingencies of Self-Worth Scale by Crocker, Luhtanen, Bouvrette, & Cooper, 2003) were adapted in the process of generating possible items for assessing the second dimension of self-sexualization, the contingency of self-worth on sexuality.

In addition, when writing items, a guideline developed by DeVellis (2012) addressing the process of writing items was adopted. The process began with a paraphrase of the statement of the construct to be measured. For example, when developing items to assess the second dimension that “individual value comes primarily from her sexual appeal or behavior to the exclusion of other characteristics,” the item development began with “I value my sexual appeal over other characteristics of me.” Then additional statements with the same idea were generated (e.g., My sex appeal is the most important part of me.) Reverse items were also developed (e.g., It is hard to feel good about myself without being sexy). Also, alternative statements of expressing critical ideas were sought (e.g., “I prefer to receive compliments on my sexy appearance over my other characteristics”). “Other characteristics” were substituted with terms such as “personality,” “intelligence,” and “friendliness.”

Cognitive Interviews for Preliminary Assessment Items – The First Set

To determine whether assessment items made sense to test takers, two sets of cognitive interviews with individuals who represented the population were conducted: the first interview was administered before sending the preliminary assessment items to experts’ review and the second interview was administered after revising

assessment items based on the experts' comments. The purposes of cognitive interviewing were to reflect the culture and language of the intended population of the self-sexualization measurement and to gather evidence of the validity of the test (the *Standards*, 12.3). This process provided the opportunity to detect wording errors, correct confusing words, and adjust concepts that a researcher and content experts might overlook (DeVellis, 2012). During the cognitive interviews, how each item was interpreted and understood was examined. Selecting the best words to represent the content to be measured also occurred during the process.

There are two major types of cognitive interviewing methods. One type of cognitive interviewing method is a think-aloud retrospective probing approach. In this method, retrospective probing questions are asked after the test takers respond to all assessment items, making it difficult for the test takers to recall their ideas at the point of probing. Due to the large number of possible assessment items for the four domains of self-sexualizing, a retrospective probing approach was not appropriate.

Another type of cognitive interviewing method is the verbal probing approach and particularly concurrent probing was used for this study. According to Willis (1999), a verbal probing method allows greater control of interviews, unlike a think-aloud interviewing method. By asking a series of probing questions, the interviewer can focus on relevant topics of interest while avoiding irrelevant and non-productive discussion. On the other hand, the use of probes has been criticized for possible artificiality and potential bias by leading the respondents to a certain type of response. To minimize potential artificiality and bias, respondents answered general questions (e.g., what do you think the questions are asking about?) before being provided a series of specific probing questions.

The typical procedure for probing interviews (Willis, 1999) starts with reading the assessment items to the test takers (e.g., To what degree do you agree with the following sentence: How sexy I look is an important part of who I am). However, in the current study, the test takers read assessment items out loud and responded to the assessment item (i.e., extremely disagree to extremely agree). Then, the interviewer asked a probing question (e.g., what does the term “sexy look” mean to you?) and the test takers responded. This process is called concurrent probing.

Participants for cognitive interviews. Participants were recruited through the use of fliers at several locations across the campus of the University of Minnesota and St. Catherine University. A recruitment flyer is presented in Appendix B-1. Qualified participations were heterosexual adult women 19 to 29 years of age who were familiar with the culture in the U.S. The qualifications, including self-sexualizing experiences and demographic characteristics, for serving as external experts of the content are presented in the results from the interviews (the *Standards*, 3.5).

Procedures for cognitive interviews. A face-to-face interview was conducted in a public space – either in available office spaces in the University of Minnesota and St. Catherine University or coffee shops near the campus. At the beginning of each interview session, the interviewer introduced herself and the purpose of the research was introduced.

The interviewees read each item and answered a series of probe questions. The probe questions were combinations of scripted and spontaneous probing types. The scripted probe questions included the following: Can you rephrase the question you just read in your own words? What do you think the question is asking about? Why? Was that question easy or hard to answer? Do you find any words in the question that you or your friends would not use? What alternative words do you suggest? To reduce

chances for possible artificiality and potential bias, interviewees took enough time to answer some questions, such as “what do you think the questions are asking about?” The interview sessions were audiotaped and the researcher took notes during the interviews. As an incentive for participation in the one-hour or the one and half hour interviews, a \$10 Target gift card was offered. The consent form and the scripted probes are presented in Appendix B-2. The revision of the preliminary items resulted in the first version of a self-sexualization scale (SS1). See Table 3 for the outline of changes of the scale.

Table 3. Outline of changes of the self-sexualization scale versions

Versions	# of items	Changes made from
Preliminary assessment	123	Generated from literature reviews
SS1	61	Interview with 3 judges representing defined populations.
SS2	74	Experts' review by 3 content experts.
SS3	68	Interview with 10 judges representing defined populations.
SS4	71	Pre-test with 4 participants.
SS5	68	Pilot test 1 with 51 participants. Pilot test 2 with 23 participants.
Final version of SS	26	Field test with 601 participants.

Expert Review on Test Specification with Preliminary Assessment Items

Test specification requires experts' judgment and the quality of assessment items relies on the experts' review and pilot testing (AERA, APA, and NCME, 2002). Experts' review on the test specification and assessment items ascertain content quality and representativeness (the *Standards*, 3.5).

Three experts were recruited to review the preliminary assessment items. One of them previously participated in the test blueprint evaluation. The reviewer is a professor in the textiles and apparel program at the University of Northern Iowa whose expertise is in self-sexualization among women. She is actively involved in research on sexual misconduct on campus settings and gender issues. She is the author of a book on the cultural phenomenon of sexualization.

The second reviewer is a professor in the department of fashion business at Sejong Cyber University in Seoul, South Korea. Her expertise is fashion marketing

and consumer behavior. Her dissertation included a modification of an existing scale assessing consumer perception of luxuriousness. She also has been involved in several research projects on the topic of the relationships between the self and clothing.

The third reviewer is a professor in the psychology department at the University of Minnesota whose expertise is in applied social psychology, impression management, and self-presentation. She has taught social psychology classes addressing self-objectification for several years. She has published many research studies addressing issues concerning nonverbal behavior and gender differences in self-presentation. She also published and advised on scale development.

These experts were asked to rate appropriateness of intended interpretation of the score, responses format, scoring procedure, and total number of constructs and items in each domain. They were also asked to rate the adequacy, clarity, conciseness, and offensiveness of the proposed assessment items (the *Standards*, 3.6). Open-ended questions for suggestions are followed by ratings of both test specification and assessment items. The evaluation form for the test specification with preliminary assessment items is presented in Appendix C-1 and C-2.

Based on feedback from experts, the test specification and assessment items were revised. Summary of evaluation and changes made to both the test specification and assessment items were documented (the *Standards*, 3.7). This review process resulted in the second version of a self-sexualization scale (SS2).

Cognitive Interviews for Assessment Items – The Second Set

The second set of cognitive interview for assessment items was administered. Recruitment for the participants and procedures of cognitive interview were followed the same as the first cognitive interview. Details are presented in the section of cognitive interviews. The results were reflected on the second version of a self-

sexualization scale (SS2) and the review process was resulted in the third version of a self-sexualization scale (SS3).

Pre-Test Interview

A pre-test was conducted with a small number of people who represented the population of interest. The purposes of the pre-test were to conduct a debriefing session with the respondents after they complete the questionnaires and to obtain an average time estimate for completing the questionnaire. During the debriefing, any remaining wording and clarity issues on assessment items were also identified. In addition, clarity on directions, procedures, and readability were ensured.

Participants of the pre-test. Four participants were recruited for the pre-test. Qualified participations were heterosexual adult women of 19 to 29 years of age. Three of them were recruited among the participants from the second cognitive interview; two of them scored relatively high on the self-sexualization scale and the last one scored low on the scale. The fourth participant was a new participant and recruited through a flyer. As an incentive for participation in a one-hour interview, a \$10 Target gift card was provided. The flyer for pre-test participant recruitment and the consent form are presented in Appendix D-1 and D-2.

Procedures of the pre-test. A pre-test was conducted in available office spaces at the University of Minnesota or at St. Catherine University. At the beginning of each pre-test, the interviewer introduced herself and the purpose of the research. During the test, the researcher observed test takers' reactions which may indicate difficulties or confusion (e.g., frowning, tilting one's head, long pauses, changing answers, scribbling). A series of questions was asked; How was the questionnaire? Did you have any questions while answering the questionnaire? Were there any hard questions? Why was it hard to understand (or answer)? How readable was the

questionnaire? Do you have any suggestions? The interviewer measured test duration time with a stopwatch while a participant was taking the questionnaire. The results from the interviews were reflected on the third version of scale (SS3) and resulted in a fourth version of a self-sexualization scale (SS4).

Pilot Test 1

A pilot test was conducted to determine whether the SS4 was adequate for main data collection. Specifically, the purpose of the pilot test was to detect deficiencies in test procedures and survey design and to identify nonresponse problems before administration to a large number of people. Evaluation of response patterns and correlations among assessment items was also conducted. Information drawn from the analysis of the pilot test was applied to survey design and procedure revisions as well as item revisions.

Participants of the pilot test. The scale was piloted with a small number of people among the members of Amazon MTurk as an online survey format. Amazon MTurk is a crowdsourcing Internet marketplace in which requesters such as individuals, researchers, and businesses post tasks. The tasks are called Human intelligence Tasks (HITs) and workers complete the tasks for pay. Requesters create and post any tasks that can be virtually done at a computer. Workers browse a list of available tasks and select the task that they want to do. Workers get paid through successful completion of each task. The amount of payment is set by requesters (e.g., 2 cents for participating in a 5-min survey). The payment is made through a credit card to a worker's account based on the quality of completed task. Amazon MTurk enables researchers to rapidly and inexpensively reach out to demographically diverse participants (Buhrmester, Kwang, & Gosling, 2011).

On Amazon MTurk, potential workers (i.e., potential participants) read a title and a short description of the survey before they decide to work on the task (i.e., survey). The title was “Answer a survey about your attitudes on sexuality. Eligibility: Heterosexual women, age 21 to 29, living in the US.” The task was described as a study to develop a scale to measure individuals’ attitudes toward one’s sexuality and activities related to sexuality (e.g., wearing sexy clothing, sexual encounters at parties). Key words for the task were “survey,” “young adult,” “women,” “21 to 29 ages,” and “heterosexual.” Reward per assignment was \$1.75. The specifications for participation were precisely presented in the result section (the *Standards*, 4.6). The consent form is presented in Appendix E.

Procedures of the pilot test. Participants were automatically moved to the survey site when they clicked the web-address hyperlink posted on the HITs. All items in the online survey were designed as voluntary except for the screening questions. The online survey could be completed at times and locations convenient to participants. Participants could chose not to answer any item in the questionnaire and were free to withdraw from participation at any time.

The survey was comprised of four major blocks: Consent information, six screening questions to filter eligible respondents, the main survey items, and 11 demographic questions. The screening questions included if the respondent is a heterosexual woman, between the ages of 21 to 29, currently living in the United States (and asked to provide zip code), living in the United States more than 15 years, and definitely familiar with the culture in the United States.

Analyses of the pilot test. A series of analyses was conducted to assess adequacy of the scale. First, descriptive statistics were examined to have a general understanding of the data as well as identify useful (or not useful) items. Second,

normality distribution of the total scores and item scores was examined. Third, item-total correlations were examined followed by estimation of item reliability.

Descriptive statistics. With the pilot data, descriptive statistics were reviewed (i.e., frequency, mean, median point, standard deviation) for the total score as well as scores of each assessment item. Having an item that has a mean close to the center of the range (e.g., an item mean near 4.5 for a 8-point Likert scale) is desirable (DeVellis, 2012). For example, if an item is skewed to the value 8 “completely agree,” the item wording is too general for everyone to agree. If this is the case, the item needs to be worded differently to capture variation. In addition, standard deviation provides some information on the variance of an item. If an item has a low variance the item may not be useful to include in the scale.

Normality. The histogram and Q-Q plot were drawn to examine whether the distribution of the total scores was normal. Normality was also examined at the item level. If the distribution of histogram is skewed near one of the end of the range or the distribution of Q-Q plot was out of the normal range, it means low variance which also can cause low correlations with other items. It may also indicate a failure to capture necessary values of the construct (DeVellis, 2012). Assessment items with skewed distribution were reviewed for either modification or elimination.

Classical test theory. To examine overall test performance and individual item performance, item analyses developed in the framework of Classical Test Theory (CTT) was conducted. The CTT, also known as the true score model, encompasses “a set of concepts and related techniques that has served as the basis for numerous measurement instruments and as a reference point for recent measurement approaches” (DeVellis, 2006, p. 50). The heart of CTT is that an observed score is the composition

of two hypothetical components, a true score and a random error (Crocker & Algina, 2006; DeVellis, 2006), as the following form

$$X = T + E$$

where X represents the observed score, T represents the true score, and E represents the error. The observed score is an actual score obtained from the test assessment. The true score is a score that can be found if an individual takes the same test for an infinite number of times (Kline, 2005). Because knowing a true score is impossible, the true score is an unobserved hypothesized score. The error score is random measurement error: the less random error, the more the observed score reflects the true score (Kline, 2005). A good item should capture a true score more while minimizing error.

Because a true score is yielded from an infinite number of observed scores, the true score should vary together with the observed score. The association between the true score and observed score has key information about how good an item is (DeVellis, 2006). The association – the variance shared between two variables – is measured by the squared correlation coefficient. Theoretically, the squared correlation between a true score and an observed score is the item's reliability (Webb, Shavelson, & Haertel, 2006). Because reliability cannot be measured directly, reliability is estimated through four methods in CTT (i.e., test-retest, parallel forms, split-half, internal consistency).

Internal consistency reliability. Reliability is concerned with an estimation of score consistency over repeated observations (Webb, Shavelson, & Haertel, 2006). Particularly, Cronbach's alpha is one type of coefficient of internal consistency reliability that is widely used for continuous data (DeVellis, 2012). Cronbach's alpha

provides a reliability estimation based on all possible covariations between internal items within a test (Webb, Shavelson, & Haertel, 2006).

In order to evaluate item performance, the computed Cronbach's alpha value when one of each item was deleted from the scale was compared to the value when all items were included. If removal of a particular item results in increase of Cronbach's alpha, the item was considered as a subject for modification or elimination from the scale. On the other hand, if removal of a particular item lead to decrease of Cronbach's alpha, the item was retained for the next version of the self-sexualization scale (SS5).

Item-total and inter-item correlations. Other item analyses developed in the framework of CTT was item-total correlations and inter-item correlations. Item-total correlations refer to correlations between each assessment item score and a total score based on all of the other items in the scale. Inter-item correlations refer to correlations between each pair of items based on all of the other items in the scale. Item-total and inter-item correlations were represented by Pearson product-moment correlation coefficient. The correlation coefficient served as item discrimination index which showed the effectiveness of an item in differentiating individuals in terms of level of the trait of interest (Hubley & Zumbo, 2013).

The correlation provides information about the strength and direction of the association. Having a strong positive correlation is ideal. However, in practice, the correlation between .20 and .50 also considered sufficient to be included as an acceptable item (Shultz, Whitney, & Zickar, 2013). In terms of item-total correlations, a relationship of below .2 or negative association indicates that the particular item does not correlate well with the rest of the scale items. Thus the item was either modified or eliminated from the future version of the self-sexualization scale after

careful review. The same approach was taken with the inter-item correlations. Items that had inter-item correlation values below .4 were carefully reviewed and considered for elimination from further analysis.

Pilot Test 2

Because there were major changes in pilot test 1, another pilot test was conducted with a small number of people from the members of Amazon MTurk. The same procedures and analyses were conducted with revised survey design and items. Results were applied to the development of the next version of self-sexualization scale (SS5).

Field Test

The self-sexualization scale (SS5) was administered as a large-scale assessment to a group of people who represent the study population among the members of Amazon MTurk. The data was split randomly into two groups using Excel. The one set of data was used for item analyses. The other set of data was used for cross-validation. After completing item analyses with cross-validation, the relationships between self-sexualization dimensions were examined.

Participants of the field test. The self-sexualization scale which resulted from the pilot tests was administered to a large number of people who represent the study population among the members of Amazon MTurk. Individuals who indicated that they participated in any of the previous pilot tests were prevented from participating in the field test for the main data collection. A total number of usable data was 601. The specification of the participants was presented in the result section (the *Standards*, 4.6).

Procedures of the field test. The same procedures from the pilot test were applied to the field test. The only change was the amount of reward per assignment. Compensation was increased to \$2.50 from \$1.75.

Analyses of the field test. Several analyses were conducted with the first set of field data. First, item-total correlations along with reliability tests were examined to extract items that were inconsistent with other items in the scale. Second, confirmative factor analyses were conducted to examine the dimensionality of the scale. Third, local item independencies were examined to prevent inaccurate estimation of item parameters. Fourth, item response theory analyses were conducted to examine the quality and performance of each assessment item. Finally, confirmatory analyses were conducted with the other set of data to cross-check the findings.

Item-total correlation. The same procedures for item-total correlation test from the pilot test were conducted with the field data (i.e., examination of the item-total correlation and the change in the Cronbach's alpha when a selected item was deleted).

Dimensionality. Confirmative factor analyses were conducted to examine the dimensionality in item responses using *R*. Particularly, unidimensionality of the proposed factor model of each dimension was tested. Unidimensionality of a scale means that all items of a scale share a single underlying latent factor as the only cause of covariation between items (DeVellis, 2012). The diagonally-weighted least squares estimation method for ordinal factor analysis was used. The factor loadings (i.e., standardized regression weights) and fit indices of one-factor model were examined to identify unidimensionality.

If the fit indices for the one-factor model indicated that the one-factor model

was not a good fit to the data, the item pairs that caused multidimensionality (i.e., items that correlated other than the one latent trait) were examined. That is, the correlations between the residuals for every pair of items after controlling for variances explained by one underlying latent trait. The items that had high negative correlations of residuals indicate multidimensionality (de Morton, Keating, & Davidson, 2008). Specifically, the correlation coefficient $|r| > .10$ was examined and eliminated.

When examining the CFA fit indices, the following guidelines were followed: the ratio of chi-square to degrees of freedom (χ^2/df) lower than 5.0 with the p -value higher than .05 indicate good fit and a smaller value of χ^2/df indicates better fit (Hair, Anderson, Tatham, & Black, 1998). The Root Mean Square Error of Approximation (RMSEA) value lower than .08 indicates acceptable fit, a value lower than .06 indicates excellent fit, and a value closer to 0.0 indicates better fit (Hair et al., 1998; Hu & Bentler, 1999). However, a RMSEA value above .10 would not be acceptable (Browne & Cudeck, 1993). The Bentler comparative fit index (CFI) and the Tucker-Lewis index (TLI) values higher than .95 indicate excellent fit and a value closer to 1.0 indicates better fit for both CFI and TLI (Hu & Bentler, 1999). The standardized root mean square residual (SRMR) lower than .08 indicates good fit and a value closer to 0.0 indicates better fit (Hu & Bentler, 1999). The weighted root mean square residual (WRMR) value smaller than 1.0 indicates good fit and a value closer to 0.0 indicates better fit (Yu, 2002).

Local item independence. The correlations of residuals also provided information of local dependency for every pair of items. Local item independence refers to independency of each item from other items in the scale, other than latent factors. In other words, response to a particular item should have no significant

association with responses to other items, except for the shared latent trait among the items (de Ayala, 2009). There should be no association when the effect of the latent factor is controlled. The items that had high positive correlations of residuals indicate local dependency (de Morton, Keating, & Davidson, 2008). Specifically, the correlation coefficient $|r| > .10$ was examined and eliminated.

The presence of local independence is one of the major assumptions (along with unidimensionality) of the item response theory analysis which was conducted with the main field data. When there were too many correlated residuals, which made identifying the problematic items difficult, items were grouped by their content before evaluating residuals of each pair of items. Residual correlations were examined by groups of items that shared similarity in their content. For example, when selecting items for the first dimension, items were separated into two groups: promiscuity and other objectifying related items. Then, item selection was made within each group of items.

Item response theory. Item response theory (IRT), also known as latent trait theory, refers to psychometric measurement models which provide information on the properties of assessment items of a test (DeVellis, 2012). IRT is considered as a modern and superior alternative to classical test theory (CTT) because IRT overcomes limitations that can be found in CTT (see Hambleton, Swaminathan & Rogers, 1991). For that reason, IRT provides ample information about an assessment item and the overall test. For example, in CTT, test reliability seems increased by redundancy when the number of items is increased. However, in IRT, test reliability can be improved by determining better items (DeVellis, 2012). IRT allows determining the better items by quantifying and illustrating the performance of each item in a scale as well as the scale as a whole. It enables researchers to examine items in terms of their

discriminatory ability among test takers by the levels of the trait being measured (Crocker & Algina, 2006).

Among several IRT models, Samejima's (1969) graded response model (GR model) was used. GR model is commonly used and most appropriate for Likert-type item response (Embretson & Reise, 2000) and the Self-Sexualized Scale used 8-point Likert scales of polytomous responses. A series of category-response curves and category information functions were generated and examined. These provided reliability indicators of the scale in IRT whereas Cronbach's alpha provided reliability estimation in CTT. IRTPRO software provided by Scientific Software International Inc. was used to estimate item parameters.

IRT analysis requires both local independency of items and unidimensionality of a scale as basic assumptions. In other words, IRT analysis requires that all locally independent items share only one latent factor. Thus, unidimensionality and local independency were tested before moving to IRT analysis. In case of multidimensionality of the data (as exemplified with the case of the first dimension), a subset of items within each factor was treated as a separate dimension. Items were selected within each dimension and then unidimensionality was tested with selected items combined.

Four major IRT outcomes were examined: the standardized local dependence (LD) χ^2 statistics, item level diagnostic $S-\chi^2$ item-fit statistics, item parameter estimates (table and graph), and item information function values (table and graph). LD χ^2 statistics were examined to identify pairs of items that had strong associations of the residuals beyond the underlying latent trait. LD χ^2 values between |5| and |10| indicated moderate associations with questionable local dependencies, and larger than |10| indicated significant associations with probable local dependencies (Cai, Thissen,

& du Toit, 2011).

S- χ^2 item-fit statistics were examined to identify items where observed responses were significantly different from the modeled responses. These statistics provided evidences of item level fit to the model. Items with significant p -values indicated misfit of observed responses to the modeled responses (Orlando & Thissen, 2000). Considering that several statistical analyses were conducted and the short length of the scale, p -values were evaluated at the 1% level (Stone & Zhang, 2003); a p -value below .01 was considered to have a good model-fit with a given item.

Item parameter estimates were examined to see the item discrimination parameters (α) and the category boundary locations (δ) of each item. The item discrimination parameters represent the degree in which an item discriminates between individuals located at different points on the latent continuum (de Ayala, 2009). The higher the α , the higher the discriminatory power. The category boundary locations, also known as thresholds or difficulties, represent the thresholds between response categories (e.g., the boundary locations from completely disagree to largely disagree, from largely disagree to moderately disagree, from moderately disagree to slightly disagree, so on). The category boundary locations were examined to identify more agreeable items from less agreeable items. Graphical illustrations of the item parameter estimates, known as item characteristic curves or trace lines, were also examined. The x-axis represents the level of latent trait and the y-axis represents the probability of agreeing with the item. The slope represents the discrimination: tall and peak shaped curves indicate higher discrimination power than broad and flat shaped curves.

Item information function values were examined to assess the amount of precision (called *information*) in discriminating individuals across a broad range on

the latent trait or at a particular point (e.g., lower level of latent trait) on the latent continuum. Specifically, the amounts of discrimination at fifteen points from -2.8 to 2.8 of latent trait continuum were examined. The item information function was used to identify items that had larger information from ones with less information. It was also used to identify items that provided more information at the lower end of the latent trait. Because the first and the fourth dimension assessed somewhat extreme forms of self-sexualization, responses were skewed and as the items in both dimensions were less agreeable, discriminating individuals at the lower end of latent trait was a challenge. Graphical illustrations of the item information function, known as item information curves, were also examined. The x-axis represents the level of latent trait and the y-axis represents the amount of information. A tall and wide shape indicates larger information than a short and narrow shape.

Cross-validation. A CFA analysis was conducted with the second set of the field data for cross-validation to ensure that the final version of the self-sexualization scale was not a chance manifestation. Cross-validation is particularly important when assessment items are selected on the basis of empirical relationships (the *Standards*, 3.10). Although all items from the final version of the self-sexualization scale resulting from content considerations, cross-validation was conducted to gather further evidence of the scale's stability (DeVellis, 2012).

CHAPTER 4: Results

This chapter discusses the results of the study. The steps outlined in the previous chapter are followed and the outcomes of each step are presented. The results of the literature reviews, experts' reviews, and both qualitative and quantitative data analyses are presented as theoretical and empirical evidences of the scale development and validation.

Results from the Literature Review to Create the Test Blueprint

Developing a test blueprint entails specifying the content areas to be assessed by the measure (AERA, APA, & NCME, 2002). An initial test blueprint was developed based on concepts and theories related to self-sexualization identified in the literature (see Chapter 2 for literature review). This test blueprint provides content-relevant validity evidence (the *Standards*, 1.6) because the blueprint ensures appropriate relationships between the test content domains and the construct the test is intended to measure.

As presented in Chapter 2, the self-sexualization concept is defined as voluntary imposition of sexualization to the self. The four conditions of sexualization by APA (2007) were adapted to the four dimensions of self-sexualization. The first dimension is termed sexual subjectification. Sexual subjectification refers to willingly and knowingly engaging in sexual objectification of oneself with playfulness. The second dimension is concerned with locus of self-worth on sexual appeal or behaviors. It refers to believing one's self-worth stems from sexual appeal or behaviors. The third dimension is termed perception of attractiveness defined by sexiness and refers to believing that in order to be attractive one must appear sexy or put another way, equating physical attractiveness with sexual attractiveness. The fourth dimension is termed acceptance of inappropriate sexuality. This dimension

includes both acceptance of inappropriate sexuality as part of one's own standard of sexuality and acceptance of inappropriate sexuality imposed upon the self by others.

The preliminary test blueprint is shown in Appendix A-3.

Results from Expert Review of the Preliminary Test Blueprint

Results of evaluation ratings. Eight experts were contacted and three experts agreed to review the preliminary test blueprint. They were given three weeks to review the test blueprint and to provide their feedback and suggestions. Table 4 shows the results of the experts' ratings for each evaluation question. Written comments and suggestions from experts and implemented changes are presented in the later section.

Adaptation of sexualization to self-sexualization. Regarding the adaption of APA's definition of sexualization to the concept of self-sexualization (item 1.1, see Table 4), the experts' evaluation on the test blueprint varied. Two of the experts agreed on adapting the definition of sexualization when defining self-sexualization. One expert did not agree on adapting the definition of sexualization when defining self-sexualization because of some conceptual murkiness regarding what self-sexualization is. Specifically, the expert questioned if self-sexualization had to be limited to behaviors or thoughts.

In terms of clarity of each dimension, two experts agreed that each dimension of self-sexualization was clearly written (item 1.2). One expert disagreed and recommended that the second aspect of self-sexualization (i.e., a woman thinks her value comes primarily from her sexual appeal or behavior) should be tied to the idea of male gaze and women appearing for men's approval.

Expert's ratings concerning adequateness of the description of inappropriate sexuality in the concept of self-sexualization (item 1.3) also varied. In the test blueprint, it was written that inappropriate sexuality includes holding socially

improper and/or morally unacceptable sexual beliefs and behaviors, such as sexual degradation, sexual aggression, verbal and physical sexual abuse. Inappropriate sexuality also includes excessive display of sexual affection as well as disinhibited sexual behaviors, such as practicing prostitution, exposing genitals, or engaging in masturbation or in sexual intercourse in public places. One expert agreed that the use of the term inappropriate sexuality was adequate in describing the concept of self-sexualization and two experts disagreed noting that inappropriate was a judgmental and value-laden term.

Regarding the last item (item 1.4; one of the four conditions of self-sexualization is sufficient for self-sexualizing to occur), two experts agreed that any one of four conditions of self-sexualization is sufficient for self-sexualization to occur. One expert disagreed for the same reason disagreeing with the item 1.1; the murkiness in defining the concept; Specifically, possible overlaps between self-sexualizing behaviors (i.e., the first domain) and self-sexualizing thoughts (i.e., the second domain) were noted.

Defining each content domain of self-sexualization. The experts' evaluation on the test blueprint also varied in terms of the defining content domains of self-sexualization. Regarding the definition of self-sexualization (item 2.1), two experts agreed that the general definition of self-sexualization (i.e., voluntary imposition of sexualization to the self) encompassed all four domains and all agreed that the definition of self-sexualization was clearly written (item 2.2). One expert did not agree with the general definition of self-sexualization as encompassing the four domains because the fourth domain (i.e., acceptance of inappropriate sexuality) seemed irrelevant and potentially implies judgement. For the same reason, the expert

disagreed with the statement that the four content domains represented the concept of self-sexualization (item 2.3).

Two experts disagreed with the adequacy of the four content domains in developing items to assess self-sexualization (item 2.4). Both of them commented on the fourth domain (i.e., acceptance of inappropriate sexuality). Possible overlaps between self-sexualizing behaviors (i.e., the first domain) and self-sexualizing thoughts (i.e., the second domain) also contributed to disagreement on the item 2.3.

It also appeared that one expert strongly thought that the constructs contained more than the specified content domains (item 2.5) mainly due to the fourth domain. Another expert also questioned the fit of the fourth dimension. The last expert agreed that the constructs did not contain more than the specified content domains.

All three experts agreed that the constructs did not contain less than the specified content domains (item 2.6), yet one of them agreed conditionally – the expert agreed that the constructs did not contain less than specified content domains, except for the fourth domain of self-sexualization.

Table 4. Results of expert review on test blueprint - Ratings

Item	Evaluation Questions	Ratings			
		Disagree strongly	Disagree	Agree	Agree strongly
<u>Part 1.1</u>	<u>Adaption of Sexualization to Self-Sexualization</u>				
1.1	The conditions of sexualization by APA are appropriately adapted to self-sexualization.		X	XX	
1.2	Each condition of self-sexualization is clearly written.		X	X	X
1.3	Description of inappropriate sexuality (*) is adequate in the concept of self-sexualization.	XX		X	
1.4	One of the four conditions of self-sexualization is sufficient for self-sexualizing to occur.	X		XX	
<u>Part 1.2</u>	<u>Defining content domains</u>				
2.1	The definition of self-sexualization (i.e., Voluntary imposition of sexualization to the self.) encompasses the four domains.		X	XX	
2.2	The definition of self-sexualization is clearly written.			XX	X
2.3	The four content domains represent the concept of self-sexualization.		X	XX	
2.4	The four content domains are adequate for developing items to assess self-sexualization.		XX	X	
2.5	The constructs do not contain more than specified content domains.	X		XX*	
2.6	The constructs do not contain less than specified content domains.			XX*	X

*conditional – the expert agreed on the evaluation item, except for the fourth dimension of self-sexualization.

Results of the suggestions and comments. Experts were asked to provide suggestions for improvement in addition to their evaluation ratings. Particularly, for each evaluation item to which they responded either “disagree strongly” or “disagree,” they were asked to explain their ratings and to make suggestions for improvement. All three

experts provided feedback on the preliminary test blueprint. Experts' comments were summarized by dimensions as well as by reviewers in Table 5.

Reviewers' comments on each dimension. Reviewers' comments were across all dimensions. Regarding the first dimension (i.e., a woman knowingly engages in sexual subjectification where playfulness, freedom, and choice are present), a suggestion using a different term to describe sexual subjectification was made. Reviewer 1 specifically recommended using the term "self-objectification" because the concept of self-objectification is rather widely understood among the general public, than the term "sexual subjectification." Another suggestion on the first dimension was on its clear connection to the presence of pleasure for oneself. Reviewer 2 stated that sexual subjectification is about pleasing oneself rather than pleasing others, specifically, men.

Regarding the second dimension (i.e., a woman thinks her value comes primarily from her sexual appeal or behavior), clarification of its description was suggested. Reviewer 2 suggested connecting the self-worth to the idea of male acceptance. In other words, a woman thinks her value comes primarily from her sexual appeal or behaviors when she receives men's approval.

Concerning the third dimension (i.e., a woman thinks her physical attractiveness equates with being sexy), importance of this dimension was questioned. Reviewer 2 commented that perception of attractiveness defined by sexiness, is less important than other dimensions of self-sexualization. The reviewer explained that if an individual equates physical attractiveness with sexual attractiveness and is not involved in the other three dimensions of self-sexualization, its impact on individuals would be lesser in degree. Another comment on the third dimension was on the role of culture in shaping women to

believe a narrow version of attractiveness. Particularly, reviewer 3 stated that the third dimension should be revised to include cultural constraints of sexuality. Specifically, the reviewer stated that “women are socialized to believe their value comes from their sexual appeal and that this is a constrained choice.”

In terms of fourth dimension (i.e., a woman accepts inappropriate sexuality), reviewer 1 commented on the judgmental tone of the word “inappropriate.” Reviewer 1 suggested changing “acceptance of inappropriate sexuality” to “acceptance of sexual violence as normal.” Furthermore, reviewer 1 recommended that consideration be given to whether “tolerance” of sexual violence as normal can play a part in self-sexualization and if both “tolerance” and “acceptance” of sexual violence as normal should be considered together.

Additionally, reviewer 2 questioned the three different types of acceptance of inappropriate sexuality. If a woman accepts inappropriate sexuality, does she engage in inappropriate sexuality herself? Does she accept inappropriate sexuality imposed on her by others? Does she accept inappropriate sexuality imposed by others to someone else? Also reviewer 2 questioned if these different types of acceptance represent a continuum, from accepting it for self to accepting it for others but not self, to not accepting it at all for anyone.

Reviewer 3 also commented that the adaption of fourth dimension of APA’s sexualization to self-sexualization is difficult to judge, given that different motivations might contribute to interpretations of “acceptable” sexuality (e.g., cultural experiences). Furthermore, reviewer 3 stated that this dimension seems irrelevant to the concept of self-sexualization. Reviewer 3 further pointed out that the provided possible assessment item

(i.e., I can joke about innocent sexual touching that happened to me at a party) is “assess(ing) reactions toward other people objectifying/sexualizing the self, which makes it less important for a measure focused on self-sexualization.” Thus, reviewer 3 suggested dropping the acceptance of inappropriate sexuality from the content domains of self-sexualization or revising the description to be free of value judgments.

Reviewers’ additional comments. In addition to commenting on each dimension, some comments and questions applying to overall and core conceptualization of self-sexualization were made by reviewers. Reviewer 1 acknowledged the wide range of self-sexualizing behaviors including faking an orgasm. Reviewer 1 explained that a woman pretending to have an orgasm in order to stimulate a partner’s perception of her sexual satisfaction is an act of self-sexualization. The reviewer explained that when a woman believes that her sexual partner is satisfied, then her sexual satisfaction increases correspondingly. Finally, reviewer 1 gave suggestions for the next stage of the study. Specifically, this reviewer recommended using the terms generated from members of the target population when developing assessment items.

Reviewer 2 questioned if the number of domains was sufficient to assess the full layers of self-sexualization. Specifically, reviewer 2 recommended capturing beliefs, values, attitudes, behaviors, and rewards that would reinforce self-sexualizing behaviors may be needed to fully access the concept of self-sexualization. Reviewer 2 acknowledged the behavioral component of self-sexualization in the first dimension of self-sexualization, sexual subjectification. Then, reviewer 2 suggested changing the verb in the description of contingency of self-worth on sexuality, from “think” to “believe” (i.e., believes her value comes primarily from her sexual appeal or behavior) so that the

concept includes one individual's belief system rather than simple thoughts or ideas concerning self-sexualization. In addition to commenting on the test blueprint, reviewer 2 proposed several possible assessment items for each dimension. Particularly, reviewer 2 commented that there has to be mention of use of clothing in the assessment items, specifically for the first dimension which assesses behavioral component of self-sexualization.

In addition, the conceptual distinction between self-objectification and self-sexualization was questioned. Specifically, reviewer 3 raised concerns that the description of the second dimension, that is a woman thinks her value comes primarily from her sexual appeal or behavior, is more or less identical to the concept of self-objectification. Reviewer 3 further commented that because the second dimension is too similar to self-objectification and self-objectification is a thought, it should not be on the same level of self-sexualizing behavior construct. The issue is understanding what comprises self-objectification and self-sexualization.

Reviewer 3 referred to the conceptualization of self-sexualization by Allen (2013) where self-sexualization is limited to behavior making a meaningful difference between self-sexualization and self-objectifying thoughts. Allen (2013) defined self-sexualization as "any action taken by an individual, which intentionally highlights his or her sexualized features" (Allen & Gervais, 2012, p. 81). Allen described self-sexualization as a self-presentation strategy wherein one's body is used to influence other's opinion of the self and it allows differentiating the self from other women. In contrast, self-objectification is a belief that one's outward appearance is regarded as more important than one's competence due to internalization of an outsider's view of the self and viewing oneself as

an object (Fredrickson & Roberts, 1997). The difference between self-objectification and self-sexualization was previously discussed under the “self-objectification and self-sexualization section.”

Table 5. Results of expert review on test blueprint – Suggestions and comments

	Reviewer 1	Reviewer 2	Reviewer 3
Part 1 Adaption of sexualization to self-sexualization		•Capture values, beliefs, attitudes, behaviors, and rewards that would reinforce the behaviors.	•What is the difference between self-sexualization behaviors and self-objectifying thoughts.
Part 2 Defining content domains	<ul style="list-style-type: none"> •The concept of self-sexualization can be related to wider range of sexual behaviors, including women’s fake orgasm. •Apply the words that actually used by target population when developing assessment items. 		<ul style="list-style-type: none"> •Explore the distinction between self-objectifying thoughts and self-sexualizing behaviors (i.e., self-sexualization does not necessarily translate into self-objectification). •Consider whether these behaviors are contextually bound.
- 1st dimension	•Use the term “self-objectification” or “sexual self-objectification” instead of “sexual subjectification.”	<ul style="list-style-type: none"> •Mention clothing when developing assessment items. •It is pleasing oneself rather than pleasing others. 	
- 2nd dimension		•Relate to idea of male gaze – appearing for men’s approval.	•The description is more or less identical to the notion of self-objectification.
- 3rd dimension		•This dimension seems less important.	•Revise to more at cultural constraints of sexuality.
- 4th dimension	•Use value-free words. Instead of “inappropriate sexuality” which contains value judgment, use “acceptance of sexual violence as normal.” Also, ponder if the dimension contains “toleration” as well as “acceptance” of sexual violence as normal.	•Does accepting it of others equate to willingness to engage in herself?	<ul style="list-style-type: none"> •This seems irrelevant and culturally bound. •This also potentially implies judgment. This section can be dropped altogether, or at the least refined, to be value-free.

Implemented changes. All comments and suggestions were carefully reviewed.

Several changes to the preliminary test blueprint were implemented based on the reviewers' comments (see Table 6).

Table 6. Results of expert review on test blueprint – Implemented changes

Category	Changes Suggested	Changes Made in the Blueprint
Self-sexualization	<ul style="list-style-type: none"> •Capture values, beliefs, attitudes, behaviors, and rewards that would reinforce the behaviors. •Differentiate it from self-sexualizing behaviors and self-objectifying thoughts. 	<ul style="list-style-type: none"> •The contents of self-sexualization were changed to belief system.
Dimension 1	<ul style="list-style-type: none"> •Use the term “self-objectification” or “sexual self-objectification” instead of “sexual subjectification.” 	<ul style="list-style-type: none"> •The dimension was changed to beliefs that active sexual self-objectification was free of choice, pleasing oneself, and fun.
Dimension 2	<ul style="list-style-type: none"> •Relate to idea of male gaze – appearing for men's approval. •Differentiate it from self-objectification. 	<ul style="list-style-type: none"> •The dimension was changed to beliefs that one's self-esteem is primarily on sexual desirability.
Dimension 3	<ul style="list-style-type: none"> •Revise to more at cultural constraints of sexuality. 	<ul style="list-style-type: none"> •The dimension was changed to beliefs that one's physical attractiveness equates with being sexy. •Assessment items reflected cultural influences on narrowly defined physical attractiveness, including pornographic sexual expressions.
Dimension 4	<ul style="list-style-type: none"> •Use judgement-free words. 	<ul style="list-style-type: none"> •The dimension was changed to beliefs that sexual violence is normal at some circumstances, such as at bars and parties.

Clarification of the concept to a set of beliefs on self-imposed sexualization. In response to the comments on the conceptualization of self-sexualization by reviewer 2 and reviewer 3, the contents of self-sexualization were changed to belief system. Initially, the four dimensions of self-sexualization contained both behavior and belief components. Specifically, the primary verb from the first dimension was “engage” and it denoted a behavior. The second and third dimension used the verb “think” and “equate” and assessed thought and perception. The fourth dimension used the verb “accept” and

assessed an action of consenting. Because it is possible that an individual's thought or perception can lead to subsequent behavior or action, variances that can be explained by one dimension can also be explained by the other dimension due to the causal relationship.

Furthermore, the first dimension (i.e., knowingly engaging in sexual subjectification where playfulness, freedom, and choice are present) contained both a behavioral component as well as a belief about self-sexualization: Knowingly engaging in sexual subjectification involved a person's behavior and seeing sexual subjectification as playful and free of choice indicates the person's view on such behavior. If the assessment items were developed based on the preliminary definition of sexual subjectification, the item would contain both components and could possibly cause ambiguity in what an item is measuring.

In order to reduce inter-dependency between dimensions and focus on one attribute level of a construct, all dimensions were set at the level of beliefs. Having all dimensions at the same order construct can increase internal consistency across dimensions within the concept while keeping content validity. In addition, having all dimensions at the same level of belief system can solve the conceptual murkiness between self-sexualizing behavior and self-sexualizing thoughts. Thus, the operationalized definition of self-sexualization was modified to the following: a set of beliefs regarding self-imposed sexualization which encompasses four dimensions. Descriptions of each dimension were further modified based on reviewers' comments. Revised descriptions of each dimension follow after a brief discussion of the concept of belief. (However, the attempt to have all dimensions at belief system was not achieved

because the fourth dimension was not successfully modified to capture the belief. See “Results from the Expert Review of the Test Specification and Assessment Items.”)

A belief is a strong idea that a tenet in mind is true or real (Smoak, 2007). For example, a tenet that sexual self-objectification is for one’s own pleasure can be believed to be true or false. If an individual thinks the tenet is likely to be true, the individual is said to believe it. If an individual thinks the tenet is unlikely to be true (e.g., sexual self-objectification is not for one’s own pleasure but for pleasing other people), the individual is said to disbelieve it.

Although beliefs can be evaluative in nature (e.g., sexual self-objectification is fun), the basic form of a belief is to be non-evaluative (Smoak, 2007). For example, if an individual believes physical attractiveness is equivalent to sexual attractiveness, that belief could either be positively evaluated (if the individual likes sexual attractiveness to be a measure for attractiveness and has narrow view of attractiveness) or that belief could be negatively evaluated (if the individual dislikes sexual attractiveness to be a measure for attractiveness and has broad view of attractiveness).

Revision of the first dimension. In response to the suggestion by reviewer 1, the name of the first dimension, sexual subjectification, was modified to *active sexual self-objectification*. The term “active” was included to present the element of conscious choice to self-sexualization. This change makes a distinction from passive self-objectification, which refers to internalization that may occur without conscious acknowledgement. Similar to reviewer 1’s comment, Gill (2008) used the term “active” objectification to mean women’s openness and willingness to displaying body parts in a

self-sexualizing manner, which refers to a shift from passive sex object to “active desiring (hetero)sexual subject” (p. 41).

In addition, the term “sexual” was included to limit the focus of the content to sexual objectification. This change also adds a meaningful difference between self-sexualization and self-objectification. As noted previously, self-objectification is about seeing oneself as an object but is not limited to viewing self as a sexual object. In contrast, self-sexualization is limited to seeing oneself as a “sexual” object (see p. 45 herein for a discussion of the difference between self-objectification and self-sexualization). For example, if a woman is self-objectifying, she constantly evaluates her outward appearance (e.g., do I look appropriate?). If a person is self-sexualizing, the evaluation criterion is focused on sexuality (e.g., do I look sexy?). As a result the first dimension, originally titled as active sexual self-objectification, was revised to the following: belief that active sexual self-objectification is freely chosen, pleasing to oneself, empowering and fun.

Revision of the second dimension. In response to comments by reviewer 2 the second dimension, contingency of self-worth based on sexuality, was changed to contingency of self-worth based on sexual desirability. While sexuality is a broad concept that includes sexual behavior, pleasure, orientation, and identity, sexual desirability is specific in that it entails being sexually desired by others. If a woman’s contingency domain is in sexual desirability, how desirable that woman is as a sexual partner to others would determine her self-perceived value. It is also possible that a woman may believe that she is sexually desirable without acknowledgement from others.

In response to criticisms from reviewer 3, the description of the second dimension was changed to increase its distinctiveness from the concept of self-objectification. This dimension was initially interpreted as thinking a woman's value comes primarily from her sexual appeal or behavior, to the exclusion of other characteristics. In order to be true to the definition of contingency of self-worth, the description includes the term "self-esteem." The sentence was changed to belief that one's self-esteem is rooted in sexual desirability. In other words, a woman who scores high on this dimension would believe her worthiness is based in whether or not she is sexually desirable.

Revision of the third dimension. The third dimension was also changed to a belief construct, that is, the belief that one's physical attractiveness equates with being sexy. As initially proposed in the study and in response to comments by reviewer 3, assessment items under this dimension reflect western cultural influences that result in a narrow definition of physical attractiveness that include pornographic sexual expressions.

Revision of the fourth dimension. In response to comments by reviewers 1 and 3 on judgmental tone and the culturally bound restriction of the word inappropriateness, the fourth dimension was changed to a less value-laden term, that is, "sexual violence." (However, the term "sexual violence" was changed to "sexual violation" as a result of the test specification review [see "Results of the suggestions and comments on test specification"]. Later, this dimension was changed to "contextualization of sexual boundaries" as a result of the field test [see "Dimension 4 – Contextualizing sexual boundaries"] to accurately reflect the final selected items in the scale.)

Sexual violence is defined as “any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic, or otherwise directed, against a person’s sexuality using coercion, by any person regardless of their relationship to the victim, in any setting, including but not limited to home and work” (World Health Organization, 2002, p. 147). If a woman believes that sexual violence is normal in some circumstances, she would be willing to be the recipient of it or to endure it without protest because she thinks such violence is proper, normal, or inevitable in some contexts. For example, some young female adults referred to “dirty, groping, grabbing” encounters with men as normal and commonplace when they went to some bars (Lynch, 2007). This dimension also includes accepting (e.g., laughing at) sexually degrading jokes directed at women and/or sexual behaviors that are forced on women by others (e.g., sexual touching) as normal parts of being sexually playful.

Initially, inappropriate sexuality was described as socially and morally improper with accompany unacceptable sexual beliefs and behaviors. Under this initial description, the following was also included: excessive displays of sexual affection as well as disinhibited sexual behaviors such as prostitution, exposure of genitals, masturbation, or sexual intercourse in a public place. However, these sexual behaviors do not fall into the definition sexual violence. Although excessive displays of sexual affection and disinhibited sexual behaviors in a public place are not categorized under the fourth dimension, such behaviors can be understood to be consistent with active sexual self-objectification, where a person actively and willingly displays their sexual body parts in a public sphere.

Results of Test Specification Revision and Assessment Item Pool Generation

Based on the revised test blueprint, the test specification was revised from the initial proposal and preliminary assessment items were generated. As described in the method section, items were generated based on both reviews of extant literature and a guideline developed by DeVellis (2012). This process resulted in an initial assessment item pool containing 123 possible items (Preliminary assessment in Table 3): Fifty items for the first dimension, 32 items for the second dimension, 20 items for the third dimension, and 21 items for the fourth dimension.

Results from the First Cognitive Interview for Initial Item Revision

Before sending the test specification and assessment items for expert's evaluation, item revisions were conducted based on results from the first cognitive interview with three participants who represented the population, one of which was a writing expert working at a writing center. Specifically, item revisions were made for items for which participants asked for clarification. Negatively worded items that were supposed to measure similar content were also carefully examined. Changes made in the items are presented in Table 7. The first cognitive interview resulted in a total of 61 items for expert's review (SS1): Twenty two items for the first dimension, 10 items for the second dimension, 16 items for the third dimension, and 13 items for the fourth dimension.

During the interviews, several items were found to have connotation differences in interpretation. For example, the differences in meaning of sexually attractive, sexually alluring, and sexually desirable were asked and found that the differences in those terms were not significant and did not result in changes in their ratings. Another example is "self-esteem" and "feelings about oneself." Although they are not the same concept, participants perceived them as synonyms and did not respond to them differently.

Because the first interview involved only three individuals, the words that may imply different connotations were reviewed again during the second set of interviews with additional participants.

An interesting finding during the first interview was that it was possible for an individual to hold a strong negative opinion regarding a particular self-sexualizing behavior while at the same be positive about other types of self-sexualizing behaviors. For example, one participant held a strong negative opinion regarding women flashing their breasts in public but held a positive attitude towards several other self-sexualizing behaviors including participating in a fantasy rape, taking a pole dancing class, or performing a lap dance.

Table 7. Results of the first cognitive interview for item revision – Implemented changes

Category	Changes made in the initial items
Words change	<ul style="list-style-type: none"> •Grabbing is changed to either sexual grabbing or physical touching. Grabbing may not related to anything sexual. Groping implies sexual touching. •“Sexual agency” is changed to “sexual spirit.” Two of participants suggested sexual spirit is better understood among their peer groups. •“Pretended rape” is changed to “fantasy rape.” •“I feel worthwhile” is changed to “I feel worthy.”
Eliminate confusions	<ul style="list-style-type: none"> •“Hooking up is a part of fun youth culture” is changed to “hooking up is a fun part of youth culture.” •“Revealing clothing” is changed to “sexy clothing.” Sexy clothing may or may not be revealing clothing.
Tuning tones	<ul style="list-style-type: none"> •“Can be” is changed to “could be.” •“Makes me” is changed to “would make me.” •“I cannot be attractive” is changed to “I am not attractive.”
Content relevancy check	<ul style="list-style-type: none"> •Eliminated items that are not relevant to long term self-esteem. For example, getting complimented by men is related to immediate boost of feeling and is not necessarily related to self-worth. •“Self-respect” is changed to either “self-esteem” or “self-worth.” •Although “self-esteem” and “feeling about oneself” does not necessarily mean the same concept but participants perceived them as the same concept.
Eliminate possibly disturbing items	<ul style="list-style-type: none"> •“When I sense men get sexually aroused by me, I feel good about myself” and “Knowing men are eager to have sex with me makes me feel worthwhile” were eliminated as these items were perceived as disturbing.
Correct typos and errors	<ul style="list-style-type: none"> •e.g., “People do public sex” is changed to “people have sex in public,” “dances” to “dancers,” and “being able to flashing breasts” to “being able to flash breasts.”

Results from the Expert Review of the Test Specification and Assessment Items.

Results of the ratings on test specification. Three experts reviewed the test specification and assessment items. The evaluation form is presented in Appendix C-1 and C-2. The evaluation process took about two months. Table 8 presents the results of the experts' ratings for each evaluation question. As shown in Table 8, the experts generally agreed that the test specifications were appropriate for test design. There were three evaluation questions that one expert assigned a "disagree" and the expert provided specific comments for improvement.

Table 8. Results of expert review on test specification - Ratings

Item	Evaluation Questions	Ratings			
		Disagree strongly	Disagree	Agree	Agree strongly
1	Intended interpretation of the score is appropriate.			XX	X
2	Question stem is appropriate.		X		XX
3	Response format is appropriate.		X		XX
4	Scoring procedure is appropriate.		X		XX
5	Total number of items is appropriate.			X	XX

Results of the suggestions and comments on test specification. Like the test blueprint evaluation, experts were asked to provide suggestions for improvement for each evaluation item to which they responded either "disagree strongly" or "disagree." Specific comments for improvement were made by only one reviewer because the other two reviewers agreed with all evaluation items. Experts' comments were summarized by evaluation items as well as by reviewers as seen in Table 9.

Table 9. Results of expert review on test specification – Suggestions and comments

	Reviewer 1	Reviewer 2	Reviewer 3
Item 1. Intended interpretation of the score			
Item 2. Question stem	<ul style="list-style-type: none"> •Use a more traditional and familiar format of agree and disagree. 		
Item 3. Response format	<ul style="list-style-type: none"> •Use a more traditional and familiar format of agree and disagree. 		
Item 4. Scoring procedure	<ul style="list-style-type: none"> •Use the mean across all items. 		
Item 5. Total number of item	<ul style="list-style-type: none"> •Hard to know at this point. 		
Item 6. Additional comments	<ul style="list-style-type: none"> •Clarify if the second dimension refers to one important domain along with other domains or the most important domain of the entire domains of self-worth. •Be aware of the term “pornographic” which is the image of a real sexual act. Rather use highly sexualized image. •The fourth dimension seems to access attitudes or opinions about “sexual assault” or “unwanted advances,” not the importance of sexiness to a women’s self-concept. •The four dimensions can be at different levels – belief, attitude, or behavior. The items seem more related to attitudes. 	<ul style="list-style-type: none"> •Conceptual framework is strong and four dimensions well developed. 	<ul style="list-style-type: none"> •The content of the first dimension seems extreme. It could be limited to a particular group of individuals.

The reviewer who disagreed with the appropriateness of the response format commented on the question stem, response format, and the scoring procedure. The initial question stem read “To what extent do you personally believe the statement is true or not true?” and the expert suggested using a traditional and familiar Likert-type scale format

with variations on “agree” and “disagree.” (To what extent do you agree or disagree with each of the following statement?) In addition, it was suggested that the scoring procedure be changed to calculate an average of all over the corresponding items rather than simply adding up individual responses.

The above three suggestions were adopted. As the reviewer commented, having a traditional response format of “agree” and “disagree” would increase familiarity for participants. Thus, the question stem was changed to “To what extent do you agree or disagree with each statement” and accordingly the response options were changed to “completely agree,” “extremely agree,” “largely agree,” “moderately agree,” “slightly agree,” “slightly disagree,” “moderately disagree,” “largely disagree,” “extremely disagree,” and “completely disagree.” The scoring procedure was also changed to a calculation of an average score across all items as it would allow clear interpretation of the computed value as the value can correspond to agreement. In this way, possible missing responses could also be taken into consideration when averaging out the score. “Completely agree” is assigned to the numeric value of 10, “extremely agree” is 9, “largely agree” is 8, “moderately agree” is 7, “slightly agree” is 6, “slightly disagree” is 5, “moderately disagree” is 4, “largely disagree” is 3, “extremely disagree” is 2, and “completely disagree” is 1.

The reviewer also had questions regarding the second, the third and the fourth dimensions. Specifically, the reviewer questioned the second dimension, belief that one’s self-esteem is primarily based on sexual desirability. The question was whether the domain is one of many domains of self-worth or the most important domain of the entire

domains of self-worth, as the use of “primarily” could imply the main domain on which a person’s self-esteem is based.

The second dimension is related to an important domain of self-worth, one of many domains of self-worth. Similar to Crocker and Wolfe (2001)’s seven domains of self-worth (i.e., appearance, social approval, academic competency, success in competition with others, family support, virtue, and God’s love), being sexually desirable by others is proposed to be one domain of self-worth for self-sexualizers. Thus, an individual could have two or three other contingency domains simultaneously with sexual desirability. If sexual desirability were the most important contingency domain of self-worth, the assessment item should have contained the original seven contingency domains (e.g., academic success, family love) in order to know its weight over the other seven domains. Therefore, the word “primarily” was deleted and the description was changed to “belief that one’s self-esteem is based on sexual desirability” in order to clarify the content domain.

The reviewer also commented on the term “pornographic” when explaining the third dimension. The dimension, belief that one’s physical attractiveness equates with being sexy, was intended to present a narrowly defined version of attractiveness that includes stylized pornographic sexual expressions. The reviewer remarked that the term “pornographic” refers to an image of a real sexual act and suggested using another phrase such as highly sexualized image to convey the intended meaning. Although the definition

of pornography¹ is not limited to a depiction of an actual sex act but also refers to the depiction of erotic behavior, which may and may not include actual sex, the phrase “use of highly sexualized images” is adequate to explain the third dimension. Thus, the term “pornographic sexual expression” was changed to “highly sexualized image.”

Regarding the fourth dimension, belief that sexual violence is excused depending on circumstances (e.g., at bars/clubs/parties), the reviewer commented that this dimension seemed to assess attitudes or opinions about “sexual assault” or “unwanted advances,” and not be a dimension underlying self-sexualization. To clarify the concept, the fourth dimension is particularly relevant to violability, the sixth notion of human objectification where a person is determined to be permissible for violation (Nussbaum, 1995). When applying the idea of violability to the concept of self-sexualization, a woman would believe that recipient of or being receptive to forms of sexual violations (e.g., groping, grabbing, sexually degrading jokes, sexual comments) was permissible, inevitable, or normal in some contexts (e.g., presence of alcohol, bars, parties). A range of sexual violations often occur in contexts where young adult women are “having fun,” sometimes overshadowed by humor or covered by a playful mood. The humor or playfulness aspect of the setting contributes to the normalization of such violation. For example, getting groped at a party could be perceived as a normal part of being sexually playful or a young woman could believe that a man groped her because he found her attractive. Therefore,

¹ The depiction of erotic behavior (as in pictures or writing) intended to cause sexual excitement (pornography, n.d.).

such experiences could be less bothersome and be perceived as excusable under the circumstances. To answer the comments by the reviewer, the fourth dimension accesses the degree to which an individual believes that sexual violation is permissible or excused in some circumstances. This belief could lead to attitudes or opinions about sexual assaults or unwanted advances as the reviewer commented. In addition, having less bothersome or even favorable attitudes towards the sexual violation (e.g., accepting the violation as playful incident) can also be considered as a form of self-sexualization which related to the imposition of sexual violability to oneself. Thus, the term sexual violence was changed to sexual violation to reflect the violability notion from human objectification by Nussbaum (1995).

The initial purpose of having all items at the same level of attribute was to reduce the possible interdependency between dimensions. However, one expert questioned that the fourth dimension assessed attitudes or opinions, rather than beliefs. Because the restriction of having all items at the same level of attribute was questioned, the relationships between the dimensions were later explored with collected data at the field test.

Results of the ratings on assessment items. The three experts' reviews on the preliminary version of the assessment were examined. Reviewers were asked to rate to what extent they agree or disagree if the item assesses the specified content (i.e., To what extent do you agree or disagree with the following statement: The item assesses the specified content). Table 10 shows the items that at least one expert rated either “strongly disagree” or “disagree.”

Table 10. Items rated “strongly disagree” or “disagree” by at least one reviewer

Dimension	Items that at least one expert rated either strongly disagree or disagree
1	Item 1-1, 1-2, 1-6, 1-8, 1-9, 1-11, 1-12, 1-13, 1-14, 1-22
2	None
3	Item 3-11, 3-13, 3-14, 3-15, 3-16
4	Item 3-8 (One reviewer suggested to drop this dimension)

Results of the suggestions and comments on assessment items. In addition to the quantitative ratings to the Likert-scale evaluation questions, changes were suggested for the items rated either as “strongly disagree” or “disagree.” Suggestions centered on adding clarification to its meaning and concept being assessed. Table 11 presents the original item, the reviewer’s comment, and the changes made for the items. The suggested changes were reviewed and implemented resulting in the revised version of the assessment for the second cognitive interview. This version consisted of a total of 74 items (SS2): Twenty seven for the first dimension, 10 items for the second dimension, 19 items for the third dimension, and 18 items for the fourth dimension.

Table 11. Changes made for the items rated "strongly disagreed" or "disagreed"

	Original item	Expert's comments	Change made for item
Dimension 1			
1-1	Hooking up is a fun part of youth culture.	•Not about self-sexualization. It is about sexual encounters.	I believe hooking up is a fun part of youth culture.
1-2	Having casual sex with different men provides women with a range of interesting experiences.	•Not about self-sexualization. It is about sexual encounters. •Delete casual.	Having sex with different men provides me with a range of interesting experiences.
1-3	Being sexually provocative is empowering for women.	•If you want to know about each participant's degree of self-sexualization, why not substitute "me" for "women."? That is more straightforward. •Delete provocative and changed to "being sexy."	Being sexy is empowering for me.
1-4	Stiletto heels are emblematic of feminine power.	•Rewrite to "wearing stiletto heels is powerful."	Wearing stiletto heels is powerful. For me, stiletto heels are emblems of feminine power.
1-5	Wearing a sexy dress is one method for women to achieve power femininity.	•Delete "femininity."	Wearing a sexy dress is one method for me to achieve power.
1-6	Accentuating women's sexual appeal reflects contemporary beliefs about femininity.	•Delete.	Delete
1-7	Sexually assertive women can wear T-shirts with labels like "porn star."	•I view women who wear T-shirts with labels like "porn star" as sexually assertive. •Needs clarification. Rewrite "can" to "sometimes."	I view women who wear T-shirts with labels like "porn star" as sexually assertive. I think that sexual assertive women sometimes wear T-shirts with labels like "porn star."
1-8	Professional strippers are feisty independent souls.		I view professional strippers as feisty independent souls.
1-9	We should consider professional stripper as a sexually assertive occupation.		I consider professional stripper as a sexually assertive occupation.
1-10	We should open minded about women participating in exotic dancing as it reflects sexual liberation.	•When I feel sexy, I feel liberated.	When I feel sexy, I feel liberated.

1-11	Models who pose for Playboy should not be identified as empowered women. (-)		I think models who pose for Playboy should not be identified as empowered women.
1-12	Aerobic pole dancing is empowering.		I think aerobic pole dancing is empowering.
1-13	Pole dancing is more empowering than participation in regular aerobics classes.		I think pole dancing is more empowering than participation in regular aerobics classes.
1-14	Pole dancing could be represented as a desirable exercise alternative.		I think pole dancing could be represented as a desirable exercise alternative.
1-15	If I participate in erotic dancing, it is for my own pleasure.		No change
1-16	If I give a man a lap dance, it is for my fun experience.		No change
1-17	Women who can give a trilling lap dance are powerful women.	<ul style="list-style-type: none"> •I would feel powerful giving a man a thrilling lap dance. •Correct trilling to thrilling. 	I view women who can give a thrilling lap dance as powerful women.
1-18	Flashing breasts in public is degrading to women. (-)		I think flashing breasts in public is degrading to women.
1-19	Flashing breasts in public is humiliating for women. (-)		I think flashing breasts in public is humiliating for women.
1-20	If I shaved my genitals, it would be for my pleasure.		No change
1-21	Having a boudoir or pinup photographs taken would be a pleasing experience for me.		No change
1-22	Women sexually kissing other women for the purpose of attracting attention is degrading to women. (-)		I think that women sexually kissing other women for the purpose of attracting attention is degrading to women.
Other comments and alternative items suggested by experts		<ul style="list-style-type: none"> •I think that it's perfectly fine to use my sex appeal to enhance my power over men. •I would feel humiliated to bear my breasts in public. •I would rather be seen as sexy than as classically beautiful. •I feel empowered when men find me sexy. 	

Dimension 2

2-1	My self-esteem goes up when men sexually desires me.	•Spelling error (desires to desire).	My self-esteem goes up when men sexually desire me.
2-2	Knowing that I am sexually desirable raises my self-esteem.	•Change “raises my self-esteem” to “makes me feel good about myself.”	Knowing that I am sexually desirable makes me feel good about myself.
2-3	Knowing that men find me sexually desirable raises my self-esteem		No change
2-4	Being sexually wanted by others increases my self-esteem.	•Change self-esteem to self-worth.	No change
2-5	When I do not feel sexually appealing, my self-esteem goes down.	•Change “my self-esteem goes down” to “I don’t feel good about myself.”	When I do not feel sexually appealing, I do not feel good about myself.
2-6	My self-esteem would suffer if I find myself not sexually desirable.		No change
2-7	My self-esteem is influenced by how sexually desirable I am.		No change
2-8	My sense of self-worth is influenced by how sexually alluring I am.		No change
2-9	I do not care whether I am sexually desirable or not. (-)		No change
2-10	My self-esteem does not depend on whether or not I am sexually seductive. (-)	•Rewrite.	No change
Other comments and alternative items suggested by experts		•Use other words than self-esteem. •All of these items look good to me.	

Dimension 3

3-1	Attractive is a synonym of sexy.		I see the word “attractive” as a synonym of “sexy.”
3-2	Attractive women are sexy women.		I consider attractive women as sexy women. I consider attractive women are the sexy women.
3-3	Being sexy is the way to be attractive.		I think being sexy is the way to be attractive.
3-4	An attractive woman has sexy appearance.		I think an attractive woman has sexy appearance.

3-5	To be attractive, I need to be sexy.		To be attractive, I need to be sexy.
3-6	I must wear something sexy to feel attractive.	•Change “attractive” to “pretty.” Use some other words beyond “attractive.”	I must wear something sexy to feel pretty. I must wear something sexy to feel attractive.
3-7	If I am helping my friend look attractive, I would suggest appearing sexy.	•Rewrite “look attractive” to “dress up for a special event.”	If I am helping my friends dress up for a special event, I would suggest appearing sexy
3-8	If I give tips to appear attractive, I would suggest dressing sexy.		No change
3-9	I look less attractive if I do not wear sexy clothing.		No change
3-10	Women appear less attractive if they do not wear sexy clothing.		I think women appear less attractive if they do not wear sexy clothing. I think I appear less attractive if I do not wear sexy clothing.
3-11	People think that the best versions of female beauty are the Victoria’s Secret models.	•Delete.	I think that the best versions of female beauty are the Victoria’s Secret models.
3-12	When people think of attractive women, they think of the Victoria’s Secret models.	•Delete.	When I think of attractive women, I think of the Victoria’s Secret models.
3-13	Porn stars have attractive bodies.	•Make more relevant to study sample. •Delete.	I think porn stars have attractive bodies.
3-14	Learning how to pose like a porn star would increase my attractiveness.	•Make more relevant to study sample. •And just how do porn stars pose?	I think learning how to pose like a porn star would increase my attractiveness.
3-15	A Vegas showgirl knows some of the best techniques to appear attractive.	•Make more relevant to study sample.	I think a Vegas showgirl knows some of the best techniques to appear attractive.
3-16	Exotic dancers have some of the best techniques to appear attractive.	•Make more relevant to study sample. Girls gone wild perhaps?	I think exotic dancers have some of the best techniques to appear attractive.
Other comments and alternative items suggested by experts			
		•How about: When it comes to making myself attractive, I could borrow some tips from exotic dancers or Vegas showgirls. In other words, make it about the participant and her beliefs, not dancers, porn stars or showgirls.	
<u>Dimension 4</u>			
4-1	A lively and fun party accepts groping of women by men.	•If I’m groped at a lively party, it’s because the man finds me attractive.	I find it enjoyable if I am groped at a lively party. I would not mind attending a party where men

		•Rewrite “accepts” to “often includes.”	may grope me. If I am groped at a lively party, it’s because the man finds me attractive. I think a lively and fun party often includes groping of women by men.
4-2	People having a fun time at parties would not mind getting sexual grabbing.	•Change “grabbing” to “grabbed” •Women that go to fun college parties don’t mind being groped.	When I am having a fun time at parties, I would not mind getting sexual grabbing.
4-3	Sexist jokes can be funny at bars if they are well said.	•Delete “if they are well said.”	I laugh at sexist jokes at bars. Sexist jokes can be funny at bars.
4-4	Flashing of breasts is a humorous drunk college life experiment.		I think flashing of breasts is a humorous drunk college life experiment.
4-5	Getting groped is a normal part of being sexually playful at a party.	•Needs rewrite.	I think getting groped is a normal part of being sexually playful at a party.
4-6	It would not hurt people if they get sexually touched at a club.		I think it would hurt me if I get sexually touched at a club.
4-7	People should not be surprised when they get groped at a spring break party.		I would not be surprised when I get groped at a spring break party.
4-8	Some people just have strong opinion about grabbing and groping at bars.	•Not well written.	Delete
4-9	Prudes whine about sexual grabbing happening at bars.		I think that prudes whine about sexual grabbing happening at bars.
4-10	Getting groped would not bother me if I am having a fun time.		No change
4-11	Getting sexually grabbed would not bother people if they are drunk.	•Change “people” to “women.”	Getting sexually grabbed would not bother me if I am drunk.
4-12	If I were intoxicated, I would not mind get groping at a club.		No change
4-13	There is nothing wrong with participating in a fantasy rape.		I think that there is nothing wrong with participating in a fantasy rape. I think that participating in a fantasy rape is wrong. I would never participate in a fantasy rape.
Other comments and alternative items suggested by experts			

- I really don't think that this dimension = about sexual contact at best, and sexual violence at worst- is part of self-sexualization. And these items, again, are not about the participant.
 - Why are you using "people"? Aren't you talking about "women"?
-

Results from the Second Cognitive Interview for Initial Item Revision

The second set of cognitive interviews was conducted with 10 participants who represent the study population. Interviews occurred at several locations near Minneapolis and the campus of the University of Minnesota and St. Catherine University. Participants were all heterosexual women of ages between 19 and 27. All participants were white Americans who were born and raised in the U.S. All participants but one were never married.

During the interviews, a total of 74 items resulting from the previous stage (i.e., expert's review on assessment items) were examined. The focus was on accessing whether assessment items made sense to test takers and whether the items were accurately interpreted by test takers. In the meantime, assessment items were reviewed to appropriately reflect the intended content of the self-sexualization concept. Confusing wordings and errors were also detected. Changes made in the items are presented in Table 12. Analysis of the second set of cognitive interviews resulted in a total of 68 items (SS3): Twenty one for the first dimension, 12 items for the second dimension, 15 items for the third dimension, and 20 items for the fourth dimension.

The interview revealed several items that were not accurately interpreted by participants. For example, the items related to flashing breasts in public (1-19 and 1-20) were intended to access the beliefs regarding active involvement of self-sexualizing behavior. However, some participants related flashing behaviors with breastfeeding in public, topless feminist activities, or flashing of breasts by accident. Thus, the item was changed to "attracting attention by flashing my breasts in public (e.g., at a bar or a party)" to be clear about the context of the flashing of breasts. Another example is the erotic

dancing item (1-16). This item was developed as a part of active self-sexualizing behavior, similar to the flashing of breasts. However, participants questioned if the erotic dancing happened in a private bedroom when she was alone or in a club where there were male audiences. Thus, the phrase was changed to “erotic dancing for men” to clarify the audience of the dancing. Shaving one’s genital hair (1-22) was also intended to be a part of self-sexualizing behaviors. However, a participant considered it as a hygiene issue and she shaved for comfort. Thus the item was dropped.

Review of content validity was another major task for the analysis of the interviews. Several items were identified for not appropriately reflecting the intended content. For example, “being sexy” (1-3), “feeling sexy” (1-11) and “wearing a sexy dress” (1-6) or “stiletto heels” (1-4) were not sufficiently extreme to be considered as a part of self-sexualization. Thus, those items were changed to being promiscuous, dressing promiscuously, and wearing a dress promiscuously to capture the intensity of active self-sexualization. Also several items were not about one’s own sexualization but about something else, such as particular professions or activities; strippers (1-9 and 1-10), exotic dancers (3-19), models for *Playboy* magazine (1-12) or porn stars (3-16), pole dancing (1-14 and 1-15), sexual encounters (1-1 and 1-2), and other women (1-20, 3-2, 3-3, 3-5), etc. These items were either dropped or modified. For complete list of revised items, see Table 12.

Table 12. Results of the second cognitive interview for item revision – Implemented changes

Original item	Rational (Investigator’s reasoning, Participant’s comments)	Change made for item	
<u>Dimension 1</u>			
1-1	I believe hooking up is a fun part of youth culture.	•It was rather about sexual encounters, not about self-sexualization.	Delete.
1-2	Having sex with different men provides me with a range of interesting experiences.	•Same as 1-1.	Delete.
1-3	Being sexy is empowering for me.	•“Being sexy” was not necessarily considering oneself as a sexual object.	It is empowering to show the promiscuous side of personality. Being sexually promiscuous is empowering for me. Presenting myself to others as a sexual object is fun to me. I enjoy being viewed as a sexual thing.
1-4	Wearing stiletto heels is powerful.	•“Wearing stiletto heels” was not necessarily active sexual self-objectification. A participant explained that wearing stiletto heels make her tall and being tall is powerful.	Delete.
1-5	For me, stiletto heels are emblems of feminine power.	•Same as 1-4.	Delete.
1-6	Wearing a sexy dress is one method for me to achieve power.	•“Wearing a sexy dress” was not necessarily self-sexualization.	Wearing a dress promiscuously is powerful for me. Dressing promiscuously is a source of power for me. I am powerful when I dress promiscuously. For me, dressing promiscuously is exciting.
1-7	I view women who wear T-shirts with labels like “porn star” as sexually assertive.	•A participant understood labels as clothing tags inside of T-shirts. Also this item was about the women wearing the T-shirts, not about oneself. The item needed to be changed an item about	Wearing a T-shirt that says “porn star” can be a way to project my sexual assertiveness.

		one's own sexualization.	
1-8	I think that sexual assertive women sometimes wear T-shirts with labels like "porn star."	•Same as 1-7.	
1-9	I view professional strippers are feisty independent souls.	•It was about professional strippers, not about self-sexualization.	Delete.
1-10	I consider a professional stripper as a sexually assertive occupation.	•Same as 1-9.	Delete.
1-11	When I feel sexy, I feel liberated.	•"Feeling sexy" was not self-sexualization.	I think I would feel liberated if I am promiscuous. If I am promiscuous, I feel free.
1-12	I think models who pose for Playboy should not be identified as empowered women.	•The profession, modeling for a soft porn magazine, was a sexually objectified profession. However, the statement was about the profession and not about self-sexualization.	Delete.
1-13	I think aerobic pole dancing is empowering.	•Participants connected "aerobic" with exercise, which may directly relate to empowerment. Participants may agree to this statement because of the word "aerobic" not because of their perspective on pole dancing.	For me, participating recreational pole dancing is empowering.
1-14	I think pole dancing is more empowering than participation in regular aerobics classes.	•It was about individuals' opinions regarding pole dancing, not about self-sexualization.	Delete.
1-15	I think pole dancing could be represented as a desirable exercise alternative.	•Same as 1-14.	Delete.
1-16	If I participate in erotic dancing, it is for my own pleasure.	•Lack of context confused participants – Is it dancing alone at a private room, for men at a club, or dancing professionally?	If I participate in erotic dancing for men, it is pleasing experience.
1-17	If I give a man a lap dance, it is for my fun experience.	•A participant who was 19 years-old did not know what a lap dance was. The item needed to be clearer on the reason for the activity.	If I give a man a lap dance, it is because I find it fun.
1-18	I view women who can give a thrilling lap dance	•It was about an individual's view on	I would feel powerful giving a man a thrilling lap dance.

	as powerful women.	particular women, not about self-sexualization.	If I can give a thrilling lap dance, I am powerful.
1-19	I think flashing breasts in public is degrading to women.	•Flashing breasts was unclear. Some participants related it to breastfeeding in public or a feminist movement.	Attracting attention by flashing my breasts in public (e.g., at a bar or a party) can be fun for me.
1-20	I think flashing breasts in public is humiliating for women.	•Understood as humiliation for that woman who flashed her breasts. The item needed to be specific to oneself and her personal self-sexualizing activity.	Engaging in public expressions of sexuality (e.g., flashing my breasts) is how I could express my sexuality.
1-21	I would feel humiliated to bear my breasts in public.	•Similar to 1-17 and 1-18, context of flashing breasts was unclear. Some participants related it to breastfeeding in public, a feminist movement, or flashing by accident.	Flashing my breasts is an expression of my sexuality.
1-22	If I shaved my genitals, it would be for my pleasure.	•It was not clear if shaving one's genitals was active sexual self-objectification. A participant said that she shaves for hygiene.	Delete.
1-23	Having a boudoir or pinup photographs taken would be a pleasing experience for me.	•Participants did not know what a boudoir photograph was.	Delete.
1-24	I think that women sexually kissing other women for the purpose of attracting attention is degrading to women.	•Participants connected the statement with their attitudes toward lesbians, not with self-sexualizing activity. Also, this item was about individual's opinions, not about herself.	Delete.
1-25	I think that it's perfectly fine to use my sex appeal to enhance my power over men.	•Using one's sex appeal was not necessarily sexual self-objectification.	Delete.
1-26	I would rather be seen as sexy than as classically beautiful.	•“Seen as sexy” was not necessarily sexualization, yet a participant said being sexy has a connotation as being a sexy object, good for one purpose.	To me, being sexually provocative has more power than being classically beautiful. I would rather be seen more sexually provocative than as traditional.
1-27	I feel empowered when men find me sexy.	•Feeling empowered when a man finds a woman sexy was not self-sexualization. Also, this item belongs to Dimension 3.	Delete.

Dimension 2

2-1	My self-esteem goes up when men sexually desire me.	•A participant explained that the statement “when men sexually desire me” gave her a creepy impression – the act of “sexually desiring her” was happening at the moment. This item was converted to a “decrease” item to balance out the number of “increase” items.	My self-esteem decreases when I am not sexually desirable.
2-2	Knowing that I am sexually desirable makes me feel good about myself.		No change.
2-3	Knowing that men find me sexually desirable raises my self-esteem		No change.
2-4	Being sexually wanted by others increases my self-esteem.	•A participant stated that “being sexually wanted” sounded different from “being sexually desirable” and contained an image of aggressiveness.	Being sexually desirable to others increases my self-esteem.
2-5	When I do not feel sexually appealing, I do not feel good about myself.	•Double-negative confused some participants.	When I feel sexually appealing, I feel good about myself. When I feel that I am sexually undesirable, I feel bad about myself.
2-6	My self-esteem would suffer if I find myself not sexually desirable.	•One participant indicated that “suffer” sounded extreme and another participant interpreted “suffer” as “decrease.”	My self-esteem would decrease if I am sexually undesirable.
2-7	My self-esteem is influenced by how sexually desirable I am.		No change.
2-8	My sense of self-worth is influenced by how sexually alluring I am.	•Using “self-worth” and using “sexually alluring” had led participants to misinterpret the original content.	How I feel about myself is influenced by how sexually desirable I am. My confidence is influenced by my sexual desirability.
2-9	I do not care whether I am sexually desirable or not.	•The item was grammatically better to put together “whether” and “or not.”	I do not care whether or not I am sexually desirable.
2-10	My self-esteem does not depend on whether or not I am sexually seductive.	•Participants interpreted “sexually seductive” differently from “sexually desirable.”	My self-esteem is unrelated to how I feel about my sexual desirability.

<u>Dimension 3</u>			
3-1	I see the word “attractive” as a synonym of “sexy.”		No change.
3-2	I consider attractive women as sexy women.	•The item was about one’s opinions regarding attractive women (if one considers them as sexy women), not equating physical attractiveness with being sexy to oneself.	Being attractive is not the same as being sexy to me. (-)
3-3	I consider attractive women are the sexy women.	•Same as 3-2.	
3-4	I think being sexy is the way to be attractive.	•Participants responded to the item differently depending on how they interpreted “the way”: Some interpreted it as “the only way.” Others interpreted it as “one way” among many ways.	I think being physically attractive is being sexy.
3-5	I think an attractive woman has sexy appearance.	•The item was about one’s opinions regarding attractive women (if one thinks that they have a sexy appearance), not equating physical attractiveness with being sexy to oneself.	For me, having physical beauty equates to being sexy.
3-6	To be attractive, I need to be sexy.		No change. Add: It is my sex appeal that makes me an attractive woman.
3-7	I must wear something sexy to feel pretty.	•“Look pretty” better represented physical aspects of attractiveness than “feel pretty.”	To look pretty, I must wear something sexy.
3-8	I must wear something sexy to feel attractive	•Same as 3-7.	I must wear something sexy to look physically attractive.
3-9	If I am helping my friends dress up for a special event, I would suggest appearing sexy.	•Participants questioned what a special event meant; Is it a professional event, a party, or a date? Responses varied dramatically depending on their	Delete.

		interpretation of the event.	
3-10	If I give tips to appear attractive, I would suggest dressing sexy.	•Similar to 3-7, this item was context dependent.	Delete.
3-11	I look less attractive if I do not wear sexy clothing.		No change. Add: If I do not wear sexy clothing, I look less attractive than I typically do.
3-12	I think women appear less attractive if they do not wear sexy clothing.	•The item was about general women, not equating physical attractiveness to sexiness to oneself.	Delete.
3-13	I think I appear less attractive if I do not wear sexy clothing.	•Same as 3-12.	No change.
3-14	I think that the best versions of female beauty are the Victoria's Secret models.	•A participant interpreted this item as whether she agrees with society's stereotype of beautiful women. The item needed to change to be specific to one's own sexualization.	I think my beauty comes from being sexually erotic.
3-15	When I think of attractive women, I think of the Victoria's Secret models.	•Same as 3-14.	I think sexiness can represent physical attractiveness.
3-16	I think porn stars have attractive bodies.	•It was about one's opinions regarding porn stars' bodies.	Delete.
3-17	I think learning how to pose like a porn star would increase my attractiveness.	•It needed to be specific to one's self-sexualization.	I think exotic dancers (e.g., strippers) are good role models to use to enhance my attractiveness.
3-18	I think a Vegas showgirl knows some of the best techniques to appear attractive.	•The item was about Vegas showgirls, not self-sexualization.	Combine this item with 3-19.
3-19	I think exotic dancers have some of the best techniques to appear attractive.	•The item was about exotic dancers, not self-sexualization.	When it comes to making myself attractive, I could borrow some tips from exotic dancers of Vegas showgirls.

Dimension 4

4-1	I find it enjoyable if I am groped at a lively party.		No change. Add: I find it acceptable if anyone gropes me at a party. Add: It is inevitable that I would be groped while at a party or a club.
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4-2	I would not mind attending a party where men may grope me.		No change. Add: I would not complain if I were groped because men groping women is commonplace.
4-3	If I am groped at a lively party, it's because the man finds me attractive.	•The item was about the man's motivation, not considering groping as normal.	Delete.
4-4	I think a lively and fun party often includes groping of women by men.	•The item was about a party, not self-sexualization.	Delete.
4-5	When I am having a fun time at parties, I would not mind getting sexual grabbing.	• Four participants answered to this item as if they were asked about what general women would be like in the situation. Grammar correction from "sexual grabbing" to "sexually grabbed."	I am willing to receive sexual advances from strangers. I am receptive to unexpected sexual advances from strangers.
4-6	I laugh at sexist jokes at bars.	•A participant stated that she generally does not go to a bar and another participant (age 21) had not gone to a bar yet. Also, two participants indicated the setting was irrelevant to sexist jokes while two other participants indicated being in a bar influenced the interpretation of the item.	Delete "at bars." Add: I welcome anyone's sexual comments about me.
4-7	Sexist jokes can be funny at bars.	•Same as 4-6.	Delete.
4-8	I think flashing of breasts is a humorous drunk college life experiment.	•The item was not a good item because it contained two elements of the experiment - humorous and drunk. A participant may have agreed with one element but disagreed with the other element. It needed to be more about personal self-sexualization and less	Delete.

		about college life experimentation. Most importantly, this item belongs to Dimension 1.	
4-9	I think getting groped is a normal part of being sexually playful at a party.	•A participant indicated that the word “playful” implied that getting groped was consensual and was her intent.	I think getting groped is a normal part of being sexual. It is inevitable that I experience men’s attempts to obtain sexual acts.
4-10	I think it would hurt me if I get sexually touched at a club. (-)	•Participants were not sure if the sexual touch was consensual or not in this statement. The item was changed to include “get groped” or “get grabbed” to contain an image of a nonconsensual act.	I think it would hurt me if I get sexually groped at a club. (-) It would hurt me if I received sexual advanced from strangers. (-) I do not tolerate any form of sexual coercion. (-)
4-11	I would not be surprised when I get groped at a spring break party.	•Participants said that they would not be surprised if they were drinking and were in crowded place. However, it did not mean that they were not bothered. A participant was not sure if the “spring break party” had a particular connotation.	I would not go to any place (e.g., spring break party) where I knew men may make unwanted sexual advances toward me (-) I would not complain if I were groped at a crowd party or a club because men groping women is commonplace.
4-12	I think that prudes whine about sexual grabbing happening at bars.	•Two participants indicated that sexual grabbing happens in a more crowded type of place and bars were not really crowded places.	I think that only prudes complain about sexual grabbing in a crowded place (e.g., bar, club, party).
4-13	Getting groped would not bother me if I am having a fun time.	•Two participants indicated that the word “fun time” implied that they were also attracted to the other person who groped them. One participant found this item confusing because she was not sure what a fun time meant. Another participant stated that she would not mind at the moment but it would bother her the morning after.	Receiving unwanted sexual advances would not bother me. Receiving unwanted sexual interests would not bother me.
4-14	Getting sexually grabbed would not bother me if I am drunk.	•Some participants agreed to this item because they would not be able to react as much due to alcohol.	Delete.

4-15	If I were intoxicated, I would not mind get groping at a club.	•Same as 4-14.	Delete.
4-16	I think that there is nothing wrong with participating in a fantasy rape.	•The item read as if the question was asking about other people who participated in such an act, not asking how the participant thought of it.	Delete.
4-17	I think that participating in a fantasy rape is wrong.	•Same as 4-16.	Delete.
4-18	I would never participate in a fantasy rape.	•This item invited many questions: Is the act a sexual experiment? Is it consensual?	Delete.

Results from Pre-Test Interview

A pre-test was conducted with four individuals who represented the study population. Three of them were recruited among the participants from the second cognitive interview; two of them scored relatively high on the self-sexualization scale and the last one scored low on the scale. The fourth participant was a new participant and recruited through a flyer. Participants were all heterosexual women between the ages of 19 and 28 and never married. All participants were white and had lived in the U.S. more than 17 years.

A total of 68 items resulting from the previous stage (i.e., the second cognitive interview) were examined. Because there were many changes in assessment items from the previous stage, the main focus of the pre-test was to review each assessment item. Demographic questions were also reviewed at this stage. During the pre-test interviews, the remaining wording and clarity issues were identified and the clarity on directions and procedures were ensured. Newly added items as a result of the second interview were also reviewed. The appropriateness in reflecting the intended content of the concept was re-reviewed. In addition, the average time for completing the questionnaire was estimated by timing one participant who was taking the questionnaire of the first time. She took one minute to complete the 15 items that belong to the second dimension. Based on her speed of completion, it was estimated that five minutes were needed to complete all 68 items and demographic questions.

One of the important changes as a result of the pre-test was the change in the study population. One participant who was 19 stated that she was legally restricted from drinking, so that she could not go to a bar or a club. In the previous cognitive interviews,

another 19 year old participant said that she did not know what a lap dance was. Thus, the age restriction of the study population was changed from 19 to 29 to 21 to 29. Also, some items were changed to hypothetical statements. When items involved a specific activity (e.g., wearing promiscuous clothes, pole dancing, flashing), participants took it as a hypothetical question when they had no experience with the activity. Thus, those items were changed to hypothetical statements (e.g., Wearing promiscuous clothes would make me feel powerful).

Another important change was the change in the response format; a 10-point Likert scale was changed to an 8-point Likert scale. In the 10-point Likert scale, both positive and negative responses had “completely,” followed by “extremely,” “largely,” “moderately,” “slightly.” However, the interval between the “completely” and “extremely” were too close compared to the intervals between the rest of response options. Thus, both positive and negative response options of “extremely” were deleted (“extremely agree” and “extremely disagree”) and resulted in 8 response options.

Newly added or modified items were well understood by participants. For example, several items that had less intensity of self-sexualization (e.g., wearing a sexy dress) were changed to “promiscuous” (e.g., wearing a dress promiscuously) to capture the intensity of active self-sexualization. Participants had no questions in understanding what promiscuous meant.

Some items that involved the status of “being” (e.g., being promiscuous, being sexy, being powerful, being physically attractive) were changed to “showing,” “appearing,” or “feeling.” Participants differentiated a status of “being” from presentations or moods. For example, two participants indicated that being physically

attractive has more to do with innate attributes, such as what a person is born with, and hard to achieve. However, presenting oneself in a physically attractive way is achievable for everyone.

The fourth dimension had some major revisions. New items were added to capture the various degree of active role in sexual violation from “inviting,” “welcoming,” “excepting,” “accepting” to “normalizing” the violation. Items that were not clear in sexual violation were clarified by using adjectives (e.g., “uninvited” sexual advances, “unwelcomed” sexual attention) or by using terms with a connotation of forced violation (e.g., sexual aggression, sexually grabbed, groped). All changes made in the items are presented in Table 13. Analysis of the pre-test resulted in a total of 71 items (SS4): Twenty five for the first dimension, 12 items for the second dimension, 15 items for the third dimension, and 19 items for the fourth dimension.

Table 13. Results of the pre-test – Implemented changes

Original item	Rational (Investigator’s reasoning, Participant’s comments)	Change made for item
<u>Dimension 1</u>		
1-1	It is empowering to show the promiscuous side of personality.	No change.
1-2	Being sexually promiscuous is empowering for me.	•“Being” was changed to “showing” to be consistent with 1-1. Participants pointed out the difference between 1-1 and 1-2 by the word “being.”
1-3	Wearing clothes promiscuously is powerful for me.	•Two participants indicated that they did not often wear clothes promiscuously. Thus, the item was changed to a hypothetical statement. “Is powerful” was changed to “feel powerful.”
1-4	Dressing promiscuously is a source of power for me.	No change.
1-5	I am powerful when I dress promiscuously.	•Participants interpreted the item as how they felt when they dress promiscuously. The item was changed to “feel powerful” from “am powerful.”
1-6	For me, participating in recreational pole dancing is empowering.	•Participants had not done the activity. The item was changed to a hypothetical item. Also, the purpose of activity needed to be specific to self-sexualizing activity. The word “recreational” contained an image of exercise, which was not the intended content.
1-7	I would feel powerful giving a man a thrilling lap dance.	No change.
1-8	If I can give a thrilling lap dance, I am	•A participant interpreted the item as if
		Giving a thrilling lab dance for men would make me feel

	powerful.	having a capability of doing the activity was a source of power – “I am powerful, if I can.”	powerful.
1-9	To me, being sexually provocative has more power than being classically beautiful.	•“Being” was changed to “showing” to be consistent with the rest of the items.	Showing my sexual provocativeness would make me feel powerful
1-10	Presenting myself to others as a sexual being is fun to me.	•A participant did not understand the question. Her initially understanding of the item was if telling people what she liked to do in private was fun to her.	It is fun to show off my body in a sexual manner (e.g., highlighting breasts, showing legs). I enjoy purposefully draw attention to my figure in a sexual manner (e.g., highlighting breasts, showing legs).
1-11	For me, dressing promiscuously is exciting.	•A participant stated dressing promiscuously was more related to “fun” than “excitement.” Another participant used the word “fun” when she described how she interpreted the item.	Wearing promiscuous clothing is fun for me. I enjoy dressing promiscuously.
1-12	If I gave a man a lap dance, it is because I find it fun.	•The item was changed to a hypothetical statement.	If I gave a man a lap dance, it would be because I would find it fun for me. It would be for my pleasure if I gave a man a lap dance.
1-13	Attracting attention by flashing my breasts in public (e.g., at a bar or a party) could be fun for me.		No change.
1-14	If I participate in erotic dancing for men, it is an enjoyable experience for me.	•Participants found this question difficult to answer, because the item stated that the dancing was for men but the experience was for them. Also, they questioned if the dancing was in private or in public.	Delete.
1-15	I enjoy being viewed as a sexual thing.	•Two participants questioned what “a sexual thing” meant.	I enjoy purposefully objectify myself as a sexual thing. It is fun to sexually objectify myself.
1-16	I think I would feel liberated if I am promiscuous.	•Participants automatically read the item as a hypothetical statement “if I were promiscuous.” To be consistent with the rest of the items, “be promiscuous” was changed to “show promiscuous.”	I would feel more liberated than usual if I were to show the promiscuous side of my personality.
1-17	If I am promiscuous, I feel free.	•A participant said “if I am” was weird. Another participant said that feeling free	Showing promiscuity would make me feel liberated.

		was higher in degree of freedom than feeling liberated. “Being promiscuous” was changed to “showing promiscuity.”	
1-18	I would rather be seen as more sexually provocative than as traditional.	•Interpretations of “traditional” were varied; conservative, not sexually provocative, or beautiful.	Delete.
1-19	Wearing a T-shirt that says “porn star” can be a way to project my sexual assertiveness.	•To accurately reflect the definition of dimension, the item was changed to a question asking whether or not an individual would see it as a fun thing to do.	It would be fun to project my sexual assertiveness by wearing a T-shirt that says “porn star.”
1-20	Flashing my breasts in public (e.g., at a bar or a party) is an expression of my sexuality.	•The item was changed to a hypothetical statement. A participant did not understand the question mainly because “sexuality” was vague in this item – was it promiscuity or sexual orientation?	It would be fun if I were to flash my breasts in public to attract attention (e.g., at a bar or a party).
1-21	Engaging in public expressions of sexuality (e.g., flashing my breasts) is how I could express my sexuality.	•Same as 1-20.	Engaging in public expressions of sexuality (e.g., flashing my breasts) would be a fun thing to do.
<u>Dimension 2</u>			
2-1	My self-esteem decreases when I am not sexually desirable.		No change.
2-2	Knowing that I am sexually desirable makes me feel good about myself.		No change.
2-3	Knowing that men find me sexually desirable raises my self-esteem.		No change.
2-4	Being sexually desirable to others increases my self-esteem.		No change.
2-5	When I feel that I am sexually undesirable, I feel bad about myself.		No change.
2-6	When I feel sexually appealing, I feel good about myself.		No change.
2-7	My self-esteem would decrease if I am sexually		No change.

	undesirable.		
2-8	My self-esteem is influenced by how sexually desirable I am.		No change.
2-9	How I feel about myself is influenced by how sexually desirable I am.		No change.
2-10	My confidence is influenced by my sexual desirability.		No change.
2-11	I do not care whether or not I am sexually desirable.		No change.
2-12	My self-esteem is unrelated to how I feel about my sexual desirability.		No change.
<u>Dimension 3</u>			
3-1	I see the word “attractive” as a synonym of “sexy.”	•A participant stated that this item had nothing to do with herself. The item was about the words.	Delete.
3-2	Being attractive is not the same as being sexy to me.	•“Attractive” was changed to “physically attractive” to directly reflect the definition of the dimension. “Not the same as” was changed to “different” to be concise.	Appearing physically attractive is different from appearing sexy to me. (-)
3-3	I think being physically attractive is being sexy.	•The item was changed to a more descriptive statement.	Being physically attractive is the same as being sexy to me.
3-4	For me, having physical beauty equates to being sexy.	•A participant indicated that “having physical beauty” had more to do with innate what a person born with. Another participant asked if the question is about herself or others (am I looking at myself or other person?).	For me, physically attractiveness equates with sexiness.
3-5	To be attractive, I need to be sexy.	•“Attractive” was changed to “physically attractive” to be more specific. “Be” was changed to “appear” and “look” because be attractive or be sexy was different from appearing or looking sexy. Also, there	To appear physically attractive, I need to look sexy.

		was another similar item (3-3).	
3-6	It is my sex appeal that makes me an attractive woman.	•Participants described an attractive woman with non-physical ways of being attractive.	Delete.
3-7	To look pretty, I must wear something sexy.	•This item was removed because there were other wearing related items.	Delete.
3-8	I must wear something sexy to look physically attractive.		No change.
3-9	I look less attractive if I do not wear sexy clothing.	•“Attractive” was changed to “physically attractive” to be specific. “Wear sexy clothing” was changed to “highlighting sexual features” to give a variation.	I look less physically attractive if I do not highlight my sexual features.
3-10	If I do not wear sexy clothing, I look less attractive than I typically do.	•The item was too close to 3-9.	Delete.
3-11	I think I appear less attractive if I do not wear sexy clothing.	•The item was too close to 3-9.	Delete.
3-12	I think my beauty comes from being sexually erotic.	•A participant indicated that being erotic was a pretty extreme word. Another participant interpreted the item as if her self-esteem came from being sexually erotic. This interpretation belongs to the Dimension 2.	Delete.
3-13	I think sexiness can represent physical attractiveness.	•The item was too general and could be applied to others. The item was modified to be specific to oneself.	My sexiness represents my physical attractiveness.
3-14	I think exotic dancers (e.g., strippers) are good role models to use to enhance my physical attractiveness.		No change.
3-15	When it comes to making myself attractive, I could borrow some tips from exotic dancers or Vegas showgirls.	•“Vegas showgirls” was removed from the statement because this occupation was not understood as an equivalent to exotic dancers.	When it comes to making myself physically attractive, I could borrow some tips from exotic dancers (e.g., strippers)

Dimension 4

4-1	I find it enjoyable if I am groped at a lively party.	•The item was changed to a hypothetical statement. Three other items were included to capture the level of active role in sexual violation.	I would find it enjoyable if I were sexually grabbed at a lively party. Add: I would find it tolerable if I were groped at parties, clubs, or bars. Add: I welcome sexual aggression by men at parties, clubs, or bars. Add: I expect to be sexually teased at parties, clubs, or bars.
4-2	I would not mind attending a party where men may grope me.		No change.
4-3	I welcome hearing sexual comments about me from anyone.	•Sexual comments were not necessarily violation of sexuality.	Delete. I see whistling, ogling, or cat calls as acceptable behavior at parties, clubs, or bars.
4-4	I welcome anyone's sexual comments about me.	•Same as 4-3.	Delete. I turn uninvited sexual remarks into flattery at parties, clubs, or bars.
4-5	I laugh at sexist jokes.	•Sexist jokes refer to degrading jokes based on gender stereotyping and it is not the content of this dimension, sexual violation.	Delete. I find sexually harassing remarks acceptable, unless extremely serious, at parties, clubs, or bars.
4-6	I think that only prudes complain about sexual grabbing in a crowded place (e.g., bar, club, party).	•The item was changed to be more specific to one's reaction towards sexual violation.	I would complain about sexual grabbing in a crowded place (e.g., bar, club, party). (-)
4-7	I am willing to receive sexual advances from strangers.	•"Sexual advances" was changed to "uninvited sexual advances" to be clear about sexual violation.	I am willing to receive uninvited sexual advances from strangers at parties, clubs, or bars.
4-8	I am receptive to unexpected sexual advances from strangers.	•Same as 4-7. "Unexpected" was understood as something pleasant.	I am receptive to uninvited sexual advances from strangers at parties, clubs, or bars.
4-9	I find it acceptable if anyone gropes me at a party or a club.		No change.
4-10	Receiving unwanted sexual advances would not bother me.	•The item confused a participant because the word "unwanted" already implied some degree of bothersome.	Delete. To me, sexual grabbing or groping is non-serious behavior at parties, clubs, or bars.
4-11	Receiving unwanted sexual attention would not bother me.	•Same as 4-10. "Unwanted" was changed to "unwelcomed" to reduce the intensity.	Receiving unwelcomed sexual attention would not bother me at parties or clubs.

4-12	I would not complain if I were groped at a crowded party or a club because men groping women is commonplace.	•The reasoning statement was removed because participants agreed and disagreed regardless of the reasoning statement.	I would not complain if I were groped by a man at a crowded party or a club.
4-13	I think getting groped is a normal part of being sexually playful at a party or a club.	•Two other items were included to capture the level of active role in sexual violation.	No change. Add: I invite groping at parties or clubs as a playful incident. Add: At some level, I accept being treated as a sexual object as a part of having fun at parties, clubs, or bars.
4-14	It is inevitable that I experience men's attempts to obtain sexual acts.	•A participant interpreted the item that it was about her actual experiences – how often it happened to her. Another participant did not understand the question because “men's attempts to obtain sexual acts” included a wide range of acts from a sexual assault to a mild attempt of showing genuine interests.	Delete.
4-15	It is inevitable that I would be groped while at a party or a club.	•Two participants interpreted the item that how often it happened to them.	Delete.
4-16	I would not complain if I were groped at a crowded party or a club because men groping women is inevitable.	•Same as 4-12. Without the reasoning, the item was identical with 4-12.	Delete.
4-17	I would not go to any place (e.g., Spring Break party) where I knew men may make unwanted sexual advances toward me		No change.
4-18	I think it would hurt me if I get sexually groped at a club.	•A participant questioned if “hurt” meant emotional hurt.	Delete.
4-19	It would hurt me if I received sexual advances from strangers.	•“Sexual advances” was unclear. It could be different from sexual violation.	Delete.
4-20	I do not tolerate any form of sexual coercion.	•Two participants did not understand what sexual coercion meant.	Delete.

Results from Pilot Test 1

The scale was piloted to members of Amazon MTurk. The primary purpose of the pilot test was to identify potential deficiencies in the design, procedures, or assessment items in preparation for a large scale administration. Several potential deficiencies and obvious errors were identified. Six assessment items were accidentally left out from the first set of pilot tests. There was a need for a way to identify participants who successfully completed the survey from those who falsely claimed completion of the survey. Another set of pilot tests were administered including the 6 items that were previously missed and a space to insert participant's Amazon MTurk ID. Also, a random code was generated for each participant who successfully completed the survey. Two attention check items were included to prevent responses by random clicking (i.e., Do not answer this question as it is just to screen out random clicking. So far, I responded to this questionnaire carefully). Statistics and related information of Pilot 1 is presented in Table 14 (demographic profile of participants), Table 15 (descriptive statistics including measures of the shape of the distribution and scale statistics) and in Appendix F (pilot test items mentioned in text).

For the first set of pilot tests (Pilot 1), a total of 67 individuals initiated the online questionnaire and 6 responses were screened out because their eligibilities to participate in the study were not met. Two respondents were excluded because they did not answer all questions. Six respondents were additionally excluded because their responses on eligibilities at the end of survey were not consistent with the information they provided in screening questions at the beginning of the survey: For the demographic questions at the end of the survey, three responded that they were under 21 (18, 20, and 20 years old,

respectively) and the other three responded that they lived in the United States less than 15 years (5, 5, and 6 years, respectively). Also, two responses were excluded due to unreasonably fast survey completion time (less than 3 minutes). This process resulted in 51 eligible responses. No systematic missing response was detected.

More than half of participants were white (72.55%), between 27 to 29 years old (56.86%), living in urban areas (54.90%), employed for wages (78.43%), earned higher than a bachelor's degree in college (66.67%), and were never married (64.71%).

Table 14. Demographic profile of pilot tests participants (Pilot 1 $n = 51$, Pilot 2 $n = 23$)

Variable	Category	Frequency (%)	
		Pilot 1 ($n = 51$)	Pilot 2 ($n = 23$)
Age	21 to 23	2 (3.92)	3 (13.04)
	24 to 26	20 (39.22)	6 (26.09)
	27 to 29	29 (56.86)	14 (60.87)
Marital status	Never married	33 (64.71)	13 (56.50)
	Married	18 (35.29)	9 (39.10)
	Divorced	0 (0.00)	1 (4.30)
Relationship status (excluded married)	Single	23 (45.10)	8 (34.78)
	Engaged	1 (1.96)	1 (4.35)
	In a domestic partnership	1 (1.96)	2 (8.70)
	In a relationship	6 (11.76)	3 (13.04)
	In an open relationship	1 (1.96)	0 (0.00)
	It is completed	1 (1.96)	0 (0.00)
	No response	18 (35.29)	9 (39.13)
Area types	Urban	28 (54.90)	9 (39.13)
	Suburban	20 (39.22)	10 (43.48)
	Rural	3 (5.88)	4 (17.39)
Race or origin	White	37 (72.55)	16 (69.57)
	Black or African American	3 (5.88)	3 (13.04)
	Asian	5 (9.80)	3 (13.04)
	American Indian or Alaska Native	4 (7.84)	1 (4.35)
	American Indian or Alaska Native, Asian	1 (1.96)	0 (0.00)
	White, Asian	1 (1.96)	0 (0.00)
Education	Some high school, no diploma	1 (1.96)	0 (0.00)
	High school graduate, diploma or the equivalent	2 (3.92)	1 (4.35)
	Some college credit, no degree	6 (11.76)	5 (21.74)
	Trade/technical/vocational training	3 (5.88)	1 (4.35)
	Associate degree	5 (9.80)	2 (8.70)
	Bachelor's degree	25 (49.02)	12 (52.17)
	Master's degree	7 (13.73)	2 (8.70)
	Professional degree	2 (3.92)	0 (0.00)
Employment	Employed for wages	40 (78.43)	15 (65.22)
	Self-employed	8 (15.69)	4 (17.39)
	Out of work and looking for work	1 (1.96)	1 (4.35)
	A homemaker	2 (3.9)	2 (8.70)
	A student	0 (0.00)	1 (4.35)

Descriptive statistics: Measures of central tendency and variability. The mean value of 24 items in the first dimension was 4.10 with the standard deviation value of 2.22. The mean value of 12 items in the second dimension was 4.97 with the standard deviation value of 1.65. The mean value of 15 items in Dimension 3 was 4.60 with the standard deviation value of 1.81. Lastly, the mean value of 15 items in the fourth

dimension was 3.41 with the standard deviation value of 2.10. It is ideal if the means of all dimensions were at about value 4.5, the center value from 1 to 8. However, the mean of the fourth dimension was 1.09 lower than the center value. This result was not surprising as the content of the fourth dimension was a somewhat extreme form of self-sexualization (i.e., violability of one's sexuality) than the other dimensions. Standard deviations ranged from 1.65 to 2.22 indicate that participants did not respond to items in the same way. In other words, there were adequate differences in responses to each item.

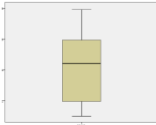
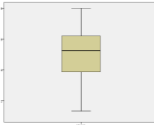
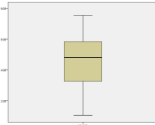

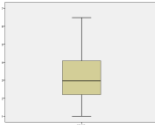
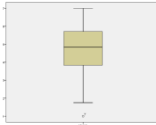
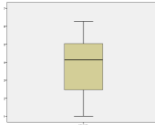
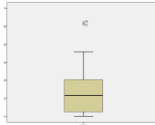
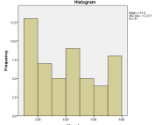
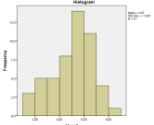
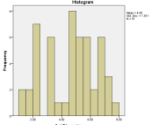
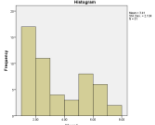
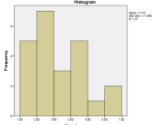
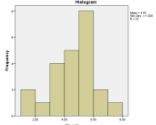
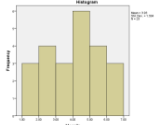
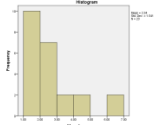
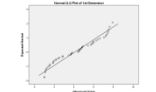
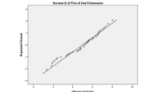
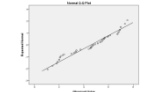
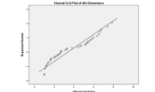
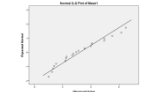
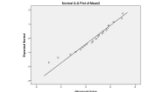
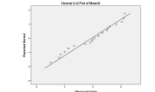
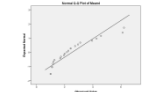
Descriptive statistics: Measures of the shape of the distribution. Although there can be variation in the measures of the distribution based on sample size, analysis distributions give general understanding and insights about gaps in the data. Histograms of mean scores of each dimension showed that the second dimension had a relatively normal shape of distribution and the other dimensions had irregular distributions, a bimodal or a trimodal distribution. Q-Q plots of each dimension also indicate departure from normality, especially for the first dimension and the fourth dimension; however, the deviations from the straight lines were not dramatic.

Skewness statistics of all dimensions were between -1.0 and 1.0 which indicates the skewness was not substantial and the distributions were not far from symmetrical: The distributions of the second and the third dimensions had negative skews with tails to the left (i.e., skewness of -.481 and -.276, respectively). The first and the fourth dimensions had positive skews with tails to the right (i.e., skewness of .126 and .502, respectively). Negative values of Kurtosis (i.e., platykurtic distributions) indicated the distribution of all dimensions was relatively flatter than normal and tail heavy; however,

Kurtosis values were all between -2.0 and 2.0 which indicate the deviations from normality were in the acceptable range.

Another measure of normality is the Shapiro-Wilk test and Kolmogorov-Smirnov Test. For a dataset smaller than 5,000, the Shapiro-Wilk test was used (Royston, 1995). The Shapiro-Wilk test showed that the p -value of the second dimension was greater .05 and the null hypothesis (i.e., the observed distribution fits the normal distribution) was not rejected. However, the p -values of the other three dimensions were lower than .05 which indicate that the observed distributions deviate significantly from the normal distribution.

Table 15. Descriptive statistics and the measures of the distribution of pilot tests

# of items	Pilot 1 (n = 51)				Pilot 2 (n = 23)			
	<u>Dimension 1</u>	<u>Dimension 2</u>	<u>Dimension 3</u>	<u>Dimension 4</u>	<u>Dimension 1</u>	<u>Dimension 2</u>	<u>Dimension 3</u>	<u>Dimension 4</u>
	24	12	15	15	25	12	15	19
<u>Descriptive statistics</u>								
Mean (SD)	4.10 (2.22)	4.97 (1.65)	4.60 (1.81)	3.41 (2.10)	3.23 (1.60)	4.65 (1.51)	3.93 (1.56)	2.54 (1.54)
Skewness (Std. Error)	.126 (.333)	-.481 (.333)	-.276 (.333)	.502 (.333)	.519 (.481)	-.720 (.481)	-.291 (.481)	1.225 (.481)
Kurtosis (Std. Error)	-1.302 (.656)	-.474 (.656)	-1.052 (.656)	-1.156 (.656)	-.608 (.935)	.446 (.935)	-.944 (.935)	.832 (.935)
Shapiro-Wilk (Sig.)	.929 (.005)	.960 (.087)	.944 (.018)	.894 (.000)	.947 (.252)	.959 (.437)	.950 (.296)	.855 (.003)
Cronbach's alpha	.990	.933	.955	.970	.973	.940	.949	.954
<u>Distribution illustrations</u>								
Box plot								
Histogram								
Q-Q plot								

Internal consistency reliability test. Cronbach's alpha values of all dimensions were all above .90 (.990, .933, .955, and .970, respectively).

Item-total correlation test. All item-total correlation results in the first dimension were good; all corrected item-total correlations were over .795 and the squared multiple correlations were over .845. Removal of any item among the 24 items in the first dimension did not result in a significant increase in Cronbach's alpha (ranging from .989 to .991).

The item-total correlation results of all items in the second dimension were good, except for the item 2-11 and 2-12; the corrected item-total correlations were over .776; the squared multiple correlations were over .705; and the values of Cronbach's alpha if an item was deleted were as low as .919. The item 2-11 and 2-12 had the item-total correlations of .322 and .080, respectively and the squared multiple correlations of .562 and .477, respectively. Removal of any item among the 12 items in the second dimension did not result in a significant increase in Cronbach's alpha (ranging from .919 to .952).

Regarding the third dimension, the item-total correlations of all items were good, except for the item 3-10; the corrected item-total correlations were over .698; the squared multiple correlations were over .698; and the values of Cronbach's alpha if an item was deleted were as low as .948. The item 3-10 had an item-total correlation of -.088 and the squared multiple correlation was .536. Removal of any item among the 15 items in the third dimension did not result in a significant increase in Cronbach's alpha (ranging from .948 to .967).

Almost all item-total correlation results of all items in the fourth dimension were good, except for the item 4-7 and 4-18; the corrected item-total correlations were

over .831 and the squared multiple correlations were over .775. The item 4-7 and 4-18 had the item-total correlations of .253 and .303, respectively and the squared multiple correlations of .721 and .703, respectively. Removal of any item among the 15 items in the fourth dimension did not result in a significant increase in Cronbach's alpha (ranging from .965 to .977).

Inter-item correlation test. Some items had lower inter-item correlations. The item 1-20 had lower than .6 coefficient values with 20 other items (ranging from .479 to .598). The item 2-11 had lower than .6 coefficient values with 10 other items (ranging from .068 to .369). The item 2-12 also had lower than .6 coefficient values with 10 other items (ranging from .002 to .090). The inter-item correlation between the item 2-11 and 2-12 was .629. The item 3-10 had lower than .3 coefficient values with all other items. Excluding the correlations with the item 3-10, the correlations below .6 were 11 pairs; 3-1 x 3-13, 3-1 x 3-15, 3-2 x 3-8, 3-2 x 3-15, 3-3 x 3-14, 3-3 x 3-15, 3-4 x 3-15, 3-5 x 3-8, 3-5 x 3-13, 3-6 x 3-12, 3-7 x 3-13. The item 4-7 had lower than .6 coefficient values with 13 other items (ranging from .117 to .337). The item 4-18 also had lower than .6 coefficient values with 13 other items (ranging from .143 to .358).

Results from Pilot Test 2

For the second set of pilot tests (Pilot 2), a total of 45 individuals initiated the online questionnaire and 7 of them were screened out because they already participated in the first pilot study (screening question was "Have you participated in the same study within a month?"). Four respondents were screened out because their eligibilities to participate in the study were not met. Ten respondents were excluded because they did not correctly answer one or both attention check items. Also, one response was excluded

due to an unreasonably fast survey completion time (less than 3 minutes). This process resulted in 23 eligible responses. No systematic missing response was detected.

Demographic characteristics of Pilot 2 were similar to those of Pilot 1 (see Table 14). More than half of participants were white (60.87%), between 27 to 29 years old (60.87%), employed for wages (65.22%), earned higher than a bachelor's degree in college (52.17%), and were never married (56.50%). About equal number of people lived in suburban and urban areas (43.48% and 39.13%).

Descriptive statistics: Measures of central tendency and variability. The mean value of 25 items in the first dimension was 3.23 with the standard deviation value of 1.60. The mean value of 12 items in the second dimension was 4.65 with the standard deviation value of 1.51. The mean value of 15 items in the third dimension was 3.93 with the standard deviation value of 1.56. Lastly, the mean value of 19 items in the fourth dimension was 2.54 with the standard deviation value of 1.54. In general, means and standard deviations of Pilot 2 data were lower and smaller than those of Pilot 1 (see Table 15).

Descriptive statistics: Measures of the shape of the distribution. Histograms and Q-Q plots of means of each dimension with Pilot 2 data were very similar to those of Pilot 1. The second dimension had a relatively normal shape of distribution and the other dimensions had irregular distributions. Q-Q plots of each dimension also indicate departure from normality, but the deviations from the straight lines were not dramatic.

Skewness statistics were also similar to those of Pilot 1. However, the skewness of the fourth dimension was above 1.0, which indicates a departure of normality. Similar to Pilot 1, the distributions of the second and the third dimensions had negative skews

with tails to the left (i.e., skewness of $-.720$ and $-.291$, respectively). The first and the fourth dimensions had positive skews with tails to the right (i.e., skewness of $.519$ and 1.225 , respectively). Kurtosis statistics (i.e., platykurtic distributions) of the first and third dimensions indicated the distributions were relatively flatter than normal and tail heavy and the second and fourth dimensions were relatively sharper peaks and thinner tails. Similar to Pilot 1, however, Kurtosis values were all under 2.0 or -2.0 which indicates the deviations from normality were in the acceptable range.

The Shapiro-Wilk test shows that the p -values of the first, the second, and the third dimension were greater $.05$ and can conclude that the data comes from a normal distribution. The p -value of the fourth dimension was less than $.05$ and there is evidence that the data were not from a normally distributed population. However, since the measure of normality is dependent on sample size, normality statistics were only used for reference.

Item-total correlation test. All item-total correlation results in the first dimension were good; the corrected item-total correlations were over $.529$. The squared multiple correlations were not generated because there were fewer data ($n = 21$) than there were variables ($n = 25$). Removal of any item among the 25 items in the first dimension did not result in a significant increase in Cronbach's alpha (ranging from $.971$ to $.973$).

The item-total correlation results of all items in the second dimension were good; the corrected item-total correlations were over $.548$. The squared multiple correlations were over $.558$. Removal of any item among the 12 items in the second dimension did not result in a significant increase in Cronbach's alpha (ranging from $.930$ to $.942$).

Regarding the third dimension, the item-total correlation of all items were good; the corrected item-total correlations were over .545, the squared multiple correlations were over .761. Removal of any item among the 15 items in the third dimension did not result in a significant increase in Cronbach's alpha (ranging from .943 to .949).

Almost all item-total correlation results of all items in the fourth dimension were good, except for item 4-7; the corrected item-total correlations were over .464. The squared multiple correlations were not generated because the number of variables was not large enough ($n = 19$) than the number of data ($n = 20$) to calculate the statistic. The item 4-7 had the item-total correlations of .208. Removal of any item among the 19 items in the fourth dimension did not result in a significant increase in Cronbach's alpha (ranging from .948 to .959).

Inter-item correlation test. More items had lower inter-item correlations in Pilot 2 compared to Pilot 1, due to a smaller sample size. Regarding the first dimension, the item 1-20 showed distinctively low correlations in Pilot 1. In the Pilot 2, however, the item 1-17, 1-19, 1-20, and 1-23 had several correlations lower than .400 and as low as .197. The results of the second dimension in Pilot 2 were similar to those of Pilot 1: the item 2-11 had lower than .6 coefficient values with 10 other items (ranging from .337 to .518). The item 2-7 and 2-12 had lower than .5 correlations with four other items in each dimension. The results of the third dimension were quite different from Pilot 1. Item 3-10 was the most problematic item with lower correlations with other items in Pilot 1. In Pilot 2, however, the item 3-1, 3-10, 3-14, and 3-15 had lower than .4 coefficient values with 5 or more items. Regarding the fourth dimension, more items were found to have lower coefficient values in Pilot 2, while item 4-7 and 4-18 were the problematic items in

Pilot 1; The item 4-6, 4-7, 4-9, 4-14, and 4-18 had lower than .4 coefficient values with 5 or more items. (See Appendix F for items mentioned in text.)

Summary of results from Pilot 1 and Pilot 2. The primary purpose of the pilot test was to prepare for a large scale administration. Several deficiencies were identified and the test procedure was improved. Six missing items as well as two attention check items were included. Two ways to identify the successful completion of surveys from false claims of completions were implemented in the survey. Looking at the results of Pilot 2, implementation of attention check items was successful enough to obtain quality responses. To keep to the purpose of the pilot test, limited item selection and modification were performed. For the need of reducing extreme response bias as well as acquiescent bias, at least one reverse-worded item was added to a dimension with all other positively worded items. Some items were modified to be more direct to the definition of content, to include various manifestations of dimensions, to be consistent with vocabularies in other items, and to reduce the intensity of statement (see Table 16). This process resulted in a total of 68 items (SS5): Twenty three items in the first dimension, 12 items in the second dimension, and 14 items in the third dimension, and the 19 items in the fourth dimension.

Table 16. Results of pilot tests

Original item	Rational (Investigator's reasoning, Participant's comments)	Change made for item
<u>Dimension 1</u>		
1-4 Showing promiscuousness is empowering for me.	This item was modified to a reversely worded item as there were several other items that related promiscuous with empowerment.	Perceived as promiscuous is disempowering for me.
1-5 Showing my sexual provocativeness would make me feel powerful.	Sexual provocativeness could be interpreted as different from active sexual self-objectification.	Delete.
1-8 I would feel more liberated than usual if I were to show the promiscuous side of my personality.	There was another item that is similar to this item (1-7 Showing promiscuity would make me feel liberated). This item is lengthier than the other	Delete.
1-22 It would be fun if I were to flash my breasts in public to attract attention (e.g., at a bar or a party).	This item was modified to a reversely worded item as there was another item that was similar to this item (1-21 Attracting attention by flashing my breasts in public (e.g., at a bar or a party) could be fun for me).	I would not find it fun to flash my breasts in public to attract attention (e.g., at a bar or a party).
1-24 I would feel sexually powerful if I pole dance for men.	To be consistent with a vocabulary, "sexually powerful" was changed to "empowering."	I would feel empowering to pole dance to attract sexual attention.
1-25 Pole dancing to attract men's attention would be empowering for me.	This item was changed to capture "fun" element in pole dancing because there was another "empowerment" related items.	Pole dancing to attract men's attention would be fun for me.

Dimension 2

2-2	When I feel sexually appealing, I feel good about myself.	This item was changed to be direct to sexual desirability and self-esteem.	Being sexually desirable is important to my self-esteem.
2-12	My self-esteem is unrelated to how I feel about my sexual desirability.	This item was changed to be more concise and specific to the content.	Being sexually desirable is not related to my self-esteem.

Dimension 3

3-6	For me, physical attractiveness equates with sexiness.	“Physically attractiveness” was corrected to “physical attractiveness.”	For me, physical attractiveness equates with sexiness.
3-7	My sexiness represents my physical attractiveness.	This item misrepresented the concept. It supposed to state “my physical attractiveness represents my sexiness.” Also there were other similar items (e.g., 3-6).	Delete.
3-10	Appearing physically attractive is different from appearing sexy to me.	“Appearing” was changed to “being” to directly reflect the content (i.e., my physical attractiveness equates to being sexy).	To me, physically attractive is different from being sexy.

Dimension 4

4-2	I welcome sexual aggression by men at parties, clubs, or bars.	The intensity of the item was reduced. The mean value was too low (2.32).	To some degree, I welcome sexual aggression by men at parties, clubs, or bars.
4-4	I am willing to receive uninvited sexual advances from strangers at parties, clubs, or bars.	“By strangers” was deleted because it limits the assaulter into strangers. Sexual violation is not caused only by strangers.	I am willing to receive uninvited sexual advances at parties, clubs, or bars.
4-5	I am receptive to uninvited sexual advances from strangers at parties, clubs, and bars.	This item was similar to 4-4.	Delete.
4-7	I would not go to any place (e.g., Spring Break party) where I knew men may make unwanted sexual advances toward me.	The values of corrected item-total correlations of both pilot tests were low (respectively, .253 and .208).	Delete.

4-10	I find sexually harassing remarks into flattery, unless extremely serious at parties, clubs, or bars.	Due to the extra conditional phrase (i.e., unless extremely serious), the context condition was moved to the beginning of the statement.	At parties, clubs, or bars, I find sexually harassing remarks into flattery, unless extremely serious.
4-11	I invite groping at parties or clubs as a playful incident.	“Invite” was changed to “consider” to reduce intensity of extreme statement.	I consider groping at parties or clubs as a playful incident.
4-13	I find it acceptable if anyone gropes me at a party or a club.	The item was modified to hypothetical statement by adding “would” and “if I were.” Also, being groped was changed to being sexually grabbed because there were several other items related to “being groped.”	I would find it acceptable if I were sexually grabbed at a party or a club.
4-16	I think getting groped is a normal part of being sexually playful at a party or a club.	“I think” was changed to “to me” because it was not specific enough to be applied to oneself.	To me, getting groped is a normal part of being sexually playful at a party or a club.
4-18	I would complain about sexual grabbing in a crowded place (e.g., bar, club, party).	This item was modified to a reversely worded item as the value of corrected item-total correlation of Pilot 1 was as low as .303 and the coefficients of inter-item correlation were lower than .4 with eight other items.	I would find it unacceptable if I were groped in a crowded place (e.g., bar, club, party).
New		Another item inspired by 4-11 was created. Inclusion of “to an extent” reduces the intensity but still contains the active role in sexual violation by others.	To an extent, I invite sexual aggression at parties, clubs, or bars.
New		Another item inspired by 4-11 and 4-16 was generated.	I would find it sexually playful to be groped at a party or a club.

Results from Field Test

A total of 992 attempts were initially recorded for the main data collection. A total of 391 attempts failed to be included in the final data due to the following reasons. Four of them did not agree for the consent form. Eighty seven of them screened out because they participated in the previous studies, either the pilot test1 or the pilot test 2. One hundred twenty four attempts were screened out because their eligibilities to participate in the study were not met to the requirements. One hundred thirty nine attempts who failed the two attention check questions were also screened out. Twenty seven responses were additionally excluded because their responses on eligibilities at the end of survey were not consistent with the information they provided in the screening questions at the beginning of the survey. For example, a participant stated that she is 25 years old but she has been lived in the U.S. for 33 years. Five responses were excluded because of too many missing responses. Five additional responses were excluded due to unreasonably fast survey completion time (less than 3 minutes). This process resulted in a total of 601 eligible responses. The 601 responses were randomly split into two groups by Excel for cross validation (main data analysis: $n = 301$, cross validation: $n = 300$). No systematic missing response was detected.

Demographic profile of field test participants is presented in Table 17. More than half of participants were white (67.11%), between 27 and 29 years old (50.17%), earned higher than a bachelor's degree in college (59.14%), employed for wages (74.09%), and were never married (65.45%). About half of participants lived in urban areas (49.50%).

Table 17. Demographic profile of field test and cross validation participants

Variable	Category	Frequency (%)	
		Field test (n=301)	Cross validation (n=300)
Age	21 to 23	40 (13.29)	47 (15.67)
	24 to 26	110 (36.54)	122 (40.67)
	27 to 29	151 (50.17)	130 (43.33)
Marital status	Never married	197 (65.45)	210 (70.0)
	Married	93 (30.90)	77 (25.67)
	Divorced	9 (2.99)	5 (1.67)
	Separated	2 (.66)	8 (2.67)
Relationship status (excluded married)	Single	107 (35.50)	121 (40.33)
	Engaged	12 (4.00)	9 (3.00)
	In a domestic partnership	5 (1.70)	5 (1.67)
	In a relationship	76 (25.20)	76 (25.33)
	In an open relationship	5 (1.70)	4 (1.33)
	It is completed	1 (.030)	7 (2.33)
	No response	95 (31.60)	78 (26.00)
Area types	Urban	149 (49.50)	132 (44.00)
	Suburban	113 (37.50)	138 (46.00)
	Rural	39 (13.00)	30 (10.00)
Race or origin	White	202 (67.11)	208 (69.33)
	Asian	42 (13.95)	34 (11.33)
	Black or African American	23 (7.64)	21 (7.00)
	American Indian or Alaska Native	14 (4.65)	17 (5.67)
	White, American Indian or Alaska Native	5 (1.66)	.
	White, Asian	4 (1.33)	3 (1.00)
	White, Black or African American	4 (1.33)	3 (1.00)
	Black or African American, Other	2 (.66)	3 (1.00)
	American Indian or Alaska Native, Asian	1 (.33)	2 (.67)
	White, Black or African American, Other	1 (.33)	.
	Native Hawaiian or Pacific Islander	1 (.33)	.
	White, Other	.	4 (1.33)
	Other	2 (.66)	5 (1.67)
Education	Some high school, no diploma	1 (.33)	2 (.67)
	High school graduate, diploma or the equivalent	23 (7.64)	26 (8.67)
	Some college credit, no degree	61 (20.27)	47 (15.67)
	Trade/technical/vocational training	7 (2.33)	7 (2.33)
	Associate degree	31 (10.30)	37 (12.33)
	Bachelor's degree	136 (45.18)	142 (47.33)
	Master's degree	34 (11.30)	30 (10.00)
	Doctorate degree	1 (.33)	1 (.33)
	Professional degree	7 (2.33)	7 (2.33)
No response	.	1 (.33)	
Employment	Employed for wages	223 (74.09)	219 (73.00)
	Self-employed	22 (7.31)	40 (13.33)
	Out of work and looking for work	13 (4.32)	9 (3.00)
	Out of work but not looking for work	4 (1.33)	2 (.67)
	A homemaker	22 (7.31)	16 (5.33)
	A student	13 (4.32)	12 (4.00)
	Unable to work	1 (.33)	.
	No response/Other	3 (1.00)	2 (.66)

Descriptive statistics. The mean value of 23 items in the first dimension was 3.55 with the standard deviation of 1.53. Both the skewness of .245 and Kurtosis of -.734 indicated acceptable range of a normal distribution of the data. However, the box plot and the histogram showed positively skewed data distribution. Also, the Shapiro-Wilk had a significant p -value lower than .05 supporting the asymmetric distribution of the data.

The mean value of 12 items in the second dimension was 5.06 with the standard deviation value of 1.53. Kurtosis was .075, which indicated a normal distribution but the skewness was -.592, which indicated moderate skewness of the distribution. The box plot and the histogram showed slightly left-tailed distribution and the Shapiro-Wilk had a significant p -value lower than .05 supported the asymmetric distribution of the data.

The mean value of 14 items in the third dimension was 4.48 with standard deviation of 1.38. The skewness was -.333, which indicated that the data distribution was approximately symmetric. Kurtosis was -.198, which was in an acceptable range to consider that the data was normally distributed. Both box plot and histogram showed relatively normal distribution. However, the Shapiro-Wilk had a p -value lower than .05 which indicated asymmetric distribution of the data.

The mean value of 19 items in the fourth dimension was 2.85 with standard deviation of 1.63. Although the Kurtosis was at the normal range (-.478), all other indicators suggested that the distribution was not normal. The mean was far below the middle value of 4.5, the skewness was .747 (indicated moderate skewness), and the Shapiro-Wilk had a significant p -value lower than .05 (supported asymmetric distribution). The box plot and the histogram clearly showed the right-tailed distribution.

In summary, all dimensions had data that were not normally distributed. The first and the fourth dimensions were positively skewed with means lower than the middle value of 4.5. Particularly, the fourth dimension had a very low mean of 2.85 out of an 8-point Likert scale. The second and the third dimensions were negatively skewed with means higher than the middle value. The following section presents the results of the item selection and the features of each scale.

Dimension 1 – Favoring sexual objectification of oneself. Item-total correlations of 23 items were examined. The results identified two problematic items; the item 1-4 and 1-20. The corrected item-total correlations of the two items were .266 and .262 respectively. Removal of these items increased Cronbach's alpha from .962 to .969. The next analysis was conducted after removing the two items.

In order to test the unidimensionality assumption, the CFA fit indices were examined with a one-factor model with all items. The CFA fit indices indicated that the one-factor model was not a good fit to the data when 21 items were included in the model structure ($\chi^2/df = 1218.616 / 189 = 6.447$ with p -value of .000, CFI = .991, TLI = .990, RMSEA = .145, RMSEA 90% confidence interval = from .138 to .153, SRMR = .069, WRMR = 1.848). Factor loadings of items were all above .500, the item 1-18 had the lowest loading of .560. Cronbach's alpha reliability value was .969. There were 29 pairs of items that showed high residual correlations. This result was not surprising considering several similar items that were intentionally included: the intention of having several similar items was to select the better performing items through statistical analysis (e.g., "I enjoy purposefully objectifying myself as a sexual thing," "It is fun to sexually objectify myself"). Having several similar items explained the very high Cronbach's alpha.

To select better items among redundant items, items were divided into two groups by their content; promiscuity and other objectifying related items. Item analyses were conducted with the eight items that were related to promiscuity (e.g., “I enjoy dressing promiscuously”). The unidimensionality and local independency assumptions were met with the eight items in the one-factor model. IRT analyses were processed with the eight promiscuity related items. As expected, LD χ^2 statistics showed no items that their residuals were correlated higher than |10|. S- χ^2 item-fit statistics showed that the item 1-11 was misfit to the GR model with *p*-value lower than .01. After removing the item 1-11, all items had good item-fit to the model.

Item characteristics and information of the remaining seven promiscuity items were examined. First, the item 1-7 (“Wearing promiscuous clothes would make me feel powerful”) was kept because the item had a relatively large slope parameter ($\alpha = 4.47$), which indicated the high degree to which the item discriminates individuals in different levels of the latent trait. The item 1-10 (“I enjoy dressing promiscuously”) was also kept because the item provided the fair amount of latent trait information across all level of latent trait. The item 1-8 (“Dressing promiscuously is a source of power for me”) and 1-9 (“I would feel powerful when I dress promiscuously”) were eliminated because their content were redundant, could be covered by the item 1-7, and did not provide additional latent trait information beyond the item 1-7 and 1-10.

The item 1-3, 1-5, and 1-6 were also kept in the promiscuity item group. The item 1-3 (“It is empowering to show my sexual promiscuous side of personality”) and 1-6 (“Showing promiscuity would make me feel liberated”) were kept because their content were not covered by the item 1-7 and 1-10. The item 1-5 (“Showing promiscuousness is

fun for me”) was kept because it provided more amount of latent trait information than the item 1-3 and 1-6. This process resulted in five items in the promiscuity group.

Another set of IRT analyses was processed with the 13 sexual self-objectification items in the first dimension, excluding the promiscuity items. Before moving into IRT analysis for item selection, unidimensionality and local independency assumptions were tested by examining the residual correlations. Five offending items of unidimensionality and local independency were eliminated and IRT analyses were processed with the remaining eight items. $S-\chi^2$ item-fit statistics showed that the item 1-7 was misfit to the GR model with p -value lower than .01. After removing the item 1-7, all seven items had good item-fit to the model.

The five selected promiscuity items and the seven selected sexual self-objectification items were combined to create one scale that represents the first dimension. When 12 items were included in a one-factor model structure, the CFA fit indices indicated that the model was not a good fit to the data in terms of RMSEA ($\chi^2/df = 178.535 / 54 = 3.306$ with p -value of .000, CFI = .997, TLI = .996, RMSEA = .093, RMSEA 90% confidence interval = from .078 to .108, SRMR = .048, WRMR = 1.091). Also, there were three pairs of items that showed high residual correlations and all three pairs involved with the item 1-14: the item 1-14 had high local dependencies with the item 1-21 and 1-23 and a multidimensionality issue with the item 1-5. To resolve both local dependency and multidimensionality issues, the item 1-14 was eliminated.

Removal of the item 1-14 did not solve the problems. Unidimensional model fit was still not satisfactory in terms of RMSEA value ($\chi^2/df = 139.230 / 44 = 3.164$ with p -value of .000, CFI = .997, TLI = .997, RMSEA = .090, RMSEA 90% confidence interval

= from .073 to .107, SRMR = .042, WRMR = 1.027). In addition, a new pair of items was found to have the violation of the local independency assumption to continue on the IRT analyses: the residual correlation between the item 1-19 and 1-21 was .107. The item 1-19 was removed because the results of the fit indices were better when 1-19 was removed from the model compared to a model removing 1-21. Removal of 1-19 resulted in a satisfactory fit to the data ($\chi^2/df = 77.417 / 35 = 2.211$ with p -value of .000, CFI = .999, TLI = .998, RMSEA = .067, RMSEA 90% confidence interval = from .047 to .087, SRMR = .033, WRMR = .820) with no high residual correlations. This process resulted in 10 items.

Because the unidimensionality and the local independency assumptions were met, IRT analyses were conducted with the 10 items. S- χ^2 item-fit statistics showed that the item 1-3 was misfit to the GR model with p -value lower than .01. All items had good item-fits to the model after removing the item 1-3. The item 1-2 was eliminated because the content of 1-2 (“It is fun to sexually objectify myself”) was closely related with the content of the item 1-1 (“I enjoy purposefully objectifying myself as a sexual thing”) and the item 1-1 had more latent trait information than the item 1-2. When examining the content of remaining eight items, the item 1-21 (“Engaging in public expression of sexuality [e.g., flashing my breasts] is how I could express my sexuality”) was eliminated because the content of the item was not consistent with the rest of the items. While the 1-21 was about a way to express one’s sexuality, the rest of items were about individual’s attitudes toward sexualizing activities (e.g., Showing promiscuousness is fun for me, Pole dancing to attract men’s attention would be fun for me). This process resulted in seven items (see Table 18).

The CFA fit indices indicated that the one-factor model with the seven items had an excellent fit to the data ($\chi^2/df = 17.032 / 14 = 1.216$ with p -value of .254, CFI = 1.000, TLI = 1.000, RMSEA = .023, RMSEA 90% confidence interval = from .000 to .068, SRMR = .023, WRMR = .493). Because the items were initially selected from two groups, the fit indices of two-factor model were examined. The two-factor model that the used promiscuity as one latent variable and the sexual self-objectification as the other latent variable did not improve the model fit ($\chi^2/df = 15.764 / 13 = 1.212$ with p -value of .262, CFI = 1.000, TLI = 1.000, RMSEA = .028, RMSEA 90% confidence interval = from .000 to .069, SRMR = .022, WRMR = .475). Therefore, one latent variable of the seven items was concluded and the scale was named as “favoring sexual objectification of oneself.” The reliability of the final scale was .93. The mean was 3.6 and the standard deviation was 1.7.

Table 18. Final items of Dimension 1: Favoring sexual objectification of oneself

Item	Label	Item description
1	1-1	I enjoy purposefully objectifying myself as a sexual thing.
2	1-5	Showing promiscuousness is fun for me.
3	1-6	Showing promiscuity would make me feel liberated.
4	1-7	Wearing promiscuous clothes would make me feel powerful
5	1-10	I enjoy dressing promiscuously.
6	1-12	I enjoy purposefully draw attention to my figure in a sexual manner (e.g., highlighting breasts, showing legs).
7	1-23	Pole dancing to attract men's attention would be fun for me.

Features of the scale 1. The scale to assess the first dimension included seven items. All seven items had adequate powers for discriminating among individuals at different locations on the latent trait continuum. As shown in Table 19, the item 5

(previously item 1-10 “I enjoy dressing promiscuously”) had the highest discrimination power ($\alpha = 4.39$) and the item was a relatively agreeable item compared to other items in the scale (see b_1 , b_2 , b_3 , and b_4 in Table 19). The item 6 (previously item 1-12 “I enjoy purposefully draw attention to my figure in a sexual manner (e.g., highlighting breasts, showing legs”) had the lowest but still adequate amount of discrimination power ($\alpha = 1.90$). Although the item 6 had the lowest information (see Figure 4 and Table 20), this item provided the most amount of information at the lower level of the content (see Table 20). The item 2 and 3 (previously, item 1-5 “Showing promiscuousness is fun for me” and 1-6 “Showing promiscuity would make me feel liberated”) contained different content, but they had similar item characteristics (see Figure 4) and had similar levels of agreeability (see b_s Table 19). Compared to the item 3, the item 2 had a little higher discrimination and provided a little more amount of information. The item 1 and 7 (previously item 1-1 “I enjoy purposefully objectifying myself as a sexual thing” and 1-26 “Pole dancing to attract men's attention would be fun for me”) were the least agreeable items. It appeared that the scale as a whole had the most information (the best precision) in discriminating individuals with latent trait levels at around -1 to 2.3 (see test information at the bottom of Table 20 and Figure 5).

Table 19. Scale 1: Item parameter estimates

Item	Label	<i>a</i>	<i>s.e.</i>	<i>b</i> ₁	<i>s.e.</i>	<i>b</i> ₂	<i>s.e.</i>	<i>b</i> ₃	<i>s.e.</i>	<i>b</i> ₄	<i>s.e.</i>	<i>b</i> ₅	<i>s.e.</i>	<i>b</i> ₆	<i>s.e.</i>	<i>b</i> ₇	<i>s.e.</i>	S- χ^2	<i>d.f.</i>	<i>p</i>
1	1-1	2.75	0.25	-0.54	0.10	0.05	0.08	0.35	0.08	0.72	0.08	1.36	0.11	1.86	0.15	2.47	0.22	98.80	84	0.1286
2	1-5	4.02	0.38	-0.73	0.09	-0.30	0.08	0.08	0.07	0.37	0.07	0.98	0.08	1.53	0.11	2.13	0.17	81.73	76	0.3054
3	1-6	3.47	0.32	-0.75	0.10	-0.34	0.08	0.04	0.07	0.36	0.07	0.97	0.09	1.54	0.12	2.25	0.19	84.67	81	0.3677
4	1-7	4.10	0.39	-0.81	0.10	-0.35	0.08	-0.06	0.07	0.19	0.07	0.78	0.08	1.54	0.11	2.18	0.17	88.85	73	0.0999
5	1-10	4.39	0.43	-1.00	0.10	-0.48	0.08	-0.12	0.07	0.17	0.07	0.87	0.08	1.42	0.10	2.16	0.17	75.16	73	0.4074
6	1-12	1.90	0.18	-1.32	0.15	-0.76	0.11	-0.35	0.10	0.01	0.09	0.75	0.10	1.49	0.14	2.30	0.22	106.10	107	0.5069
7	1-23	2.16	0.21	-0.46	0.10	0.04	0.09	0.31	0.09	0.57	0.09	1.25	0.12	1.77	0.16	2.52	0.25	93.54	87	0.2962

-2loglikelihood: 6293.50
Akaike Information Criterion (AIC): 6405.50
Bayesian Information Criterion (BIC): 6613.10

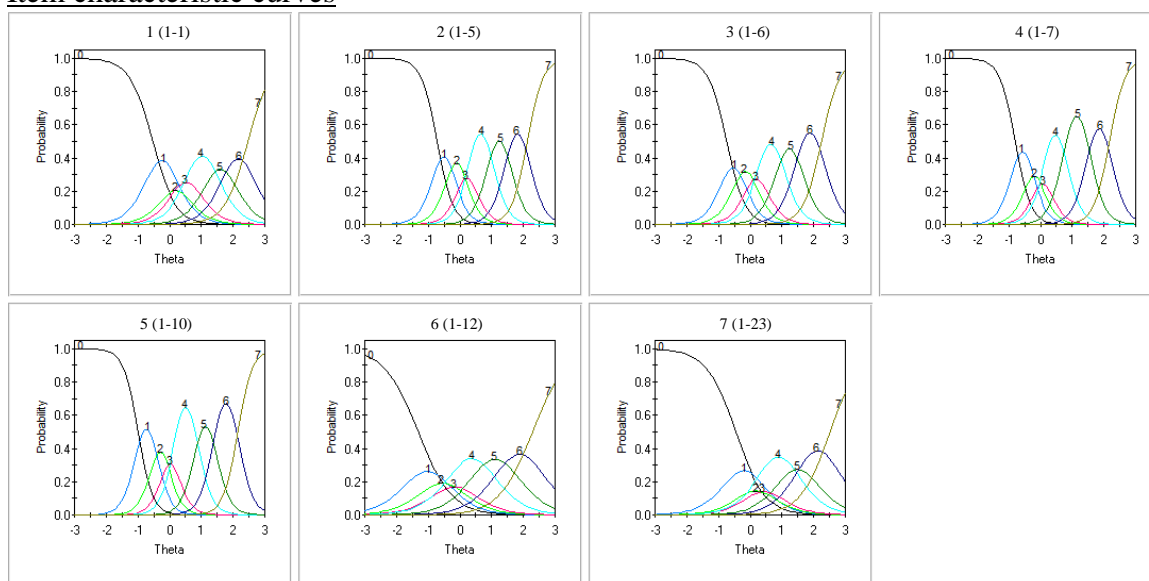
Table 20. Scale 1: Item information function values at 15 values of θ from -2.8 to 2.8

Item	Label	θ :														
		-2.8	-2.4	-2.0	-1.6	-1.2	-0.8	-0.4	-0.0	0.4	0.8	1.2	1.6	2.0	2.4	2.8
1	1-1	0.02	0.05	0.13	0.37	0.92	1.72	2.22	2.36	2.41	2.34	2.31	2.34	2.30	2.16	1.58
2	1-5	0.00	0.02	0.10	0.46	1.86	4.24	4.91	5.04	4.82	4.51	4.60	4.60	4.44	3.09	0.96
3	1-6	0.01	0.04	0.16	0.58	1.75	3.28	3.75	3.80	3.65	3.51	3.53	3.45	3.27	2.89	1.37
4	1-7	0.00	0.02	0.12	0.60	2.33	4.64	5.15	5.30	4.73	4.64	4.03	4.62	4.49	3.50	1.14
5	1-10	0.01	0.04	0.24	1.23	4.09	5.38	5.82	5.93	4.85	5.22	5.32	4.82	4.84	3.67	1.01
6	1-12	0.19	0.37	0.62	0.89	1.07	1.14	1.16	1.15	1.13	1.13	1.12	1.11	1.08	0.97	0.74
7	1-23	0.03	0.07	0.16	0.34	0.66	1.06	1.37	1.48	1.50	1.48	1.47	1.46	1.43	1.35	1.11

Test Information: 1.26 1.61 2.52 5.46 13.68 22.47 25.37 26.07 24.09 23.83 23.38 23.41 22.85 18.62 8.91
Expected s.e.: 0.89 0.79 0.63 0.43 0.27 0.21 0.20 0.20 0.20 0.20 0.20 0.21 0.21 0.21 0.23 0.33

Marginal Reliability for Response Pattern Scores: 0.93

Item characteristic curves



Item information function curves

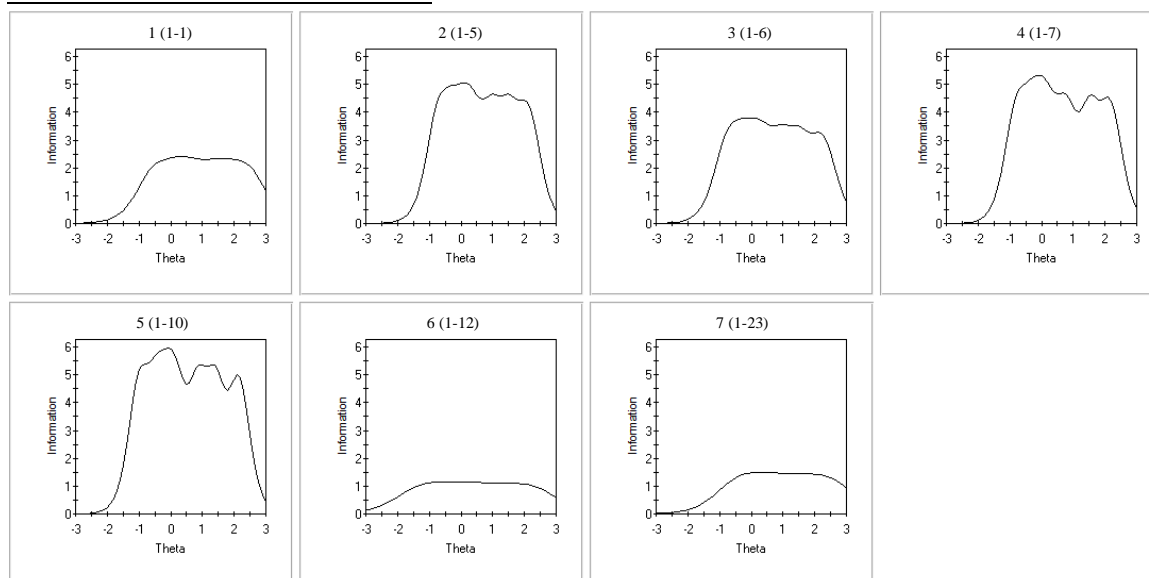


Figure 4. Scale 1: Item characteristic curves and item information function curves

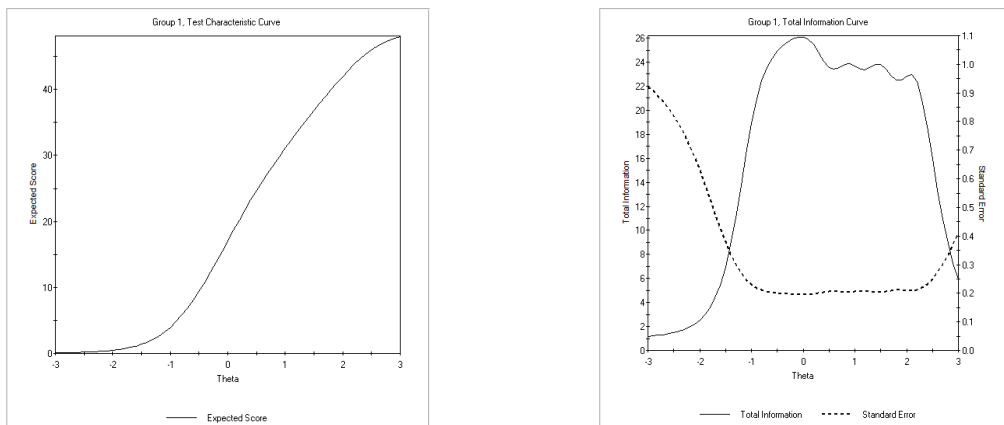


Figure 5. Scale 1: Total characteristic curve (left) and test information curve (right, a solid line represents the total information function and a dashed line represents standard error of estimation).

Dimension 2 – Relating sexual desirability to self-esteem. Item-total

correlations of 12 items were examined and the results were good. The lowest corrected item-total correlations were the item 2-11 and 2-12 with .416 and .466 respectively.

Removal of these items increased Cronbach's alpha from .943 to .957. However, the item-total correlations were not low enough and the increase of Cronbach's alpha was not significant, the next analysis was conducted without removing the two items.

The CFA fit indices indicated that the one-factor model was not a good fit to the data when all 12 items were included in the model structure ($\chi^2/df = 219.302 / 54 = 4.061$ with p -value of .000, CFI = .996, TLI = .995, RMSEA = .106, RMSEA 90% confidence interval = from .091 to .120, SRMR = .054, WRMR = 1.209). Factor loadings of items were all above .500, except for the item 2-11 and 2-12 (.464 and .496, respectively).

There were three pairs of items that showed high residual correlations: the item 2-11 and 2-12 (.339), the item 2-11 and 2-9 (-.101), and the item 2-12 and 2-2 (-.100). Between the

item 2-11 and 2-12, the item 2-11 was removed to as it had the lower item-total correlation. Removal of the item 2-11 resulted in an acceptable CFA fit to the data ($\chi^2/df = 113.927 / 44 = 2.589$ with p -value of .000, CFI = .998, TLI = .998, RMSEA = .076, RMSEA 90% confidence interval = from .059 to .093, SRMR = .035, WRMR = .929) without extreme residual correlations.

IRT analyses were carried on with 11 items. As expected, LD χ^2 statistics showed no items that their residuals were correlated higher than |10|. S- χ^2 item-fit statistics showed that the item 2-3 and 2-12 were misfit to the GR model with p -value lower than .01. Removal of the two offending items resulted in acceptable S- χ^2 item-fit statistics with p -value higher than .01.

Item characteristics and information of the remaining nine items were examined. The slope (α) estimates ranged from 2.50 to 4.02 and the slope parameters indicated most items have a similar discrimination power. The high slope for the item 2-8 (“My self-esteem is influenced by how sexually desirable I am”) indicated the strongest power to discriminate among individuals located on the latent continuum. The item 2-8 was kept for the final scale because the item 2-8 provided the most amount of latent trait information.

Two items that appeared to provide nearly identical information across the continuum were the item 2-1 (“Being sexually desirable is important to my self-esteem”) and 2-10 (“My confidence is influenced by my sexual desirability”). Their respective item information functions were nearly identical which suggested that only one of these items might be necessary (see Figure 6). Between the two items, the item 2-10 was retained because it had slightly higher peaks, which indicated slightly more information,

precision discriminating individuals, than the item 2-1. Another set of items that appeared to provide nearly identical information were the item 2-7 (“When I feel that I am sexually undesirable, I feel bad about myself”) and 2-9 (“How I feel about myself is influenced by how sexually desirable I am”). Between the two items, the item 2-7 was retained because the item 2-7 provided slightly more information across all levels of latent trait (see θ s of the item 2-7 in Figure 6).

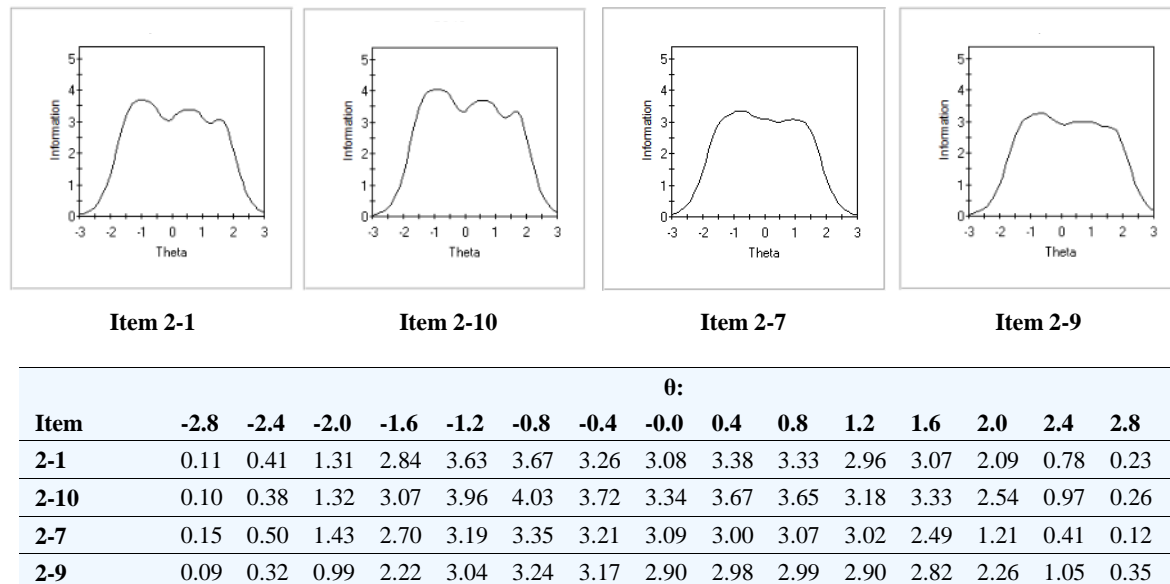


Figure 6. Item information function curves and values of the item 2-1, 2-7, 2-9, and 2-10.

So far, the selected items included two “influence” items (e.g., “My self-esteem is influenced by how sexually desirable I am”) and one “decrease” item (i.e., “When I feel that I am sexually undesirable, I feel bad about myself”). The item 2-4 was additionally retained among the two “increase” items (i.e., 2-2 “Knowing that I am sexually desirable makes me feel good about myself” and 2-4 “Being sexually desirable to others increases

my self-esteem”). Although the item 2-2 provided relatively more information at the very lower levels of the latent trait, the item 2-4 provided generally more information of latent trait across all levels of the latent trait. Between the remaining two “decrease” items (2-5 “My self-esteem decreases when I am not sexually desirable” and 2-6 “My self-esteem would decrease if I am sexually undesirable”), the item 2-5 was selected because the item provided more latent trait information than the item 2-6. This process resulted in five items (see Table 21) in the scale and the scale was titled “relating sexual desirability to self-esteem.”

The CFA fit indices indicated that the one-factor model with the five items was an excellent fit to the data ($\chi^2/df = 5.410 / 5 = 1.082$ with p -value of .368, CFI = 1.000, TLI = 1.000, RMSEA = .017, RMSEA 90% confidence interval = from .000 to .085, SRMR = .013, WRMR = .347). The reliability of the final scale was .93. The mean was 4.9 and the standard deviation was 1.7.

Table 21. Final items of Dimension 2: Relating sexual desirability to self-esteem

Item	Label	Item description
1	2-4	Being sexually desirable to others increases my self-esteem.
2	2-5	My self-esteem decreases when I am not sexually desirable.
3	2-7	When I feel that I am sexually undesirable, I feel bad about myself.
4	2-8	How I feel about myself is influenced by how sexually desirable I am.
5	2-10	My confidence is influenced by my sexual desirability.

Features of the scale 2. The scale to assess the second dimension included five items. All five items had adequate powers in discriminating among individuals at different locations on the latent trait continuum. All items had similar levels of

discriminating power ranged from 2.78 to 3.91. The item 2, 3, and 4 (previously item 2-5 “My self-esteem decreases when I am not sexually desirable”, 2-7 “When I feel that I am sexually undesirable, I feel bad about myself”, and 2-8 “How I feel about myself is influenced by how sexually desirable I am”) had similar agreeable levels (see Table 22). The item 1 (previously item 2-4 “Being sexually desirable to others increases my self-esteem”) was the only “increase” item in the scale 2. This item was the most agreeable item and had relatively more information at the lower levels of latent trait, compared to other items in the scale. The two “influence” items, the item 4 and 5 (previously item 2-8 “How I feel about myself is influenced by how sexually desirable I am” and 2-10 “My confidence is influenced by my sexual desirability”) provided relatively more information of latent trait (see Figure 7). It appeared that the scale as a whole had the most information (the best precision) in discriminating individuals with latent trait levels at around -1.7 to 1.7 (see Table 23 and Figure 8).

Table 22. Scale 2: Item parameter estimates

Item	Label	<i>a</i>	<i>s.e.</i>	<i>b</i> ₁	<i>s.e.</i>	<i>b</i> ₂	<i>s.e.</i>	<i>b</i> ₃	<i>s.e.</i>	<i>b</i> ₄	<i>s.e.</i>	<i>b</i> ₅	<i>s.e.</i>	<i>b</i> ₆	<i>s.e.</i>	<i>b</i> ₇	<i>s.e.</i>	<i>S-χ</i> ²	<i>d.f.</i>	<i>p</i>
1	2-4	2.78	0.25	-1.78	0.15	-1.34	0.12	-1.07	0.11	-0.89	0.10	-0.07	0.08	0.65	0.08	1.65	0.14	68.13	64	0.3379
2	2-5	3.30	0.31	-1.35	0.12	-0.99	0.10	-0.61	0.08	-0.43	0.08	0.34	0.07	0.95	0.09	1.59	0.13	65.44	68	0.5663
3	2-7	3.22	0.30	-1.50	0.13	-0.99	0.10	-0.76	0.09	-0.51	0.08	0.12	0.07	0.81	0.09	1.43	0.12	65.21	67	0.5401
4	2-8	3.91	0.39	-1.47	0.12	-0.89	0.09	-0.64	0.08	-0.38	0.07	0.34	0.07	1.04	0.09	1.72	0.13	46.10	62	0.9347
5	2-10	3.52	0.33	-1.45	0.12	-1.12	0.10	-0.77	0.09	-0.48	0.08	0.32	0.07	0.91	0.09	1.73	0.13	50.64	64	0.8879

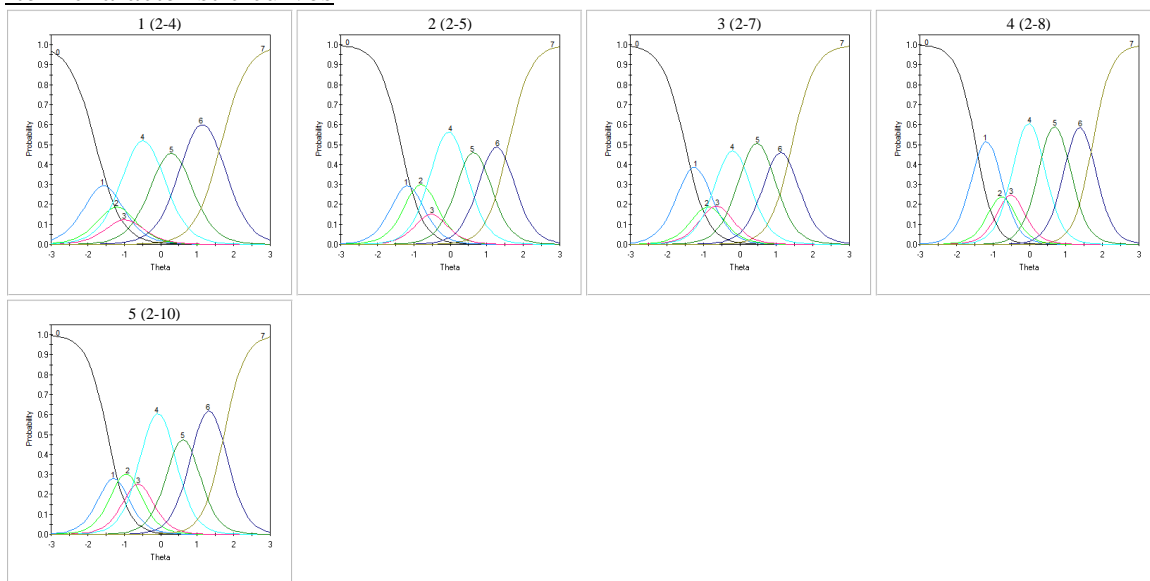
-2loglikelihood: 4563.13
Akaike Information Criterion (AIC): 4643.13
Bayesian Information Criterion (BIC): 4791.41

Table 23. Scale 2: Item information function values at 15 values of θ from -2.8 to 2.8

Item	Label	θ :														
		-2.8	-2.4	-2.0	-1.6	-1.2	-0.8	-0.4	-0.0	0.4	0.8	1.2	1.6	2.0	2.4	2.8
1	2-4	0.40	0.99	1.84	2.36	2.46	2.32	2.19	2.26	2.25	2.13	1.98	2.05	1.54	0.75	0.29
2	2-5	0.09	0.32	1.04	2.40	3.32	3.45	3.27	2.96	3.17	3.20	3.13	2.94	1.80	0.66	0.19
3	2-7	0.15	0.51	1.45	2.69	3.17	3.31	3.14	3.04	2.95	3.03	2.99	2.49	1.24	0.42	0.12
4	2-8	0.08	0.38	1.52	3.68	4.30	4.76	4.61	3.92	4.21	4.03	4.13	4.09	2.92	0.95	0.22
5	2-10	0.11	0.41	1.38	3.06	3.86	3.91	3.57	3.20	3.55	3.55	3.16	3.26	2.52	0.99	0.28
Test Information:		1.84	3.63	8.22	15.19	18.10	18.75	17.77	16.38	17.12	16.95	16.40	15.83	11.01	4.78	2.11
Expected s.e.:		0.74	0.53	0.35	0.26	0.24	0.23	0.24	0.25	0.24	0.24	0.25	0.25	0.30	0.46	0.69

Marginal Reliability for Response Pattern Scores: 0.93

Item characteristic curves



Item information function curves

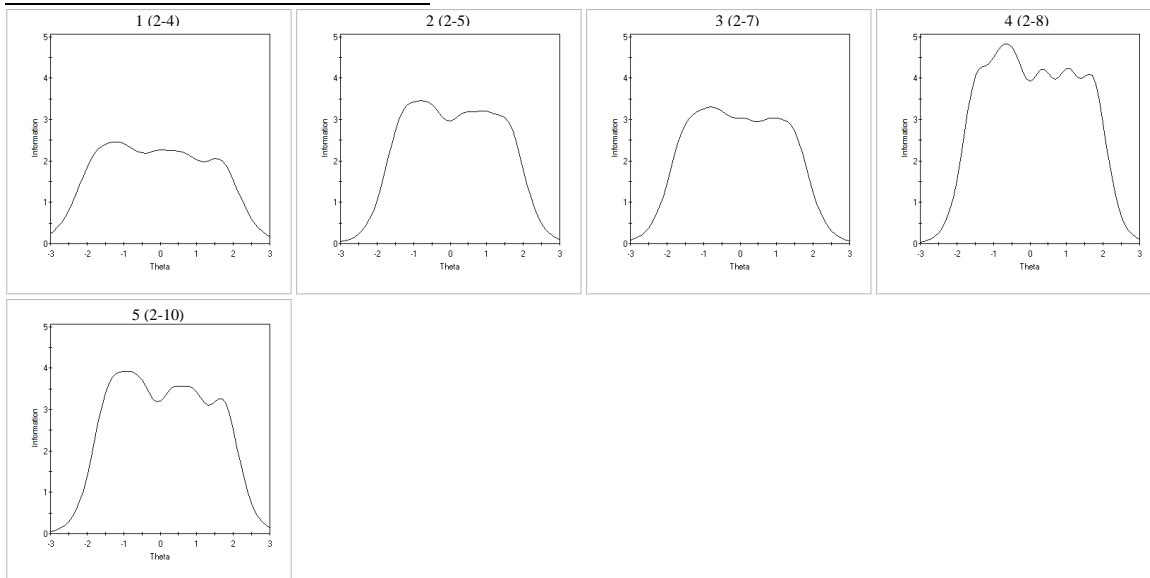


Figure 7. Scale 2: Item characteristic curves and item information function curves

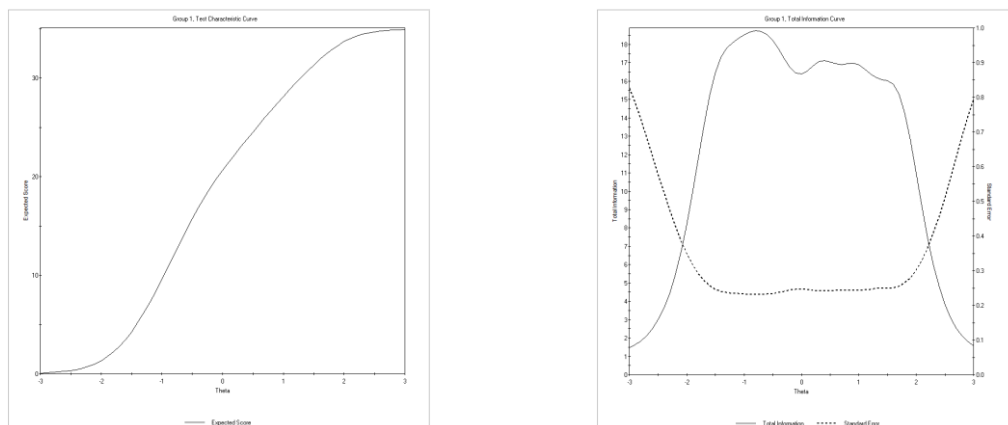


Figure 8. Scale 2: Total characteristic curve (left) and test information curve (right, a solid line represents the total information function and a dashed line represents standard error of estimation).

Dimension 3 – Equating physical attractiveness with being sexy. Item-total correlations of 14 items were examined. The results showed that the item 3-6 had a low corrected item-total correlation of .369. Removal of the item 3-6 increased the Cronbach’s alpha value from .929 to .934. Although the item 3-6 was a candidate for elimination, a CFA was conducted without removing the item because the item-total correlation of the item was above .3 (Field, 2005).

The CFA fit indices indicated that the one-factor model was not a good fit to the data when all 12 items were included in the model structure ($\chi^2/df = 510.914 / 77 = 6.635$ with p -value of .000, CFI = .983, TLI = .980, RMSEA = .144, RMSEA 90% confidence interval = from .132 to .156, SRMR = .080, WRMR = 1.644). Factor loadings of items were all above .600, except for the item 3-6 (.409). There were 24 pairs of items that showed high residual correlations. Among the items that had high residual correlations, four items (item 3-2, 3-6, 3-13, and 3-14) were removed by examining the item-total

correlations, the inter-item correlations, the CFA fit changes, and the content of items. A CFA was conducted with the remaining 10 items and resulted in a satisfactory fit to the data ($\chi^2/df = 80.922 / 35 = 2.312$ with p -value of .000, CFI = .998, TLI = .997, RMSEA = .068, RMSEA 90% confidence interval = from .049 to .088, SRMR = .036, WRMR = .839) without extreme residual correlations.

IRT analyses were carried on with the 10 items. As expected, LD χ^2 statistics showed no pair of items that their residuals were correlated higher than |10|. S- χ^2 item-fit statistics showed that the item 3-7, 3-9, 3-11, and 3-12 were misfit to the GR model with p -value lower than .01. Among the four offending items, the item 3-7 had a relatively large slope parameter ($\alpha = 3.33$), which indicated the high degree of discrimination with relatively high information across all level of latent trait (high θ s). Thus, the item 3-7 was retained for further analysis, while the other three items were removed.

Removal of the three items resulted in acceptable S- χ^2 item-fit statistics with p -value higher than .01. Among the remaining seven items, the item 3-8 was eliminated due to its limited information across all levels of the latent trait continuum (a and θ) as well as relatively high standard errors in determining the location of each item response location (see s.e. of b_i in Table 25). This process resulted in six items (see Table 24) in the scale and the scale was titled “equating physical attractiveness with being sexy.”

The CFA fit indices indicated that the one-factor model with the six items was a satisfactory fit to the data ($\chi^2/df = 22.298 / 9 = 2.477$ with p -value of .008, CFI = .999, TLI = .998, RMSEA = .072, RMSEA 90% confidence interval = from .034 to .110, SRMR = .027, WRMR = .625). The reliability of the final scale was .93. The mean was 4.8 and the standard deviation was 1.6.

Table 24. Final items of Dimension 3: Equating physical attractiveness with being sexy

Item	Label	Item description
1	3-1	I hold to a standard that physical attractiveness equates to being sexy to myself.
2	3-3	How sexy I am is a measure of how physically attractive I am.
3	3-4	When I evaluate my physical attractiveness, I evaluate how sexy I am.
4	3-5	Being physically attractive is the same as being sexy to me.
5	3-7	For me, physical attractiveness equates with sexiness.
6	3-10	To appear physically attractive, I need to look sexy.

Features of the scale 3. The scale to assess the third dimension included six items. All six items had adequate powers for discriminating among individuals at different locations on the latent trait continuum (α ranged from 2.62 to 3.75). In general, all items in the scale 3 were more agreeable than the items in the scale 1 and had similar discriminations and information distributions of latent traits with the scale 2. The item 3 (previously item 3-4 “When I evaluate my physical attractiveness, I evaluate how sexy I am”) was the most agreeable item and the rest of items had relatively similar agreeable levels. All items had a fair amount of information. The item 5 (previously item 3-7 “For me, physical attractiveness equates with sexiness”) had the most information as represented in the highest peaks (Figure 9). It appeared that the scale as a whole had the most information (the best precision) in discriminating individuals with latent trait levels at around -2 to 2 (see Table 26 and Figure 10).

Table 25. Scale 3: Item parameter estimates

Item	Label	<i>a</i>	<i>s.e.</i>	<i>b</i> ₁	<i>s.e.</i>	<i>b</i> ₂	<i>s.e.</i>	<i>b</i> ₃	<i>s.e.</i>	<i>b</i> ₄	<i>s.e.</i>	<i>b</i> ₅	<i>s.e.</i>	<i>b</i> ₆	<i>s.e.</i>	<i>b</i> ₇	<i>s.e.</i>	S- χ^2	<i>d.f.</i>	<i>p</i>
1	3-1	2.75	0.24	-1.83	0.15	-1.38	0.12	-0.95	0.10	-0.46	0.08	0.34	0.08	1.14	0.10	2.01	0.17	79.90	73	0.2708
2	3-3	3.27	0.30	-1.73	0.14	-1.15	0.10	-0.75	0.09	-0.48	0.08	0.19	0.07	0.91	0.09	1.71	0.13	98.75	71	0.0164
3	3-4	2.62	0.23	-2.14	0.18	-1.52	0.13	-1.16	0.11	-0.73	0.09	0.24	0.08	1.10	0.10	1.77	0.15	91.13	70	0.0456
4	3-5	3.13	0.28	-1.58	0.13	-1.09	0.10	-0.63	0.08	-0.22	0.07	0.34	0.07	1.11	0.10	1.82	0.14	71.27	74	0.5692
5	3-7	3.73	0.34	-1.76	0.14	-1.21	0.10	-0.78	0.08	-0.40	0.07	0.28	0.07	0.94	0.09	1.75	0.13	99.70	69	0.0092
6	3-10	2.90	0.26	-1.44	0.13	-1.00	0.10	-0.57	0.08	-0.17	0.08	0.50	0.08	1.05	0.10	1.73	0.14	92.07	77	0.1157

-2loglikelihood: 5563.94
Akaike Information Criterion (AIC): 5659.94
Bayesian Information Criterion (BIC): 5837.89

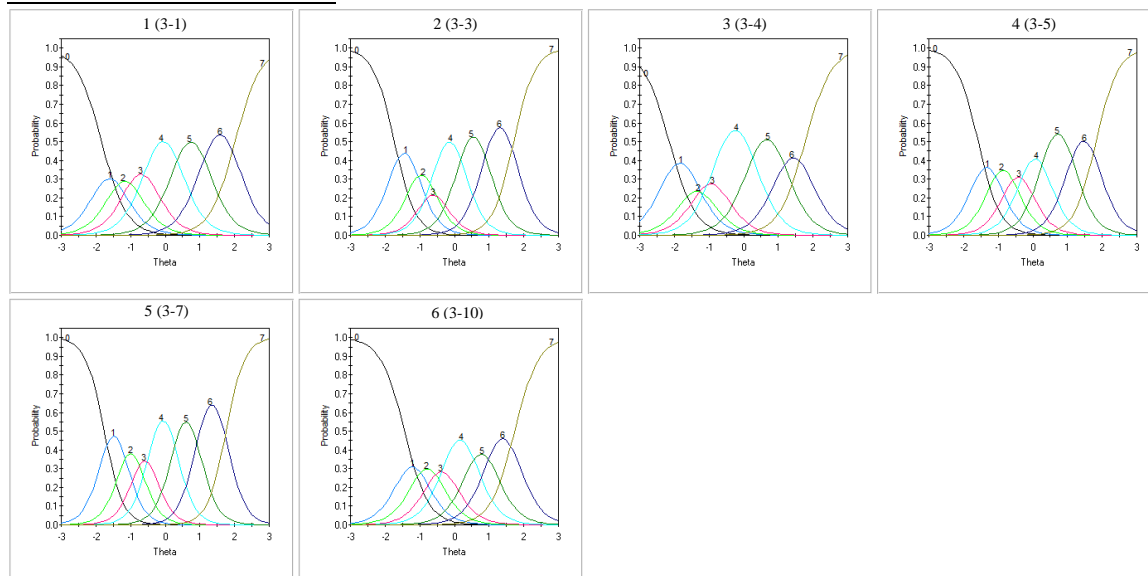
Table 26. Scale 3: Item information function values at 15 values of θ from -2.8 to 2.8

Item	Label	θ :														
		-2.8	-2.4	-2.0	-1.6	-1.2	-0.8	-0.4	-0.0	0.4	0.8	1.2	1.6	2.0	2.4	2.8
1	3-1	0.46	1.10	1.91	2.32	2.40	2.37	2.27	2.17	2.20	2.16	2.17	2.08	2.03	1.45	0.70
2	3-3	0.31	0.97	2.26	3.08	3.27	3.37	3.22	3.07	3.02	3.03	2.86	2.88	2.17	0.92	0.29
3	3-4	0.89	1.59	2.01	2.14	2.18	2.10	1.90	1.90	1.96	1.96	2.04	2.00	1.63	0.94	0.41
4	3-5	0.20	0.64	1.65	2.71	3.02	3.06	3.07	2.98	2.86	2.71	2.82	2.76	2.33	1.18	0.42
5	3-7	0.27	1.06	2.90	3.98	4.19	4.30	4.14	3.79	3.89	3.85	3.49	3.60	2.86	1.05	0.27
6	3-10	0.16	0.46	1.16	2.11	2.59	2.66	2.65	2.54	2.53	2.56	2.50	2.39	1.86	0.93	0.35

Test Information: 3.29 6.83 12.89 17.34 18.64 18.87 18.24 17.45 17.45 17.28 16.88 16.71 13.88 7.47 3.43
Expected s.e.: 0.55 0.38 0.28 0.24 0.23 0.23 0.23 0.23 0.24 0.24 0.24 0.24 0.24 0.27 0.37 0.54

Marginal Reliability for Response Pattern Scores: 0.94

Item characteristic curves



Item information function curves

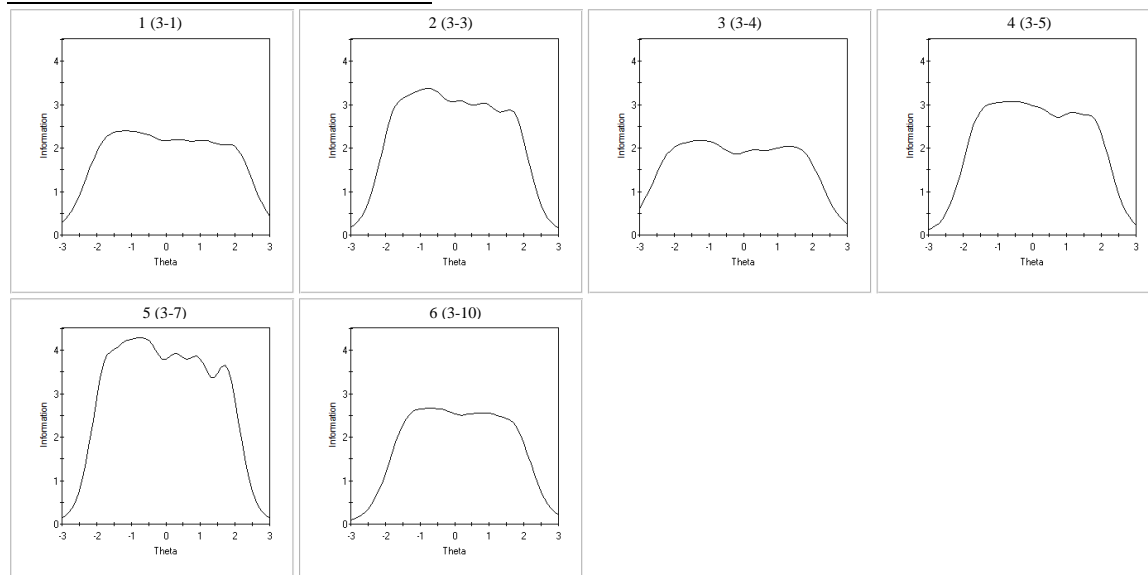


Figure 9. Scale 3: Item characteristic curves and item information function curves

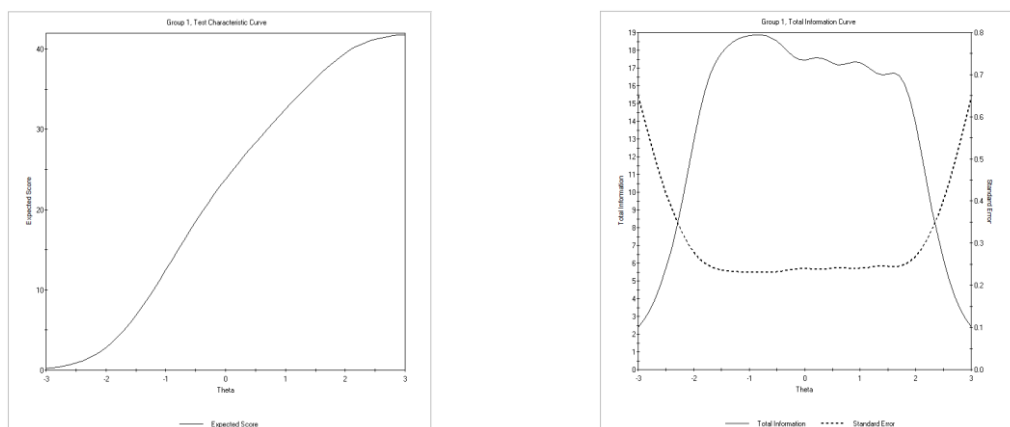


Figure 10. Scale 3: Total characteristic curve (left) and test information curve (right, a solid line represents the total information function and a dashed line represents standard error of estimation).

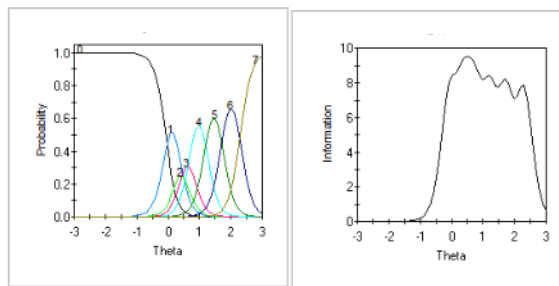
Dimension 4 – Contextualizing sexual boundaries. Item-total correlations of 19 items were examined. The results showed that the item 4-14 had a low corrected item-total correlation of .420 and removal of the item increased Cronbach's alpha value from .972 to .975. The item 4-14 had lower than .3 inter-item correlations with the item 4-7 and 4-8 (.249 and .282). Although the item 4-14 was a candidate for elimination, a CFA was conducted without removing the item because the item-total correlation was above .3 (Field, 2005).

The CFA fit indices indicated that the one-factor model had an excellent fit to the data when all 19 items were included in the model structure ($\chi^2/df = 173.174 / 152 = 1.139$ with p -value of .115, CFI = 1.000, TLI = 1.000, RMSEA = .023, RMSEA 90% confidence interval = from .000 to .038, SRMR = .028, WRMR = .755). Factor loadings of items were all above .600, except for the item 4-14 (.580). Surprisingly, there was no

pair of items that showed high residual correlations, even with several similar items that were intentionally included in the scale.

To reduce the number of items in the scale without losing the diverse manifestations of the content, the items were categorized into three groups to select the best representative items per group: (a) active role in contextualizing sexual boundaries (e.g., “To some degree, I welcome sexual aggression by men at parties, clubs, or bars”), (b) passive role in contextualizing sexual boundaries (e.g., “Receiving unwelcomed sexual attention would not bother me at parties, clubs, or bars”), and (c) playful attitude towards contextualization of sexual boundaries (“I consider groping at parties or clubs as a playful incident”).

There were four items in the active role group and they had an excellent one-factor model fit to the data ($\chi^2/df = 0.580 / 2 = 0.290$ with p -value of .748, CFI = 1.000, TLI = 1.001, RMSEA = .000, RMSEA 90% confidence interval = from .000 to .081, SRMR = .007, WRMR = .131) without extreme residual correlations (item 4-1, 4-3, 4-5, and 4-9). IRT analyses showed that the four items had acceptable $S-\chi^2$ item-fit statistics with p -value higher than .01. Among the four items, the item 4-1 (“To an extent, I invite sexual aggression at parties, clubs, or bars”) had the highest slope parameter ($\alpha = 5.51$), but the item had lowest information at the lower levels of latent trait (see Figure 11). Because the purpose of the scale was not to identify individuals with the extreme level of self-sexualization (e.g., diagnostic scale for personality disorder), having items that had information over a wider range of latent trait points were desirable. Thus, the item 4-1 was eliminated and the other three items that had at least some information at the lower levels of the latent traits were retained.



Item	θ :															
	-2.8	-2.4	-2.0	-1.6	-1.2	-0.8	-0.4	-0.0	0.4	0.8	1.2	1.6	2.0	2.4	2.8	
4-1	0.00	0.00	0.00	0.01	0.06	0.56	3.81	8.43	9.41	8.87	8.45	8.03	7.09	7.16	1.74	

Figure 11. Item information function curves and item characteristic curves of the item 4-1

A CFA analysis was conducted with 10 items in the passive role group. The item 4-14 (that had a lower item-total correlation) was eliminated because removal of the item provided a better fit to the data ($\chi^2/df = 35.956 / 27 = 1.331$ with p -value of .116, CFI = 1.000, TLI = 1.000, RMSEA = .035, RMSEA 90% confidence interval = from .000 to .062, SRMR = .025, WRMR = .603) with no extreme residual correlations. During the IRT analyses, three items were eliminated due to unsatisfactory $S-\chi^2$ item-fit statistics to the GR model with p -value lower than .01 (item 4-10, 4-13, and 4-16). Removal of the three items resulted in all satisfactory item-fit statistics with the remaining six items.

In the playful attitude group, there were four items and they had an excellent one-factor model fit to the data ($\chi^2/df = 0.116 / 2 = 0.058$ with p -value of .944, CFI = 1.000, TLI = 1.000, RMSEA = .000, RMSEA 90% confidence interval = from .000 to .021, SRMR = .002, WRMR = .058). There was no pair of items that had high correlated

residuals. IRT analyses revealed that the item 4-4 (“I would find it sexually playful to be groped at a party or a club”) had an unsatisfactory $S-\chi^2$ item-fit statistic with p -value lower than .01. The item 4-4 was removed from the scale.

There were three items in the active role group, six items in the passive role group, and three items in the playful attitude group. Correlations of all items in the three groups were examined. The purpose of the correlation test was to increase the distinction between the groups by eliminating highly related items across groups. Spearman’s rank-order correlation was used because the collected data was ordinal and the data distributions were not normal. The item 4-15 (“I would find it tolerable if I were groped at a lively party”), 4-18 (“To me, sexual grabbing or groping is non-serious behavior at parties, clubs, or bars”), and 4-19 (“I would not complain if I were groped at a crowded party or a club”) in the passive role group had very high correlations above .8 with items in other groups. Removal of the three items in the passive role group resulted in three items per group. The correlation between the active role group and passive role group was .826. The correlation between the active role group and the playful attitude group was .809. The correlation between the passive role group and the playful attitude group was .774. This process resulted in nine items in the scale and the scale was titled “contextualizing sexual boundaries.”

CFA analyses of the one-factor model and the three-factor model were conducted and compared if the complex model had a significant improvement in the model fit. The one-factor model with all three groups as one latent variable had an excellent fit to the data ($\chi^2/df = 34.859 / 24 = 1.452$ with p -value of .142, CFI = 1.000, TLI = 1.000, RMSEA = .033, RMSEA 90% confidence interval = from .000 to .061, SRMR = .026,

WRMR = .593). The three-factor model with three different but related latent variables also had an excellent and improved fit to the data ($\chi^2/df = 13.894 / 24 = .578$ with p -value of .949, CFI = 1.000, TLI = 1.001, RMSEA = .000, RMSEA 90% confidence interval = from .000 to .003, SRMR = .017, WRMR = .375). Although the one-factor model had an excellent fit to the data, based on the fact that the contents of the three groups were different from each other and that the three-factor model had an improved fit supported having the three subscales. In conclusion, the scale for the fourth dimension had six items which encompassed three subscales of active role in, passive role in, and playful attitude towards contextualizing sexual boundaries (see Table 27).

The reliability of the final scale with six items was .94. The mean was 3.0 and the standard deviation was 1.7. The active role subscale had the Cronbach's alpha of .84, the mean of 3.2, and the standard deviation of 1.7. The passive role subscale had very similar values as the active role subscales: Cronbach's alpha of .81, the mean of 3.2, and the standard deviation of 1.7. The playful attitude subscale had the Cronbach's alpha of .93, the mean of 2.6, and the standard deviation of 1.8.

Table 27. Final items of Dimension 4: Contextualizing sexual boundaries

Item	Label	Item description
<u>Active role</u>		
1	4-3	To some degree, I welcome sexual aggression by men at parties, clubs, or bars.
2	4-5	I expect to be sexually teased at parties, clubs, or bars.
3	4-9	I turn uninvited sexual remarks into flattery at parties, clubs, or bars
<u>Passive role</u>		
4	4-6	I am willing to receive uninvited sexual advances at parties, clubs, or bars.
5	4-7	Receiving unwelcomed sexual attention would not bother me at parties, clubs, or bars.
6	4-8	I see whistling, ogling, or cat calls as acceptable behaviors at parties, clubs, or bars.
<u>Playful attitude</u>		
7	4-11	I consider groping at parties or clubs as a playful incident.
8	4-12	I would find it enjoyable if I were sexually grabbed at a lively party.
9	4-17	To me, getting groped is a normal part of being sexually playful at a party or a club.

Features of the scale 4. The scale to assess the fourth dimension included nine items; three items to measure active role in, three items to measure passive role in, and three items to measure playful attitude towards contextualizing sexual boundaries of oneself. All nine items had adequate powers in discriminating among individuals at different locations on the latent trait continuum (α ranged from 2.24 to 4.32). In general, items in the scale 4 were the least agreeable items than the items in the scale 1, 2, and 3. The playful attitude items, item 7, 8, and 9 (previously item 4-11 “I consider groping at parties or clubs as a playful incident,” 4-12 “I would find it enjoyable if I were sexually grabbed at a lively party,” and 4-17 “To me, getting groped is a normal part of being

sexually playful at a party or a club”) were the least agreeable items in the scale 4 but contained the most information of the latent trait, at the upper half on the latent trait continuum, as represented in the highest peaks (Figure 12). It appeared that the scale as a whole had the most information (the best precision) in discriminating individuals with latent trait levels at around $-.4$ to 2.4 (see Table 29 and Figure 13).

Table 28. Scale 4: Item parameter estimates

Item	Label	a	<i>s.e.</i>	b_1	<i>s.e.</i>	b_2	<i>s.e.</i>	b_3	<i>s.e.</i>	b_4	<i>s.e.</i>	b_5	<i>s.e.</i>	b_6	<i>s.e.</i>	b_7	<i>s.e.</i>	$S-\chi^2$	<i>d.f.</i>	p
1	4-3	3.10	0.30	-0.27	0.09	0.20	0.08	0.50	0.08	0.73	0.08	1.33	0.11	1.88	0.15	2.28	0.20	105.21	75	0.0122
2	4-5	2.80	0.26	-0.59	0.10	-0.04	0.08	0.19	0.08	0.55	0.08	1.06	0.10	1.57	0.13	2.39	0.21	104.64	89	0.1231
3	4-9	2.43	0.23	-0.72	0.11	-0.25	0.09	0.18	0.09	0.62	0.09	1.28	0.12	1.87	0.16	3.06	0.36	127.42	89	0.0047
4	4-6	3.27	0.31	-0.37	0.09	0.16	0.08	0.51	0.08	0.81	0.09	1.28	0.11	1.77	0.14	2.25	0.19	90.87	81	0.2122
5	4-7	2.26	0.21	-0.70	0.11	-0.13	0.09	0.20	0.09	0.72	0.10	1.41	0.13	1.90	0.17	2.62	0.26	91.97	90	0.4232
6	4-8	2.35	0.22	-0.68	0.11	-0.16	0.09	0.18	0.09	0.56	0.09	1.14	0.11	1.76	0.15	2.39	0.22	120.29	90	0.0181
7	4-11	3.96	0.39	-0.17	0.08	0.23	0.08	0.55	0.08	0.83	0.08	1.23	0.10	1.69	0.12	2.20	0.18	80.68	68	0.1392
8	4-12	4.32	0.46	-0.01	0.08	0.41	0.07	0.71	0.08	0.96	0.08	1.29	0.10	1.91	0.15	2.57	0.24	85.54	63	0.0309
9	4-17	4.22	0.43	-0.08	0.08	0.34	0.07	0.61	0.08	0.82	0.08	1.24	0.10	1.82	0.13	2.31	0.19	77.13	61	0.0795

-2loglikelihood: 7462.90
Akaike Information Criterion (AIC): 7606.90
Bayesian Information Criterion (BIC): 7873.81

Table 29. Scale 4: Item information function values at 15 values of θ from -2.8 to 2.8

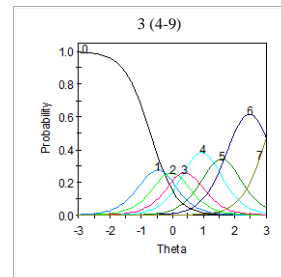
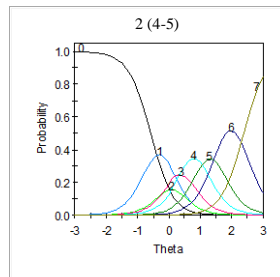
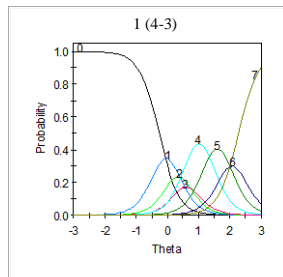
Item	Label	θ :														
		-2.8	-2.4	-2.0	-1.6	-1.2	-0.8	-0.4	-0.0	0.4	0.8	1.2	1.6	2.0	2.4	2.8
1	4-3	0.00	0.01	0.04	0.15	0.48	1.32	2.46	2.97	3.08	2.98	2.90	2.93	2.95	2.49	1.34
2	4-5	0.02	0.05	0.15	0.42	1.03	1.88	2.35	2.49	2.50	2.46	2.43	2.34	2.20	2.10	1.44
3	4-9	0.04	0.10	0.24	0.55	1.08	1.61	1.84	1.89	1.88	1.84	1.83	1.81	1.67	1.50	1.55
4	4-6	0.00	0.01	0.05	0.19	0.63	1.71	2.91	3.25	3.39	3.37	3.31	3.29	3.22	2.64	1.31
5	4-7	0.04	0.10	0.24	0.52	0.96	1.37	1.57	1.63	1.63	1.60	1.59	1.61	1.58	1.51	1.30
6	4-8	0.04	0.09	0.23	0.51	0.98	1.46	1.70	1.77	1.77	1.74	1.72	1.71	1.68	1.54	1.13
7	4-11	0.00	0.00	0.01	0.05	0.25	1.09	3.26	4.72	4.94	4.92	4.79	4.70	4.52	3.42	1.21
8	4-12	0.00	0.00	0.00	0.02	0.11	0.58	2.47	5.17	5.74	5.91	5.66	4.89	5.07	4.87	3.68
9	4-17	0.00	0.00	0.01	0.03	0.15	0.77	2.92	5.13	5.58	5.58	5.26	4.94	5.12	4.49	1.79

Test Information: 1.14 1.37 1.97 3.44 6.68 12.80 22.49 30.01 31.51 31.40 30.49 29.20 29.03 25.57 15.75
Expected s.e.: 0.94 0.85 0.71 0.54 0.39 0.28 0.21 0.18 0.18 0.18 0.18 0.19 0.19 0.20 0.25

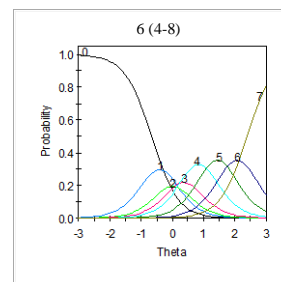
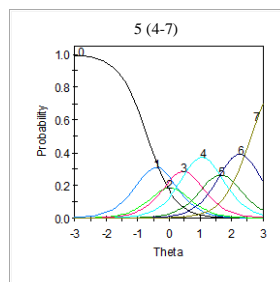
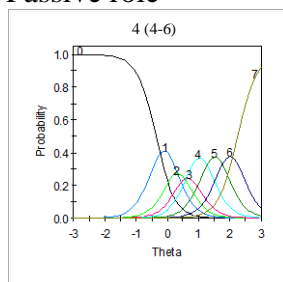
Marginal Reliability for Response Pattern Scores: 0.92

Item characteristic curves

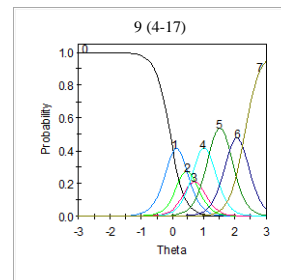
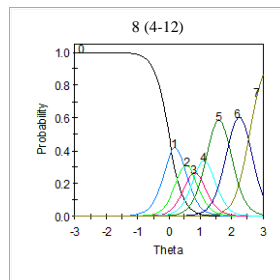
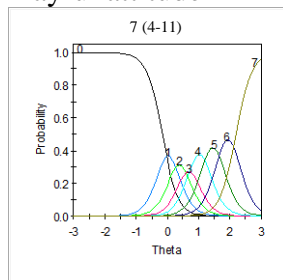
Active role



Passive role

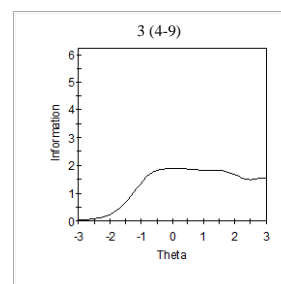
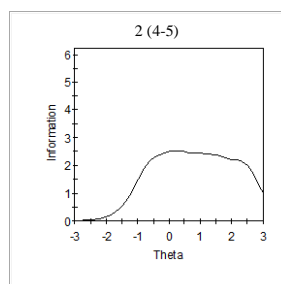
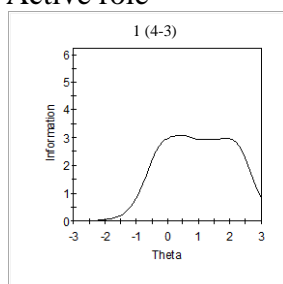


Playful attitude

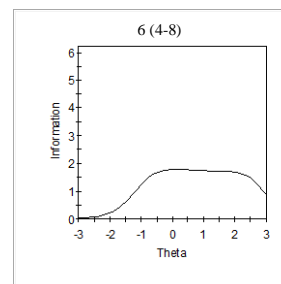
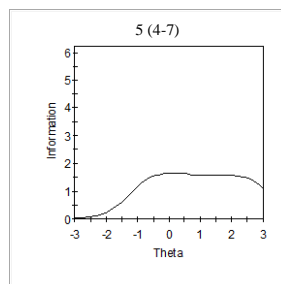
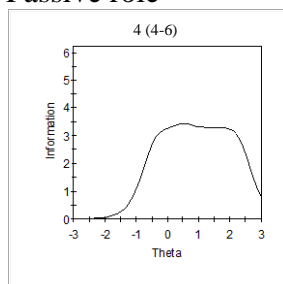


Item information function curves

Active role



Passive role



Playful attitude

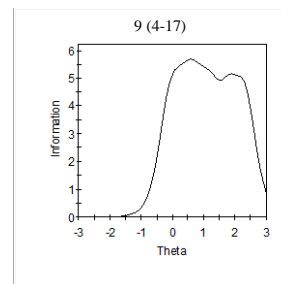
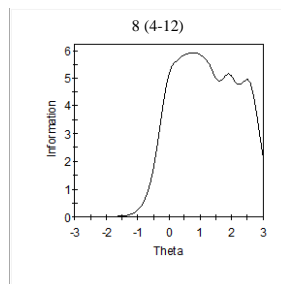
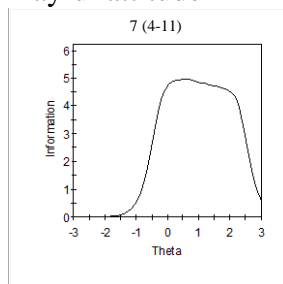


Figure 12. Scale 4: Item characteristic curves and item information function curves

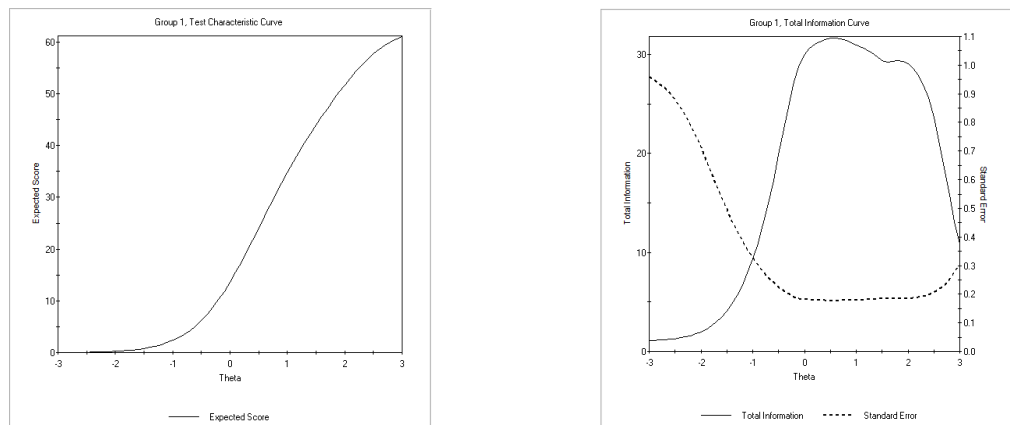


Figure 13. Scale 4: Total characteristic curve (left) and test information curve (right, a solid line represents the total information function and a dashed line represents standard error of estimation)

Results of cross-validation. The subsample of 300 data from the main data collection ($n = 601$) was used to cross-check the final version of the each scale. Both CFA fit indices and Cronbach's alpha values were examined. Results of cross-validation provided evidences that the developed scale was constant across the two subsamples and was not distorted by chance. The scales developed with the training set ($n = 301$) was confirmed by the testing set ($n = 300$). The details are presented below.

First, the scale of the first dimension, favoring sexual objectification of oneself, was examined. The CFA fit indices indicated that the one-factor model was an excellent fit to the data ($\chi^2/df = 20.918 / 14 = 1.494$ with p -value of .104, CFI = 1.000, TLI = .999, RMSEA = .042, RMSEA 90% confidence interval = from .000 to .077, SRMR = .024, WRMR = .547). The lowest factor loading of items was .786. There was no extreme residual correlation. The Cronbach's alpha was .96. The mean was 3.5 and the standard deviation was 1.6.

Second, the scale of the second dimension, relating sexual desirability to self-esteem, was examined. The CFA fit indices indicated that the one-factor model was a satisfactory fit to the data ($\chi^2/df = 13.434 / 5 = 2.686$ with p -value of .020, CFI = .999, TLI = .997, RMSEA = .077, RMSEA 90% confidence interval = from .028 to .129, SRMR = .026, WRMR = .546). The lowest factor loading of items was .813. There was no extreme residual correlation. The Cronbach's alpha was .91. The mean was 4.6 and the standard deviation was 1.8.

Third, the scale of the third dimension, equating physical attractiveness with being sexy, was examined. The CFA fit indices indicated that the one-factor model was an excellent fit to the data ($\chi^2/df = 11.678 / 9 = 1.297$ with p -value of .232, CFI = 1.000, TLI = 1.000, RMSEA = .032, RMSEA 90% confidence interval = from .000 to .077, SRMR = .021, WRMR = .453). The lowest factor loading of items was .777. There was no extreme residual correlation. The Cronbach's alpha was .92. The mean was 4.6 and the standard deviation was 1.7.

Last, the scale of the fourth dimension, contextualizing sexual boundaries, was examined. The CFA fit indices indicated that the one-factor model was a satisfactory fit to the data ($\chi^2/df = 37.305 / 27 = 1.381$ with p -value of .090, CFI = 1.000, TLI = .999, RMSEA = .037, RMSEA 90% confidence interval = from .000 to .064, SRMR = .028, WRMR = .614). The lowest factor loading of items was .772. There was no extreme residual correlation. The Cronbach's alpha was .97. The mean was 2.8 and the standard deviation was 1.7. The active role subscale had the Cronbach's alpha of .82, the mean of 3.1, and the standard deviation of 1.7. The passive role subscale had the exact same values as the active role subscales: Cronbach's alpha of .82, the mean of 3.1, and the

standard deviation of 1.7. The playful attitude subscale had the Cronbach's alpha of .92, the mean of 2.6, and the standard deviation of 1.9.

Relationship of the four dimensions. Spearman's rank-order correlation rho values were examined to explore the relationships of the four dimensions with both the training set and the testing set (n = 601). All four dimensions were positively and significantly related to each other (Table 30). Particularly, the first and the fourth dimensions were strongly related with a rho coefficient value of .754. The second and the third dimensions also had the coefficient value of .740 which indicated a strong correlation of the two dimensions.

Table 30. Correlations of the four dimensions

	Dimension 1	Dimension 2	Dimension 3	Dimension 4
Dimension 1	1.000			
Dimension 2	.625**	1.000		
Dimension 3	.667**	.740**	1.000	
Dimension 4	.754**	.528**	.565**	1.000

Self-sexualization was proposed to have four dimensions. However, how the four dimensions were related was not yet theoretically and empirically explored. In order to explore the relations of the four dimensions of self-sexualization, two models were tested; one model with four dimensions as sub-dimensions of self-sexualization and the other model with four dimensions as separate dimensions.

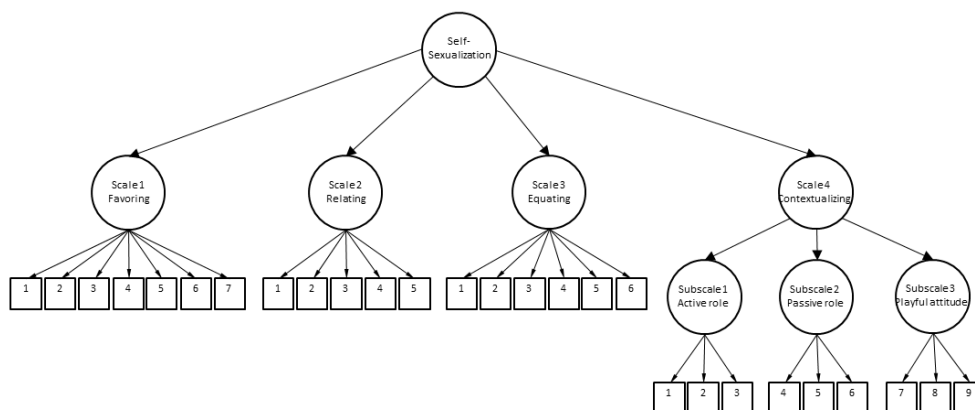
First, a CFA was performed to examine the model fit of the hierarchical structure of the dimensions (see proposed model 1 in Figure 14). In this model, the four dimensions were sub-dimensions of one general latent trait called self-sexualization (i.e.,

voluntary imposition of sexualization to oneself). The CFA fit indices of the higher-order structure with four dimensions (i.e., a general self-sexualization factor with four subfactors model) provided evidence that the hierarchical latent variable model was not a satisfactory fit to the data, in terms of RMSEA and WRMR ($\chi^2/df = 1600.709 / 317 = 5.049$ with p -value of .000, CFI = .993, TLI = .992, RMSEA = .091, RMSEA 90% confidence interval = from .087 to .096, SRMR = .063, WRMR = 1.722).

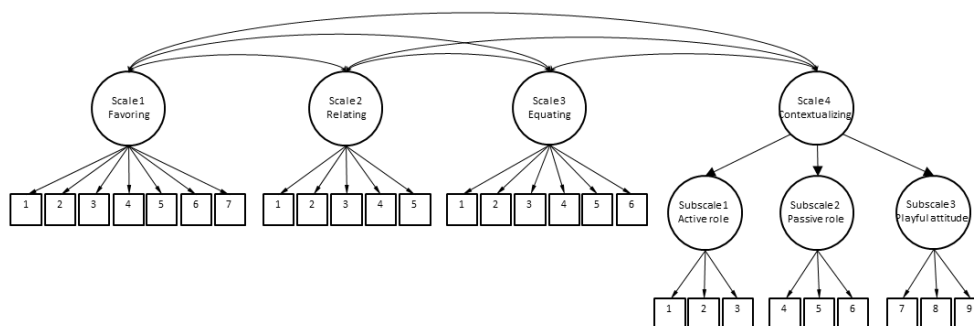
Second, a CFA was performed to examine the model fit of the correlation structure of the four dimensions (see proposed model 2 in Figure 14). The CFA fit indices of the four dimensions with correlations provided evidences that the correlation model was a satisfactory fit to the data ($\chi^2/df = 650.884 / 315 = 2.066$ with p -value of .000, CFI = .998, TLI = .998, RMSEA = .047, RMSEA 90% confidence interval = from .042 to .052, SRMR = .038, WRMR = 1.098). This result suggested that the model with four separate but correlated factors better explained the data than the hierarchically structured model with sub-dimensions.

A rival model was tested to compare with the performance of the proposed models (see rival model in Figure 14). As the four dimensions had significant positive correlations, the rival model was tested as one-factor model with all dimensions without the distinction of dimensions. The CFA fit indices indicated that the one-factor model was not a satisfactory fit to the data ($\chi^2/df = 5075.738 / 324 = 15.665$ with p -value of .000, CFI = .973, TLI = .970, RMSEA = .173, RMSEA 90% confidence interval = from .169 to .178, SRMR = .113, WRMR = 3.066), which suggested that the self-sexualization scale with the four separate dimensions was both theoretically and empirically meaningful.

Proposed model 1: Higher-order model



Proposed model 2: Correlation model



Rival model: One-factor model

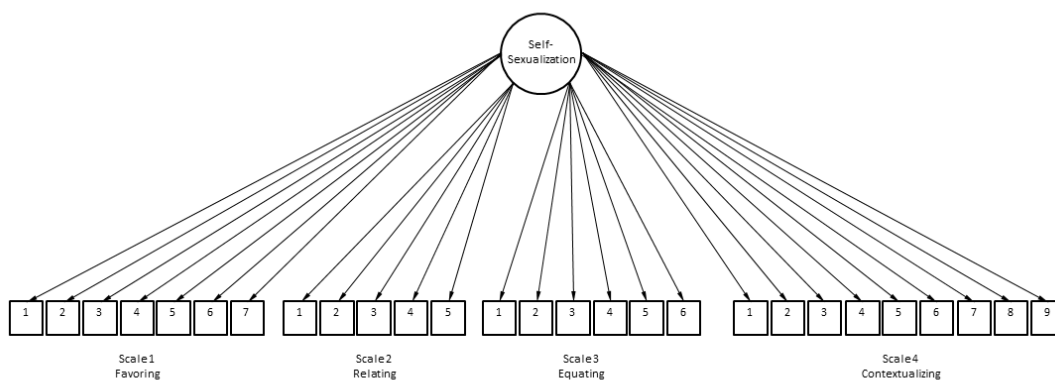


Figure 14. Model structure of the proposed models and a rival model.

Analyses of the four factor model. Because the model with the four separate dimensions with correlations was identified as the best fitting model, the correlations between the residuals for every pair of items after controlling for variances explained by the four latent traits were examined. Previously, when each dimension scale was developed, the analyses involved only the items within a scale. The correlations of residuals to identify a set of items for each dimension that produce good item-fit to a single-factor model and evidence of both local independence and unidimensionality. Now, a more complex model with four factors and with correlations between the factors identified six new pairs of items with noticeable residual correlations. The item 6 in Scale 1 “I enjoy purposefully draw attention to my figure in a sexual manner (e.g., highlighting breasts, showing legs)” had a noticeable negative residual correlation with the item 7 in Scale 1 and also had noticeable positive residual correlations with two items in Scale 2 and two items in Scale 3. Mostly due to the negative residual correlation within the same scale which indicates the violation of the unidimensionality, the item 6 in Scale 1 was eliminated, which resulted in six items in Scale 1.

Elimination of the item 6 resulted in one pair of items with a positive residual correlation barely bigger than .10 (.109); the pair of items was the item 7 in Scale 1 “Pole dancing to attract men’s attention would be fun for me” and the item 8 in Scale 4 “I would find it enjoyable if I were sexually grabbed at a lively party”). A positive residual correlation indicates evidence of local item dependence. However, given that the item pair was not in the same dimension, it was not an indicator for the same factor theoretically, thus, did not represent the violation of local independence assumption.

After removing the item 6, a one-factor model with the remaining six items was examined to ensure the structure validity of the revised Scale 1. Using the training set ($n = 301$), a CFA was conducted for the Scale 1. The CFA fit indices indicated that the one-factor model of Scale 1 without the item 6 was still an excellent fit to the data ($\chi^2/df = 12.828 / 9 = 1.425$ with p-value of .171, CFI = 1.000, TLI = 1.000, RMSEA = .039, RMSEA 90% confidence interval = from .000 to .083, SRMR = .021, WRMR = .474). The reliability of the revised Scale 1 was .93. The mean was 3.5 and the standard deviation was 1.8.

Removal of the item 6 in Scale 1 slightly reduced the correlation between the four scales ($n = 601$). The correlations between Scale 1 and Scale 2 was reduced to .592 (from .625), between Scale 1 and Scale 3 was reduced to .645 (from .667), and between Scale 1 and Scale 4 was reduced to .752 (from .754). In addition to examining the correlation of the four scales, the CFA with four factor model was examined using the revised Scale 1. The CFA fit indices of the four dimensions with correlations indicated a slightly improved model fit to the data ($\chi^2/df = 490.337 / 290 = 1.690$ with p-value of .000, CFI = .999, TLI = .999, RMSEA = .037, RMSEA 90% confidence interval = from .032 to .043, SRMR = .035, WRMR = .983). The final selected items are presented in Appendix G.

CHAPTER 5: Discussion

The Chapter 5 provides a summary of the research findings, suggestions on how to use the scale, and limitations of the study. Remaining steps in validating and exploring the scale are also discussed for future research.

Summary of the Study

The purpose of this study was to develop a scale to measure self-sexualization which holistically reflects the dimensions of the concept. The study population was young adult women between 21 and 29 years old, living in the U.S, and who were familiar with the American culture. The concept of self-sexualization was defined based on the definition of sexualization by APA (2009): the four conditions of sexualization by APA were adapted to define self-sexualization (Table 1). Related literatures that explained the four conditions (dimensions) of self-sexualization were discussed. Existing scales in the literature of self-sexualization were presented (Table 2). The needs for a new scale development were discussed in terms of the lack of consistency in defining and operationalizing the concept, issues of validity inherent in the existing scales, and shortcomings in measuring the possible dimensions underlying the concept.

Prior to developing a scale, a hypothesis was formulated that the construct of interest was a property that could be quantified using a scale rule and the scale was to locate individuals at various points on a psychological continuum according to the amount of the property each individual possesses. As the first step of a scale development, a test blueprint that included the definition of self-sexualization with proposed four dimensions was developed. The test blueprint was reviewed by the experts who had expertise in the content of self-sexualization (Appendix A-3). Their reviews provided

content validity evidence. The description and scope of each dimension as well as the definition of self-sexualization were redefined and a distinction from a related concept was discussed (see Table 4, 5, and 6).

Next, the test specification (which included the format of responses, scoring procedures, etc.) was developed and assessment items were generated based on the revised concept from the test blueprint reviews. To add clarity and reflect the language of the study population, assessment items were reviewed by three individuals who presented the study population before sending them to experts for review (Table 7). Three experts reviewed the test specification and assessment items (Appendix C-1 and C-2). Based on the expert reviews, the questionnaire format was changed to a more familiar format of agree and disagree Likert-scale, the scoring procedure was changed to averaging the responses, and assessment items were revised (Table 8, 9, 10, and 11).

The revised items were reviewed by ten individuals who represented the study population through interviews. Accurate interpretations of assessment items and review of content validity were two of the major outcomes of the interviews (Table 12). A pre-test was conducted with one new participant and the selected three individuals from previous interviews; two individuals who showed relatively high self-sexualization and one who showed relatively low self-sexualization. One of the important outcomes from the pre-test was the change in the study population to above 21 (previously the study population started from 19) due to legally restricted experiences in bars, clubs, or parties involving alcohol (see Table 13 for other outcomes).

The scale encompassing assessment items was pilot tested. The survey was improved by adding attention check questions to identify qualified responses and some

assessment items were modified to better reflect the content (Table 16). To select items and to ensure reliability and validity of the scale, a series of CTT, CFA, and IRT analyses were conducted with the main data collected from the field test. The four scales assessing the four dimensions of self-sexualization were developed and had empirical evidences for the scales. The first scale comprised of six items assessed the degree to which a woman has favorable attitudes toward sexual objectification of herself. The second scale comprised of five items assessed the degree to which a woman relates her sexual desirability to her self-esteem. The third scale comprised of six items assessed the degree to which a woman equates her physical attractiveness with being sexy. The fourth scale comprised of nine items assessed the degree to which a woman contextualizes her sexual boundaries at bars, clubs, or parties (see Table 18, 21, 24, and 27 for items in the four scales).

How to Use the Self-Sexualization Scale

Because the self-sexualization (i.e., the voluntary imposition of sexualization to the self) with four dimensions was meaningful, it is encouraged to use the four scales to holistically assess the self-sexualization as a whole. However, researchers can pick and choose a scale to focus on a particular dimension of self-sexualization that is better suitable for their research interests and for easier interpretation of the findings.

When researchers use all four scales to measure the degree of self-sexualization, the correlation model should be used to accurately reflect the structure of the four dimensions. Treating all dimensions self-sexualization as one is not desirable, as evidenced by non-satisfactory CFA fit indices. Particularly, regarding the subscales of scale 4, dividing one scale from another may not generate a statistically noticeable

improvement in the model fit (see “Dimension 4 – Contextualizing sexual boundaries”), but the content of each subscale is different enough that the division would allow flexibility in the scale application. For example, if researchers want to see individual’s active role in contextualizing sexual boundaries, they can look at the active role subscale and it would allow easy interpretation of the score. If researchers want to examine the most extreme form of self-sexualization, they can use the subscale that measures the playful attitude towards contextualizing sexual boundaries. If their research interest is in the contextualizing sexual boundaries in general, they can use all nine items.

In addition, it is recommended to use statistical analyses specialized for ordered data, as the self-sexualization scale uses an 8-point Likert scale format. Treating ordinal data as continuous is often considered acceptable practice, especially when either summing or averaging scores are used. However, analyzing data with appropriate statistical methods is encouraged due to the nature of self-sexualization. Similar to many of psychological constructs, such as ambition and vanity, self-sexualization is a construct that exists in lower levels for more people than in higher levels for fewer people. Particularly, the scale 1 and 2 measure somewhat extreme forms of self-sexualization, “Favoring sexual objectification of oneself” and “Contextualizing sexual boundaries,” that are unlikely to be normally distributed in the general population, as seen in this study. Thus, utilizing statistical approaches that count for non-normality of the data would reduce the possible biases in estimations. When using the self-sexualization as a variable in structural equation modeling, for example, researchers can use robust maximum likelihood estimation, instead of standard maximum likelihood estimation; or using the weighted least squares estimation is generally considered better than maximum likelihood

estimation (Kline, 2012). In this study, the diagonally-weighted least squares estimation method for ordinal factor analysis was used in R. AMOS users can take a Bayesian approach.

Limitations

There are limitations to this study. One of them concerns the scope of self-sexualization. The four dimensions were adapted from the four conditions of sexualization by APA (2007). Then the description of and the scopes of self-sexualization were reviewed by content experts. Although the APA is the largest and leading scientific and professional organization of psychologists and provides highly reliable information, and the content was reviewed by experts, exploration of other possible dimensions under self-sexualization by interviewing individuals who are self-claimed self-sexualizers (e.g., someone who welcomes sexual aggression by men at parties) could have ensured additional credible validity evidence based on the scale content.

Another limitation of the study is possible construct-irrelevant variance in measuring self-sexualization. It is possible that the outgoing personality affects the assessment outcomes of the fourth scale (involved with experiences in bars, clubs, or parties). It is also possible that the interest in fashion affects the outcomes of the first scale which includes wearing and dressing related items. Controlling for the possible influences on the outcomes could have purified the developed scale and deepened the understanding of self-sexualization. Thus, the associations of possible influential variables need to be explored in future research.

The study is also limited in validity evidence based on relations to other variables. Convergent and discriminant validity evidences were not gathered for this study. The

self-sexualization scale lacks in empirical supports that the scale is related to other measures to be related and unrelated to measures of which the concept should be unrelated. Thus, gathering the evidence based on relations to other variables is proposed for future study (see the following section of “What’s Next”).

The last limitation of the study is sampling. The scale was developed based on the sample from members of one crowd sourcing platform (i.e., Amazon Mturk). Although cross-validation of the scale was performed with a randomly split sample, the result might lack generalizability.

What’s Next?

Three major projects are expected for future study. One project is to gather validity evidence of the self-sexualization scale based on its relation to other variables. The second project is to further explore the relationships of the four scales. The third project is to utilize the developed self-sexualization scale as a variable in research.

Evidence based on relations to other variables. Validity evidence based on relations to other variables (i.e., convergent and discriminant validity evidences) are important information because it “addresses questions about the degree to which these relationships are consistent with the construct underlying the proposed test interpretations” (the *Standards*, p. 13). Convergent validity is concerned with the similarity between scales that are theoretically related (DeVellis, 2012). On the other hand, discriminant validity is concerned with dissimilarity between scales that are theoretically different from each other (DeVellis, 2012). Correlations between several other scales of related concept and the self-sexualization scale need to be examined. For any expected correlations with the self-sexualization scale, the correlation should show substantial

unshared variances which indicate discriminant validity of the self-sexualization scale from other scales for related concepts.

The existing scales in the literature of self-sexualization are expected to positively correlate with the self-sexualization scale: the sexualizing behavior scale (SBS), the enjoyment of sexualization Scale (ESS), the sex is power scale (SIPS), and the self-sexualization behavior questionnaire for women (SSBQ-W). (See Table 2 for descriptions of these scales.) Specifically, the SBS is expected to strongly correlate with the first and the fourth scales of self-sexualization as they measure extreme sexuality behaviors that are generally considered inappropriate (e.g., flashing breasts).

The ESS is expected to strongly correlate with the first scale, as well as the third subscale of the fourth scale (i.e., playful attitude towards contextualizing sexual boundaries) because both scales contain aspects of pleasurable emotion; the ESS deals with a feeling or condition of pleasure and the sexual subjectification also encompasses a feeling of amusement – playfulness.

The SIPS is expected to show moderate correlation with the second and the third scales of the self-sexualization scale. Although it is possible that a person places value on sexual desirability because she believes that being desirable by others gives her some power, the SIPS and the self-sexualization scale assess conceptually different variables.

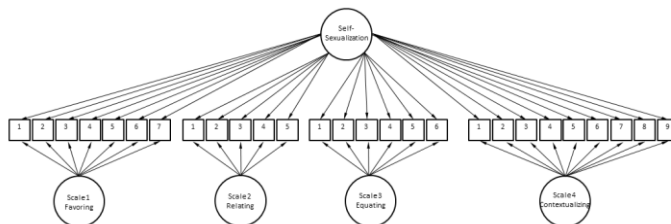
The SSBQ-W is expected to show moderate correlation with the second and the third scales of self-sexualization. Because the SSBQ-W assesses grooming activities dedicated to appearing sexually appealing, the person who places value on her sexual desirability and who equates physical attractiveness to sexual attractiveness would likely manage her appearance to appear sexy.

Although the first dimension of self-sexualization is inspired by the concept of self-objectification, they are different constructs as noted in the literature review. Thus, the measures of self-objectification (i.e., objectified body consciousness (OBC) scale and self-objectification questionnaire (SOQ)) are expected to show weak to moderate positive relationships with the self-sexualization scale.

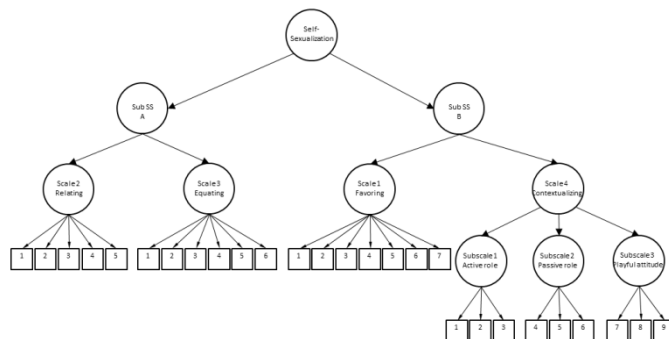
Hyperfemininity was found to be positively related with sexualizing behaviors measured by SBS, while sexism was not (Nowatzki & Morry, 2009). Thus, the hyperfemininity scale is expected to correlate with the self-sexualization scale. On the other hand, the Ambivalent Sexism Inventory (ASI; hostile and benevolent sexism) are not expected to correlate with the self-sexualization scale.

Exploration of the scale. In this study, correlations between the four scales and fit indices of the higher-order model were examined. The relationship between the four scales can be further explored. Specifically, different models can be explored. For example, a bi-factor model, instead of a simple correlation model or a higher-order model, may improve a model fit and may better explain the structure of the self-sexualization scale (see Figure 15). Considering the strong correlations between the first and the fourth dimensions and between the second and the third dimensions, it is possible that the three-factor hierarchical model may improve a model fit as seen in Figure 15. In addition, a sub-dimension model with the first dimension as the higher-order factor with the other three dimensions as the lower factors can be explored. This model reflects the APA's definition of self-sexualization. The APA's self-sexualization adapted one of four conditions of sexualization. If this model fit the data better, it means that the first dimension of self-sexualization encompasses the other three aspects of self-sexualization.

Bi-factor model



Three-factor hierarchical model



Sub-dimension model

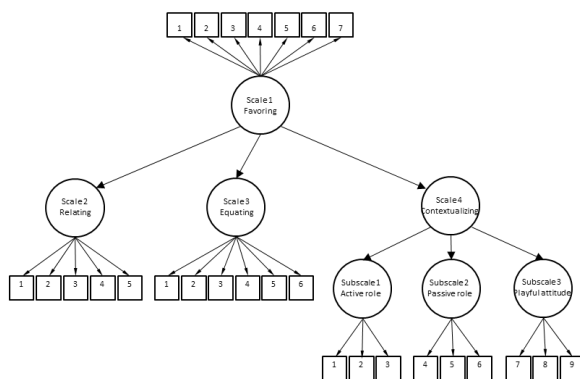


Figure 15. Exploration of different models

Use the scale as a variable. Using the scale as a variable to explore the relationships with other variables was the ultimate goal of the self-sexualization scale development. There are numerous possibilities to use the scale as a variable in research.

A particular study utilizing the self-sexualization scale is to examine the role of self-sexualization in understanding self-objectification.

Fredrickson and Roberts (1997) explained that when a woman experiences constant sexual objectification, she internalizes the third person's view and evaluates herself based on her appearance, which is called self-objectification (see "Self-objectification" in the literature review for details). Both sexual experiences and self-objectification were found to have negative consequences which include increase of body shame, body surveillance, disordered eating, depression, substance abuse, and sexual dysfunction (Carr & Szymanski, 2011; for a review see Moradi & Huang, 2008).

Not all women experience the same degree of sexual objectification, nor do all men sexually objectify women. Yet, a woman with high self-sexualization may experience a greater chance to be sexually objectified by others and may unknowingly increase a chance of negative consequences. With this reasoning, a study can be conducted to examine the differences in sexual objectification experiences as well as self-objectification among individuals who actively self-sexualize (high self-sexualizers) versus those who do not (low self-sexualizers).

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Appendix A-1. Invitation Letter for Test Blueprint Review

Title: Invitation for expert review_Dr.(name)

Dear Professor (name),

I am a doctoral student at the University of Minnesota and conducting my dissertation research on the development of a scale to measure self-sexualization among young adult women. With this letter I am formally soliciting your expert help in the development of my research instrument, which is now titled a scale of *Self-Sexualization (SS)*.

As a sequential process of expert review in the development of the instrument, at the first stage, I ask you to evaluate the test blueprint with respect to the validity of the definition and domains of self-sexualization in the test blueprint for developing an assessment to measure self-sexualization. As a researcher on the topic of self-sexualization, your expert opinion is invaluable.

The assessment items will be developed from the test blueprint based on your feedback at the first stage. At the second stage, I will ask you to evaluate the assessment items that are developed from the test blueprint. As an expert rater you will be asked to assess the validity of the blueprint and the assessment item.

If you are willing to participate in these two stages of expert review on the development of the instrument, please email me to confirm your interest at:
choi0305@umn.edu.

I am attaching the evaluation form of test blueprint to help you get a sense of the task I am asking you to perform.

The test blueprint evaluation is organized into two main sections: 1) Definition of the concept self-sexualization and evaluation of the definition. 2) Proposed domains of self-sexualization and evaluation of the domains. The evaluation includes questions related to the validity of the content and the degree to which the test blueprint is relevant to the domains of the concept.

About 40 to 50 assessment items will be written based on the revised test blueprint. You will also be asked at a later time to rate each of the assessment items with respect to how well they measure the concept of self-sexualization stated in the final test blueprint. You will be asked to suggest improvements for any items for which you “strongly disagree” or “disagree.” You will be asked to suggest concepts/topics that may be missing, items that can be removed/revised, and any other suggestions you may have to improve the assessment.

If you agree to participate as an expert reviewer, I will send you again a copy of the test blueprint for you to review. The turnaround for the evaluation form of the blueprint will be 2 weeks. Please feel free to ask me any questions that you have. I sincerely hope that you will be able to contribute to my research.

Thank you very much.

Sincerely,
Dooyoung Choi

Appendix A-2. Exert Review Consent Form for Test Blueprint

You are invited to participate in a study designed to develop and validate a scale to measure self-sexualization. This study is being conducted by a doctoral student, Dooyoung Choi, at the University of Minnesota. Please read this form and ask any questions you may have before agreeing to be in the study.

Background Information

The proposed study is to develop an instrument to assess the relative degree of which a young woman voluntarily sexualizes herself in comparison to average women. The target population of the assessment is heterosexual adult women age from 19 to 29.

Procedures

If you agree to be in this study, please take your time to review and evaluate the test blueprint on the form attached. You may be invited for the follow-up evaluation for preliminary assessment items again.

Risks and Benefits of Being in the Study

There are no known risks to you as a participant. The benefit to participation is the opportunity to contribute your expertise on the research about sexual presentation of young women.

Confidentiality

The records of this study will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify you as a participant. Research records will be kept in a locked file; only the researchers conducting this study will have access to the records.

Voluntary Nature of the Study

Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota. If you decide to participate, you are free to withdraw at any time without affecting those relationships.

Contacts and Questions

The lead researcher conducting this study is Dooyoung Choi under the advisement of Dr. Kim Johnson. If you are willing to participate or have any questions, you are encouraged to contact me, Dooyoung Choi via my University of Minnesota email (choi0305@umn.edu). You may also contact my advisor, Dr. Johnson (kjohnson@umn.edu). If you have any questions or concerns regarding the study and would like to talk to someone other than the researcher(s), contact Research Subjects' Advocate line, D528 Mayo, 420 Delaware Street S.E., Minneapolis, Minnesota 55455; telephone (612) 625-1650. Please keep this copy of the consent form for your records.

Statement of Consent

Please mark Yes or No to the followings:

Yes	No
▽	▽

I have read the above information. I have had the opportunity to ask questions and receive answers.

You need to sign and return this consent form if you agree to let us use your responses in the research study described above.

I give permission for my responses to evaluation form to be included in any analyses, reports or research presentations made as part of this research project.

You can print a copy of this form to keep for your records.

Appendix A-3. Test Blueprint Evaluation Form

This is an evaluation form to get information of how valid the test blueprint is to develop an instrument to assess the self-sexualization. Please read through the four notions of self-sexualization and evaluate the adequacy of definition and domains of self-sexualization.

Part 1-1. Adaption of Sexualization to Self-Sexualization

The definition of self-sexualization is adapted from the four conditions of sexualization by American Psychological Association (APA, 2007). Report of the APA task force on the sexualization of girls stated the four conditions of sexualization as below.

Sexualization by APA (2007)
1. A person is sexually objectified.
2. A person's value comes only from his or her sexual appeal or behavior, to the exclusion of other characteristics.
3. A person is held to a standard that equates physical attractiveness (narrowly defined) with being sexy.
4. Sexuality is inappropriately imposed upon a person.

* APA stated that any one of these four conditions is sufficient for sexualization to occur.

Based on the four conditions of sexualization, I propose the four conditions of self-sexualization among women as below.

Self-Sexualization of Women
1. A woman knowingly engages in sexual subjectification where playfulness, freedom, and choice are present.
2. A woman thinks her value comes primarily from her sexual appeal or behavior.
3. A woman thinks her physical attractiveness equates with being sexy.
4. A woman accepts inappropriate sexuality*.

*Inappropriate sexuality includes socially improper and/or morally unacceptable sexual beliefs and behaviors, such as sexual degradation, sexual aggression, verbal and physical sexual abuse. It also includes excessive display of sexual affection as well as disinhibited sexual behaviors, such as prostitution, exposure of genitals or masturbation or sexual intercourse in a public place.

I propose one of these four conditions is sufficient to self-sexualize, correspondingly to APA's definition of sexualization.

Part 1-2. Evaluation of Adaptation of Sexualization to Self-Sexualization

Please check the extent to which you agree or disagree with each of the following statements about the definitions of self-sexualization.

Item	Evaluation Questions	Ratings			
		Disagree strongly	Disagree	Agree	Agree strongly
1	The conditions of sexualization by APA are appropriately adapted to self-sexualization.				
2	Each condition of self-sexualization is clearly written.				
3	Description of inappropriate sexuality (*) is adequate in the concept of self-sexualization.				
4	One of the four conditions of self-sexualization is sufficient to self-sexualize to occur.				

Part 1-3. Suggestions for Improvement

For the following questions, please describe your opinions about the adaptation of sexualization to self-sexualization.

For each item to which you responded “Disagree strongly” or “Disagree,” please explain why you disagree and suggest how the definitions might be improved.

Part 2-1. Test Blueprint: Defining content domains

Please read through blueprint carefully before answering the items below. This part focuses on the content domains of self-sexualization. I propose to define a concept of self-sexualization which encompasses the four domains as **voluntary imposition of sexualization to the self**.

Definition of Self-Sexualization: Voluntary imposition of sexualization to the self.		
Content domains	Content domain description	Possible item for self-sexualization scale
1 Sexual subjectification.	Knowingly engage in sexual subjectification where playfulness, freedom, and choice are present.	Hooking up with men gives interesting experiences.
2 Contingency of self-worth on sexuality.	Think her value comes primarily from her sexual appeal or behavior.	I'd rather be sexy than friendly.
3 Perception of attractiveness defined by sexiness.	Equate her physical attractiveness with being sexy.	To be attractive, I need to be sexy.
4 Acceptance of inappropriate sexuality.	Accept inappropriate sexuality* (Include both acceptance of inappropriate sexuality as one's own standards of sexuality and acceptance of inappropriate sexuality imposed by others).	I can joke about innocent sexual touching that happened to me at a party.

*Inappropriate sexuality includes socially improper and/or morally unacceptable sexual beliefs and behaviors, such as sexual degradation, sexual aggression, verbal and physical sexual abuse. It also includes excessive display of sexual affection as well as disinhibited sexual behaviors, such as prostitution, exposure of genitals or masturbation or sexual intercourse in a public place.

Part 2-2. Evaluation of Test Blueprint

Please check the extent to which you agree or disagree with each of the following statements about the test blueprint.

Item	Evaluation Questions	Ratings			
		Disagree strongly	Disagree	Agree	Agree strongly
1	The definition of self-sexualization encompasses the four domains.				
2	The definition of self-sexualization is clearly written.				
3	The content domains represent the concept of self-sexualization.				
4	The content domains are adequate for developing items to assess self-sexualization.				
5	The constructs do not contain more than specified content domains.				
6	The constructs do not contain less than specified content domains.				

Part 2-3. Suggestions for Improvement

For the following questions, please describe your opinions about the content domains of self-sexualization in the test blueprint.

1. For each item to which you responded “Disagree strongly” or “Disagree,” please explain why you disagree and suggest how the blueprint might be improved.
2. What do you think may be missing from the contents of the blueprint related to the constructs of self-sexualization?
3. What parts of the contents may be extraneous or not as important for measuring the self-sexualization?
4. Do you have any other suggestions for improving the test blueprint? Please describe.

Thank you very much!

Appendix B-2. Interview Consent Form

Consent Form: Interview

You are invited to participate in a study designed to develop and validate a scale to measure self-sexualization. This study is being conducted by a doctoral student, Dooyoung Choi, at the University of Minnesota. Please read this form and ask any questions you may have before agreeing to be in the study.

Background Information

The proposed study is to develop an instrument to assess four domains of self-sexualization among women. The target population of the assessment is heterosexual adult women age from 19 to 29.

Procedures

Each interview will be audiotaped to produce a record of your responses for later analysis. Quotations of your interview may be used in research presentations or publications as an illustration of students' statistical thinking and reasoning. These excerpts may be in the form of a transcription of your statements during the interview, or of audio files selected from an interview.

We are asking for your consent to do three things. First, we ask for your consent to audiotape and record the interview. Second, we ask for your consent to include audio files of your interviews in presentations of this research. Third, we ask for your consent to include excerpts of your statements during the interviews in research presentations and publications.

Benefits of Being in the Study

You will receive a \$10 gift certificate for your participation in the approximately one-hour interview.

Risks of Being in the Study

There are no known risks to you as a participant. The benefit to participation is the opportunity to contribute your expertise on the research about sexual presentation of young women.

Confidentiality

The records of this study will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify you as a participant. Research records will be kept in a locked file; only the researchers conducting this study will have access to the records.

Voluntary Nature of the Study

Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota. If you decide to participate, you are free to withdraw at any time without affecting those relationships.

Contacts and Questions

The lead researcher conducting this study is Dooyoung Choi under the advisement of Dr. Kim Johnson. If you are willing to participate or have any questions, you are encouraged to contact me, Dooyoung Choi via my University of Minnesota email (choi0305@umn.edu). You may also contact my advisor, Dr. Johnson (kjohnson@umn.edu). If you have any questions or concerns regarding the study and would like to talk to someone other than the researcher(s), contact Research Subjects' Advocate line, D528 Mayo, 420 Delaware Street S.E., Minneapolis, Minnesota 55455; telephone (612) 625-1650. Please keep this copy of the consent form for your records.

Statement of Consent

I have read the above information. I have had the opportunity to ask questions and receive answers.

Please place an X next to each item below for which you do give your permission.

- _____ I give permission to be recorded and audiotaped.
 _____ I give permission to include audio files of my interview in presentations of this research.
 _____ I give permission to include excerpts of my statements in research presentations and publications.

Your Name (Please PRINT):

Date:

Appendix B-3. Scripted Probes for Interview

What do you think the question is asking about?

Follow up questions by interviewer.

Was that easy or hard to answer? If it was hard, why was it hard to answer?

Do you find any vocabularies which you and your friend would not use? What alternative words do you suggest?

Appendix C-1. Test Specification Evaluation Form

This is an evaluation form to ask you to evaluate test specification. The evaluation questions are intended to get information of how valid the proposed test is in assessing self-sexualizing beliefs within young adult heterosexual women between 19 and 29 years of age living in the U.S.

Part 1. Concept Overview

1. Assumptions

A personal self-sexualizing belief is hypothesized as a construct that can be quantified and the quantified score can be located on a scale – a psychological continuum. It is also hypothesized as a construct with one or more dimensions that all women have to a greater or lesser extent. It is neither pathology nor ability. Thus, this test is to assess the relative degree of individual's beliefs regarding self-sexualization in comparison to an average woman from the sample population.

2. Conceptualization

Self-sexualization is defined as voluntary imposition of sexualization to the self. Personal self-sexualizing belief is defined as a set of beliefs regarding self-imposed sexualization which encompasses four dimensions (see [Figure 1. Conceptualization of self-sexualizing beliefs with four dimensions.](#)).

The first dimension involves with belief that active sexual self-objectification is fun, pleasing oneself, empowering, and a free choice. Women who score high on this dimension would believe that treating and experiencing oneself as a sexual object is fun, pleasurable, and empowering experience. To them, active self-objectification is a conscious choice; willingly and knowingly engage in such experience.

The second dimension involves with belief that one's self-esteem is primarily based on sexual desirability. Women who score high on this dimension would believe that sexual desirability of oneself is the important domain of self-worth. The domain must be satisfied in order to have high self-esteem. They desire to be desired in a sexual manner. Being sexually wanted by others is the parameter of self-worth.

The third dimension involves with belief that one's physical attractiveness equates with being sexy. Women who score high on this dimension would believe that to be attractive one must be sexy. They hold a narrowly defined version of attractiveness, which is sexual attractiveness including stylized pornographic sexual expression.

The fourth dimension involves with belief that sexual violence is excused depending on circumstances (e.g., at bars/clubs/parties). Women who score high on this dimension would believe sexual violence is normal, proper, permitted, acquitted, or inevitable at some context and they would willingly receive or endure sexual violence without protest.

3. A belief

A belief is a strong idea that a tenet in mind is true or real. For example, a tenet that sexual self-objectification is for one's own pleasure can be either believed to be true or false. If an individual thinks the tenet is likely to be true, the individual is said to believe it. If an individual thinks the tenet is unlikely to be true (e.g., sexual self-objectification is not for one's own pleasure but for pleasing other people), the individual is said to disbelieve it.

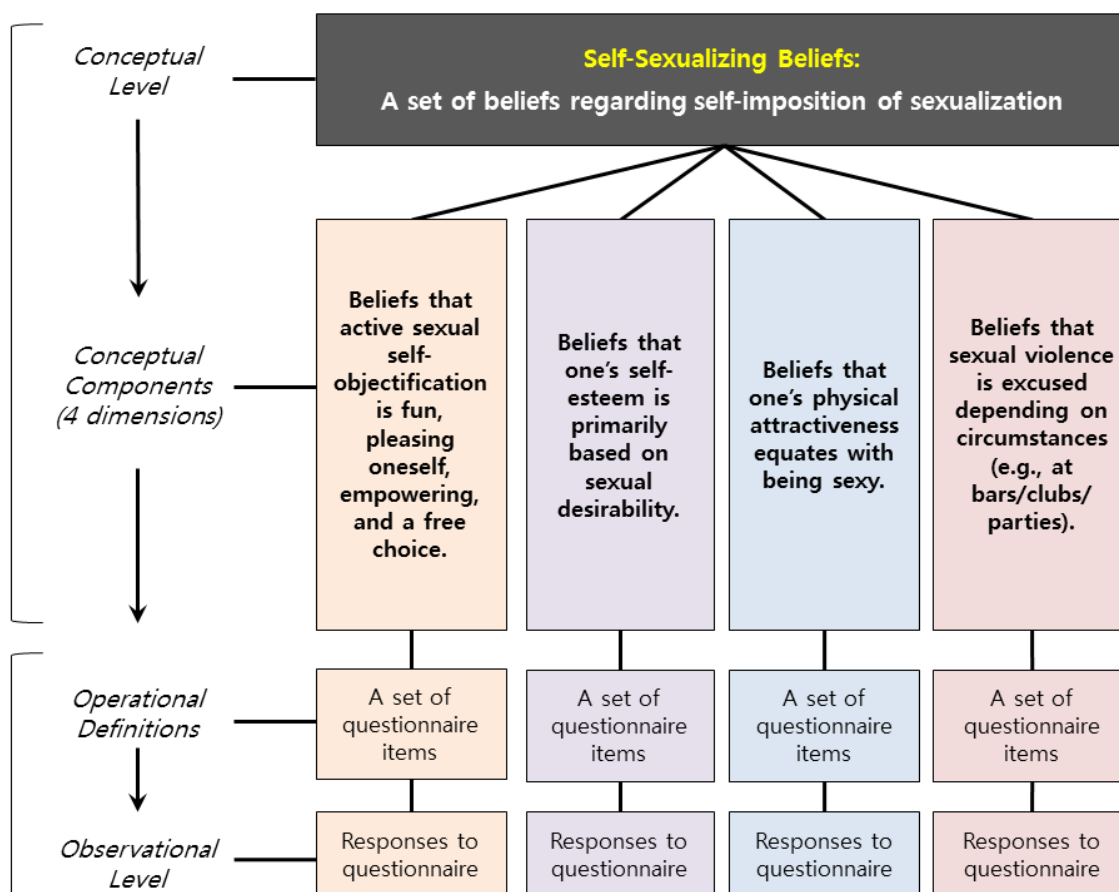


Figure 1. Conceptualization of self-sexualizing beliefs with four dimensions.

Part 2-1. Test Specification

Please read below test specification and rate in the items below.

1. Intended interpretation of the score. The meaning of the score of self-sexualization scale is to assess individual's relative position in comparison with other individuals who take the same scale, not to measure absolute levels of self-sexualizing beliefs.

2. Question stem. To what extent do you personally believe the statement is TRUE or NOT TRUE? Select one answer.

3. Response format. A 10-point Likert scale ranging from 1 (completely not true) to 10 (completely true).

Example:

<p>To what extent do you personally believe the statement is TRUE or NOT TRUE? Select one answer.</p>									
<p>1. Hooking up is a fun part of youth culture.</p>									
Completely not true	Extremely not true	Largely not true	Moderately not true	Slightly not true	Slightly true	Moderately true	Largely true	Extremely true	Completely true
1	2	3	4	5	6	7	8	9	10

4. Scoring procedure. The value of all items checked within a domain is summed together to compute a total score.

5. Total number of item. The test is expected to have a total 21 to 34 assessment items. (The desirable number of total items is between 21 to 34 items.)

Dimensions	Expected # of items
D1. Beliefs regarding active sexual self-objectification	6 to 10
D2. Beliefs regarding sexual desirability	5 to 8
D3. Beliefs regarding sexual attractiveness	5 to 8
D4. Beliefs regarding sexual violence	5 to 8
Expected total # of items	21 to 34

Part 2-2. Evaluation of Test Specification

Please check the extent to which you agree or disagree with each of the following statements

Item	Evaluation Questions	Ratings			
		Strongly Disagree ▼	Disagree ▼	Agree ▼	Strongly Agree ▼
1	Intended interpretation of the score is appropriate.				
2	Question stem is appropriate.				
3	Response format is appropriate.				
4	Scoring procedure is appropriate.				
5	Total number of item is appropriate.				
If you responded “Strongly disagree” or “Disagree”, please explain why you disagree and suggest how the item might be improved.					

Part 2-3. Additional Comments for Improvement

Please feel free to comment or add any suggestions for improvement.

Thank you very much!

Appendix C-2. Preliminary Assessment Item Evaluation Form

This is an evaluation form to ask you to evaluate each assessment item. The evaluation questions are intended to get information of how valid the proposed assessment item is in assessing each dimension of self-sexualizing beliefs within young adult heterosexual women between 19 and 29 years of age living in the U.S.

Based on your feedback, the preliminary assessment items will be revised. Revised assessment items will be administrated with a small number of people who represent the papulation of interest to determine whether the items make sense to test takers, to reflect the cultural language of the intended population, and to gather additional evidence of the validity of the test.

Part 1-1. Evaluation of Preliminary Assessment Items

Table below shows the list of generated assessment items for each dimension. Description of each dimension is provided as specified content on the top of the table. Each assessment item reflects the specified content. Please read each assessment item carefully and rate how relevant you think each item is to specified construct (i.e., if the item assess the specified content). *(-) indicates reverse item.

D1	Specified content: Beliefs that active sexual self-objectification is fun, pleasing oneself, empowering, and a free choice.					
To what extent do you agree or disagree with the following statement: The item assesses the specified content.		Ratings				Comments
		Strongly Disagree ▼	Disagree ▼	Agree ▼	Strongly Agree ▼	If you responded “Strongly disagree” or “Disagree”, please explain why you disagree and suggest how the item might be improved.
1-1	Hooking up is a fun part of youth culture.					

1-2	Having casual sex with different men provides women with a range of interesting experiences.					
1-3	Being sexually provocative is empowering for women.					
1-4	Stiletto heels are emblematic of feminine power.					
1-5	Wearing a sexy dress is one method for women to achieve power femininity.					
1-6	Accentuating women's sexual appeal reflects contemporary beliefs about femininity.					
1-7	Sexually assertive women can wear T-shirts with labels like "porn star."					
1-8	Professional strippers are feisty independent souls.					
1-9	We should consider professional stripper as a sexually assertive occupation.					
1-10	We should open minded about women participating in exotic dancing as it reflects sexual liberation.					
1-11	Models who pose for Playboy should not be identified as empowered women. (-)					
1-12	Aerobic pole dancing is empowering.					
1-13	Pole dancing is more empowering than participation in regular aerobics classes.					

1-14	Pole dancing could be represented as a desirable exercise alternative.					
1-15	If I participate in erotic dancing, it is for my own pleasure.					
1-16	If I give a man a lap dance, it is for my fun experience.					
1-17	Women who can give a trilling lap dance are powerful women.					
1-18	Flashing breasts in public is degrading to women. (-)					
1-19	Flashing breasts in public is humiliating for women. (-)					
1-20	If I shaved my genitals, it would be for my pleasure.					
1-21	Having a boudoir or pinup photographs taken would be a pleasing experience for me.					
1-22	Women sexually kissing other women for the purpose of attracting attention is degrading to women. (-)					
Do you have any other suggestions for improving the assessment?						

D2 Specified content: Beliefs that one's self-esteem is primarily based on sexual desirability						
To what extent do you agree or disagree with the following statement: The item assesses the specified content.		Ratings				Comments
		Strongly Disagree ▼	Disagree ▼	Agree ▼	Strongly Agree ▼	If you responded "Strongly disagree" or "Disagree", please explain why you disagree and suggest how the item might be improved.
1-1	My self-esteem goes up when men sexually desires me.					
1-2	Knowing that I am sexually desirable raises my self-esteem.					
1-3	Knowing that men find me sexually desirable raises my self-esteem					
1-4	Being sexually wanted by others increases my self-esteem.					
1-5	When I do not feel sexually appealing, my self-esteem goes down.					
1-6	My self-esteem would suffer if I find myself not sexually desirable.					
1-7	My self-esteem is influenced by how sexually desirable I am.					
1-8	My sense of self-worth is influenced by how sexually alluring I am.					
1-9	I do not care whether I am sexually desirable or not. (-)					

1-10	My self-esteem does not depend on whether or not I am sexually seductive. (-)					
Do you have any other suggestions for improving the assessment?						

D3	Specified content: Beliefs that one’s physical attractiveness equates with being sexy					
To what extent do you agree or disagree with the following statement: The item assesses the specified content.		Ratings				Comments
		Strongly Disagree ▼	Disagree ▼	Agree ▼	Strongly Agree ▼	If you responded “Strongly disagree” or “Disagree”, please explain why you disagree and suggest how the item might be improved.
1-1	Attractive is a synonym of sexy.					
1-2	Attractive women are sexy women.					
1-3	Being sexy is the way to be attractive.					
1-4	An attractive woman has sexy appearance.					
1-5	To be attractive, I need to be sexy.					
1-6	I must wear something sexy to feel attractive.					

1-7	If I am helping my friend look attractive, I would suggest appearing sexy.					
1-8	If I give tips to appear attractive, I would suggest dressing sexy.					
1-9	I look less attractive if I do not wear sexy clothing.					
1-10	Women appear less attractive if they do not wear sexy clothing.					
1-11	People think that the best versions of female beauty are the Victoria's Secret models.					
1-12	When people think of attractive women, they think of the Victoria's Secret models.					
1-13	Porn stars have attractive bodies.					
1-14	Learning how to pose like a porn star would increase my attractiveness.					
1-15	A Vegas showgirl knows some of the best techniques to appear attractive.					
1-16	Exotic dancers have some of the best techniques to appear attractive.					
Do you have any other suggestions for improving the assessment?						

D4 Specified content: Beliefs that sexual violence is excused depending on circumstances (e.g., at bars/clubs/parties)						
To what extent do you agree or disagree with the following statement: The item assesses the specified content.		Ratings				Comments
		Strongly Disagree ▼	Disagree ▼	Agree ▼	Strongly Agree ▼	If you responded “Strongly disagree” or “Disagree”, please explain why you disagree and suggest how the item might be improved.
1-1	A lively and fun party accepts groping of women by men.					
1-2	People having a fun time at parties would not mind getting sexual grabbing.					
1-3	Sexist jokes can be funny at bars if they are well said.					
1-4	Flashing of breasts is a humorous drunk college life experiment.					
1-5	Getting groped is a normal part of being sexually playful at a party.					
1-6	It would not hurt people if they get sexually touched at a club.					
1-7	People should not be surprised when they get groped at a spring break party.					
1-8	Some people just have strong opinion about grabbing and groping at bars.					

1-9	Prudes whine about sexual grabbing happening at bars.					
1-10	Getting groped would not bother me if I am having a fun time.					
1-11	Getting sexually grabbed would not bother people if they are drunk.					
1-12	If I were intoxicated, I would not mind get groping at a club.					
1-13	There is nothing wrong with participating in a fantasy rape.					
Do you have any other suggestions for improving the assessment?						

Part 1-2. Suggestions for Improvement

There may be a whole approach that I have failed to include. What do you think may be missing from overall assessment items? Do you have any other suggestions for improving the assessment?

Thank you very much!

Appendix D-1. Pre-Test Interview Flyer

Looking for Interview Participants
for a scale development
regarding sexuality among
heterosexual women age from 19 to 29



Qualifications: Any heterosexual woman, age from 19 to 29, who is familiar with the culture of the U.S.

Compensation: **\$10 Target gift card** for approx. 1 hour interview.

Interview: I would like to schedule a one-time interview with completion of a survey at a time and place that is convenient for you to discuss your experiences.

Interview data will be used in a research project conducted by Dooyoung Choi, a doctoral student, under the direction of Dr. Marilyn DeLong, a professor in the College of Design at the University of Minnesota. In reports that may be published or publicly presented, I will not include any information that will make it possible to identify you as a participant.

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Appendix D-2. Pre-Test Consent Form

Consent Form: Interview

You are invited to participate in a study designed to develop and validate a scale to measure self-sexualization. This study is being conducted by a doctoral student, Dooyoung Choi, at the University of Minnesota. Please read this form and ask any questions you may have before agreeing to be in the study.

Background Information

The proposed study is to develop an instrument to assess four domains of self-sexualization among women. The target population of the assessment is heterosexual adult women age from 19 to 29, who is familiar with the culture of U.S.

Procedures

Each interview will be audiotaped to produce a record of your responses for later analysis. Quotations of your interview may be used in research presentations or publications as an illustration of students' statistical thinking and reasoning. These excerpts may be in the form of a transcription of your statements during the interview, or of audio files selected from an interview.

We are asking for your consent to do three things. First, we ask for your consent to audio-tape and record the interview. Second, we ask for your consent to include audio files of your interviews in presentations of this research. Third, we ask for your consent to include excerpts of your statements during the interviews in research presentations and publications.

Benefits of Being in the Study

You will receive a \$10 *Target* gift certificate for your participation in the approximately one-hour interview.

Risks of Being in the Study

There are no known risks to you as a participant. The benefit to participation is the opportunity to contribute your expertise on the research about sexual presentation of young women.

Confidentiality

The records of this study will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify you as a participant. Research records will be kept in a locked file; only the researchers conducting this study will have access to the records.

Voluntary Nature of the Study

Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota. If you decide to participate, you are free to withdraw at any time without affecting those relationships.

Contacts and Questions

The lead researcher conducting this study is Dooyoung Choi under the advisement of Dr. Kim Johnson. If you are willing to participate or have any questions, you are encouraged to contact me, Dooyoung Choi via my University of Minnesota email (choi0305@umn.edu). You may also contact my advisor, Dr. Johnson (kjohnson@umn.edu). If you have any questions or concerns regarding the study and would like to talk to someone other than the researcher(s), contact Research Subjects' Advocate line, D528 Mayo, 420 Delaware Street S.E., Minneapolis, Minnesota 55455; telephone (612) 625-1650. Please keep this copy of the consent form for your records.

Statement of Consent

I have read the above information. I have had the opportunity to ask questions and receive answers.

Please place an X next to each item below for which you do give your permission.

- _____ I give permission to be recorded and audiotaped.
 _____ I give permission to include audio files of my interview in presentations of this research.
 _____ I give permission to include excerpts of my statements in research presentations and publications.

Your Name (Please PRINT):

Date:

Appendix D-3. Pre-Test Debriefing Interview Questions

How was the questionnaire?

Did you have any questions while answering the questionnaire?

Were there any hard questions?

Why was it hard to understand (or answer)?

How readable was the questionnaire?

Do you have any questions or suggestions?

Appendix E. Consent Form for Pilot Test

You are invited to participate in a study designed to develop and validate a scale to measure individuals' attitudes towards their sexuality. This study is being conducted by a doctoral student, Dooyoung Choi, at the University of Minnesota. Please read this form before agreeing to be in the study.

Background Information

The purpose of this study is to acquire validity evidences of assessment items and to conduct item analyses. The target population of the assessment is **heterosexual adult women age from 21 to 29, living in the US more than 15 years and who are familiar with American culture.**

Procedures

If you agree to participate, we would like you to complete the accompanying questionnaire. The questions asked are concerned with your personal beliefs and attitudes regarding sexuality. It takes about 20 to 25 minutes to complete the questionnaire.

Benefits and Risks of Being in the Study

You will receive a \$1.75 through Amazon MTurk for your completion of the questionnaire. There are no known risks to you as a participant.

Confidentiality

The records of this study will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify you as a participant. Research records will be kept in a locked file; only the researchers conducting this study will have access to the records.

Voluntary Nature of the Study

Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota. If you decide to participate, you are free to withdraw at any time without affecting those relationships.

Contacts and Questions

The lead researcher conducting this study is Dooyoung Choi under the advisement of Dr. Marilyn DeLong. If you are willing to participate or have any questions, you are encouraged to contact me, Dooyoung Choi via my University of Minnesota email (choi0305@umn.edu). You may also contact my advisor, Dr. DeLong (mdelong@umn.edu). If you have any questions or concerns regarding the study and would like to talk to someone other than the researcher(s), contact Research Subjects' Advocate line, D528 Mayo, 420 Delaware Street S.E., Minneapolis, Minnesota 55455; telephone (612) 625-1650.

Click **YES** to provide your consent and complete the questionnaire.

Statement of Consent: I have read the above information. I consent to participate in the study

YES

NO

Appendix F. Pilot Test Item Mentioned in Text

Dimension 1

- 1-17: I would feel powerful giving a man a thrilling lap dance.
- 1-19: It would be for my pleasure if I gave a man a lap dance.
- 1-20: If I gave a man a lap dance, it would be because I would find it fun for me.
- 1-23: Engaging in public expressions of sexuality (e.g., flashing my breasts) is how I could express my sexuality.

Dimension 2

- 2-7: When I feel that I am sexually undesirable, I feel bad about myself.
- 2-11: I do not care whether or not I am sexually desirable.
- 2-12: My self-esteem is unrelated to how I feel about my sexual desirability.

Dimension 3

- 3-1: I hold to a standard that physical attractiveness equates to being sexy to myself.
- 3-2: I embrace the idea of being physically attractive as the way to be sexy to myself.
- 3-4: When I evaluate my physical attractiveness, I evaluate how sexy I am.
- 3-5: Being physically attractive is the same as being sexy to me.
- 3-6: For me, physical attractiveness equates with sexiness.
- 3-8: I find it difficult to be sexy without being physically attractive.
- 3-10: Appearing physically attractive is different from appearing sexy to me.
- 3-12: I must wear something sexy to look physically attractive.
- 3-13: I look less physically attractive if I do not highlight my sexual features.
- 3-14: I think exotic dancers (e.g., strippers) are good role models to use to enhance my physical attractiveness.
- 3-15: When it comes to making myself physically attractive, I could borrow some tips from exotic dancers (e.g., strippers).

Dimension 4

- 4-6: Receiving unwelcomed sexual attention would not bother me at parties, clubs, or bars.
- 4-7: I would not go to any place (e.g., Spring Break party) where I knew men may make unwanted sexual advances toward me.
- 4-9: I turn uninvited sexual remarks into flattery at parties, clubs, or bars.
- 4-14: I would find it tolerable if I were groped at a lively party.
- 4-18: I would complain about sexual grabbing in a crowded place (e.g., bar, club, party).

Appendix G. Self-Sexualization Scales

Self-Sexualization: Voluntary Imposition of Sexualization to Oneself			
<u>Scale 1</u>	<u>Scale 2</u>	<u>Scale 3</u>	<u>Scale 4</u>
Favoring sexual self-objectification	Relating sexual desirability to self-esteem	Equating physical attractiveness with being sexy	Contextualizing sexual boundaries
1. I enjoy purposefully objectifying myself as a sexual thing.	1. Being sexually desirable to others increases my self-esteem.	1. I hold to a standard that physical attractiveness equates to being sexy to myself.	1. Active: To some degree, I welcome sexual aggression by men at parties, clubs, or bars.
2. Showing promiscuousness is fun for me.	2. My self-esteem decreases when I am not sexually desirable.	2. How sexy I am is a measure of how physically attractive I am.	2. Active: I expect to be sexually teased at parties, clubs, or bars.
3. Showing promiscuity would make me feel liberated.	3. When I feel that I am sexually undesirable, I feel bad about myself.	3. When I evaluate my physical attractiveness, I evaluate how sexy I am.	3. Active: I turn uninvited sexual remarks into flattery at parties, clubs, or bars
4. Wearing promiscuous clothes would make me feel powerful.	4. How I feel about myself is influenced by how sexually desirable I am.	4. Being physically attractive is the same as being sexy to me.	4. Passive: I am willing to receive uninvited sexual advances at parties, clubs, or bars.
5. I enjoy dressing promiscuously.	5. My confidence is influenced by my sexual desirability.	5. For me, physical attractiveness equates with sexiness.	5. Passive: Receiving unwelcomed sexual attention would not bother me at parties, clubs, or bars.
6. Pole dancing to attract men's attention would be fun for me.		6. To appear physically attractive, I need to look sexy.	6. Passive: I see whistling, ogling, or cat calls as acceptable behaviors at parties, clubs, or bars. 7. Playful attitude: I consider groping at parties or clubs as a playful incident.
			8. Playful attitude: I would find it enjoyable if I were sexually grabbed at a lively party. 9. Playful attitude: To me, getting groped is a normal part of being sexually playful at a party or a club.
Cronbach's alpha .93	Cronbach's alpha .93	Cronbach's alpha .93	Cronbach's alpha .94