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Review article

Body dissatisfaction and condom use self-efficacy: A meta-analysis

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ABSTRACT

The consistent use of condoms is the most effective behavior for reducing the acquisition of sexually transmitted infections (STIs), and condom use self-efficacy has been shown to be a key construct related to condom use. However, the examination of modifiable psychosocial and behavioral correlates of condom use self-efficacy is lacking. Recent investigations have highlighted the association of body dissatisfaction with condom use self-efficacy, and the current study conducted a meta-analysis on all available data addressing this relationship. Eleven individual effect-size parameters from nine studies yielded a total sample of 2495 men and women participants. A random-effects model revealed an average effect-size of $r = -.25$, Cohen's $d = -0.52$, which is moderate in strength. As body dissatisfaction increases, ones' self-efficacy regarding the use of condoms diminishes. Integrating interventions to decrease body dissatisfaction and sexual risk behaviors may prove to be an effective strategy to decrease STIs.

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Introduction

Safer sexual practices, such as consistent condom use, are important preventative measures against the spread and transmission of sexually transmitted infections (STIs), yet less than half of U.S. adults use condoms during sex with non-regular partners (e.g., Anderson, 2003). There is ongoing evidence that efforts to promote consistent condom use in the U.S. are needed, in that the rates of new HIV infections have not decreased in the past decade (CDC, 2013), and that the prevalence of STIs is estimated at 110 million in the U.S., with roughly 20 million new infections per year (Satterwhite et al., 2013). Accordingly, studies examining psychosocial and behavioral variables that can be modified and reduce HIV and STI acquisition are still needed, as traditional efforts are not achieving their goals (e.g., Crepaz et al., 2006; Herbst et al., 2007).

Use of condoms operates in conjunction with psychosocial variables. *Condom use self-efficacy*, defined as confidence in one's ability to practice safer sex in difficult situations, is one variable that has been featured prominently in many models of health behaviors, such as social cognitive theory (Bandura, 1994). This theory, applied to safer sex behaviors, proposes that individuals engage in a process of evaluating the relative advantages and disadvantages of using condoms during sex (e.g., social norms of condom use, knowledge about STIs, and expectancies regarding condom use). These cognitive processes subsequently predict one's level of self-efficacy. Self-efficacy then becomes the salient

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variable in terms of whether an individual engages in unprotected vs. safer sex practices. Empirically, self-efficacy has been strongly related to actual use of condoms among a variety of populations (e.g., Baele, Dusseldorp, & Maes, 2001; Wulfert, Safren, Brown, & Wan, 1999; Wulfert & Wan, 1993; Wulfert, Wan, & Backus, 1996), and meta-analytic data have revealed medium-sized effects with actual condom use for both cross-sectional and longitudinal studies (Sheeran, Abraham, & Orbell, 1999). One study compared social cognitive theory, with self-efficacy, to the two other most frequently used theories related to condom use, the health belief model and theory of reasoned action (Wulfert et al., 1996). Results indicated that self-efficacy explained variance in condom use above and beyond that accounted for by the other two models, highlighting its value in promoting safer sex behaviors.

Although condom use self-efficacy has been established as a salient predictor of condom use, proposed psychosocial variables that might contribute to condom use self-efficacy have been limited. One construct that has recently received increased attention in this area is body dissatisfaction. *Body dissatisfaction* may be defined as possessing negative evaluation about one's body or appearance (Cash, 2002). Theoretically, it has been argued that elevated body dissatisfaction may be associated with lowered condom use self-efficacy. Individuals who have concerns regarding their appearance report heightened worry about receiving negative evaluations from others (e.g., Cash, Thériault, & Annis, 2004). In the context of sexual behaviors, where exposed bodies are central, engaging in discussions regarding condom use may lead individuals with body dissatisfaction to experience increased anxiety, perhaps concerned that this negotiation with sexual partners will lead to rejection. Thus, individuals with elevated body dissatisfaction may lack assertiveness in broaching the use of condoms, and may be less likely to initiate conversation around safer sex practices.

Empirically, a number of studies have found significant relationships between body dissatisfaction and lowered condom use self-efficacy. Most of these studies sampled adolescent or young adult women (i.e., Gillen, Lefkowitz, & Shearer, 2006; Salazar et al., 2004; Schooler, Ward, Merriwether, & Caruthers, 2005; Swenson, 2007; Van Anders, 2013; Watson, Matheny, Gagne, Brack, & Ancis, 2013; Weaver & Byers, 2006; Yamamiya, Cash, & Thompson, 2006). Comparably fewer studies have assessed these relationships among men (for exceptions, see Blashill, Goshe, Mayer, Robbins, & Safren, 2014; Gillen et al., 2006; Van Anders, 2013). Of those, Blashill et al. (2014) sampled men who have sex with men (MSM) living with HIV, and found a medium-sized effect between body dissatisfaction and lower condom use self-efficacy. The limited studies on heterosexual men have revealed conflicting results, with Gillen et al. (2006) finding a null result, and others noting a significant medium-sized effect (Schooler & Ward, 2006; Van Anders, 2013). Thus, it would seem that the relationship between body dissatisfaction and condom use self-efficacy has been less consistently studied among men as compared to women.

To date, there has been limited empirical examination of psychosocial predictors of condom use self-efficacy, the key predictive variable in social cognitive theory. Body dissatisfaction is prevalent among men and women (24–32% for men and 35–38% for women; Peplau et al., 2009), and emerging data have begun to reveal significant associations with condom use self-efficacy. However, to our knowledge, there have been no attempts to integrate the data on this topic to yield a summary of the significance and size of the effect of body dissatisfaction on condom use self-efficacy. Thus, the aim of this study was to conduct a meta-analysis on all available, published and unpublished, data on body dissatisfaction and condom use self-efficacy among men and women. It was hypothesized that a significant inverse relationship would be revealed between body dissatisfaction and condom-use self-efficacy. Although there are limited data to guide directional hypotheses, a preliminary moderation analysis was also conducted, examining the differential effect of participant sex on body dissatisfaction and condom use self-efficacy.

Table 1
Measures used to assess body dissatisfaction and condom use self-efficacy.

Primary study	BD	CUSE	Sample	Parameter
Blashill et al. (2014)	ABCD-SF	CUSES	105 HIV+ MSM	.29
Gillen et al. (2006)	AE-MBSRQ	CUSES	193 men	−.02
Gillen et al. (2006)	AE-MBSRQ	CUSES	213 women	.29
Salazar et al. (2004)	BTWBAS	CUSES	522 women	.21
Schooler et al. (2005)	BISC	SSES	188 women	.52
Swenson (2007)	BESAQ	SES	258 women	.29
Van Anders (2013)	Single item	N-MCAS	20 women	.42
Van Anders (2013)	Single item	N-MCAS	26 men	.30
Watson et al. (2013)	S-OBCS	CSES	556 women	.24
Weaver and Byers (2006)	SIBID	CUSES	213 women	.23
Yamamiya et al. (2006)	BIQ	SRBBS	384 women	.20

Note: For ease of interpretation, primary studies that included a measure of dissatisfaction were transformed to a measure of satisfaction, so that all primary study parameters could be interpreted similarly. BD = body dissatisfaction measures; CUSE = condom use self-efficacy measures; MSM = men who have sex with men; ABCD-SF = Assessment of Body Change and Distress Questionnaire-Short Form; AE-MBSRQ = Appearance Evaluation subscale from the Multidimensional Body Self-Relations Questionnaire; BTWBAS = Ben-Tovin Walker Body Attitudes Scale; BISC = Body Image Self Consciousness Scale; BIQ = Body-Image Ideals Questionnaire; S-OBCS = Shame subscale from the Objectified Body Consciousness Scale; SIBID = Situational Inventory of Body Image Dysphoria; CUSES = Condom Use Self-Efficacy Scale; SSES = Sexual Self-Efficacy Scale; SES = Self-Efficacy Scale; N-MCAS = Negotiation subscale from the UCLA Multidimensional Condom Attitudes Scale; CSES = Contraceptive Self-Efficacy Scale; SRBBS = Sexual Risk Behavior Beliefs and Self-Efficacy Scales.

Method

Data Collection

Multiple strategies were utilized to locate potential studies for the meta-analysis. First, computer-based searches were conducted via Google Scholar, PsycINFO, and Medline, using the following keywords: *condom use*, *condom use self-efficacy*, *self-efficacy*, *sexual risk*, *sexual risk behaviors*, *body image*, *body image disturbance*, *body dissatisfaction*, *body esteem*, *body attitudes*, *weight concerns*, and *shape concerns*. Second, the references of selected articles were examined for additional studies that may have been germane to the current meta-analysis. Third, messages were sent to several listservs relevant to the current study (e.g., the International Academy of Sex Research, Association for Behavioral and Cognitive Therapies), soliciting unpublished or in print data (including theses and dissertations). Last, individual researchers were contacted who had previously published work in this area, soliciting unpublished or in print data.

Selection of Studies

Inclusion of primary studies was not restricted by country; however, articles were required to be written in English. Age, sex, sexual orientation, HIV status, race/ethnicity of participants, as well as year of publication were not restricted. Studies were restricted to those that included measures of body satisfaction or dissatisfaction, and measures of condom use self-efficacy. Across the studies, a variety of measures were used to assess body dissatisfaction and condom use self-efficacy (see Table 1).

For a study to be included in the meta-analysis, the authors needed to report a statistical parameter estimate between the variables of interest. In a number of studies, correlation coefficients (or other appropriate data for effect size conversion) were not published. In these cases, the primary author was contacted and the appropriate data were requested.