

# CONFIDENTIAL - FOR PEER-REVIEW ONLY

# meta-analysis sexual double standard (#12457)

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#### 1) Have any data been collected for this study already?

No, no data have been collected for this study yet.

## 2) What's the main question being asked or hypothesis being tested in this study?

In this meta-analysis we will examine how prevalent endorsement of traditional sexual double standards is in society and with which measures endorsement of traditional sexual double standards can be detected. We will test the following hypotheses based on evolutionary theory, biosocial theory, social cognitive theory, and previous research: (a) people would expect behaviors associated with high sexual activity more from men than from women, and behaviors associated with low sexual activity more from women than from men; (b) people would evaluate highly sexually active men more positively (or less negatively) than highly sexually active women, and low sexually active women more positively (or less negatively) than low sexually active men; and (c) endorsement of traditional sexual double standards would be less prevalent in studies using explicit measures, such as self-reports, than in studies using more implicit measures, such as IATs, or vignettes.

## 3) Describe the key dependent variable(s) specifying how they will be measured.

The social-cognition framework is used to conceptualize endorsement of sexual double standards as a multidimensional construct. According to this framework, sexual double standards can be viewed as social cognitions consisting of attitude components, i.e., one's evaluation of sexual behaviors of men versus women, and stereotype components, i.e., socially shared set of expectations about the sexual behaviors of men and women. In the sexual double standard literature, studies often use self-report questionnaires of stereotypes and attitudes regarding sexual double standards, or between- or within-subject experimental designs in which participants were asked to evaluate a vignette or scenario that describes the sexual behavior of a hypothetical male and/or female.

#### 4) How many and which conditions will participants be assigned to?

Not applicable for self-report questionnaire data. For experimental data on the sexual double standard it depends on the study. For within-subject designs participants are exposed to at least two conditions (e.g., evaluating the sexual behavior of BOTH men and women). For between-subjects designs participants are exposed to only 1 condition (e.g., evaluating the sexual behavior of a man OR a woman).

### 5) Specify exactly which analyses you will conduct to examine the main question/hypothesis.

Two separate meta-analyses will be conducted. One meta-analysis for studies that presented endorsement of sexual double standards as two scores representing the evaluation/expectation of the sexual behavior of men versus women and a second meta-analysis for studies that presented endorsement of sexual double standards as a single scale score.

- 1) For the first meta-analysis, the standardized mean difference (d) will be calculated for each study. Effect sizes indicating a difference in evaluation of the sexual behavior of men and women that is in line with our hypotheses (e.g., more positive or less negative evaluation of males compared to females for high sexual activity) will be given a positive sign, differences that are not in line with our hypotheses are given a negative sign (e.g., more positive or less negative evaluation of females compared to males for high sexual activity).
- 2) For the second meta-analysis, group means and standard deviations of each study will be rescaled to a scale from -1 to +1 (for scales that did not originally range from negative to positive rescaling will be done around the midpoint of the scale). Negative scores represent endorsement of reversed sexual double standards (e.g., expecting high sexual activity more for women than for men), scores around zero represent endorsement of egalitarian sexual standards (e.g., no difference in expectation or evaluation of the sexual activity of men and women), and positive scores represent endorsement of traditional sexual double standards (e.g., expecting high sexual activity more for men than for women). This meta-analysis will test whether the combined mean is different from zero in either the positive (traditional) or negative (reversed) direction.
- 3) In both meta-analyses we will explore moderating effects of sexual behavior type, gender of participant, age of participant, educational level and cultural background of participant, publication year, whether participants had to evaluate the behavior or character of hypothetical target persons in vignettes/scenarios, whether participants had to evaluate a target person on a positive, negative, or neutral dimension, gender of the first author, gender-composition of the authors, and publication outlet.

## 6) Describe exactly how outliers will be defined and handled, and your precise rule(s) for excluding observations.

Studies will be excluded when they employed a design that confounded participant gender and target gender (e.g., participants only evaluating the sexual behavior of same- or opposite-gender targets).

We will check for outlying effect sizes and sample sizes separately for the two meta-analyses. Z-values below 3.29 or greater than 3.29 are considered outliers. Analyses will be conducted with and without studies with outlying effect sizes. The outliers with regard to sample size will be winsorized (highest non-outlying number + difference between highest non-outlying number and before highest non-outlying number).



# 7) How many observations will be collected or what will determine sample size? No need to justify decision, but be precise about exactly how the number will be determined.

Systematic literature search will determine the number of studies included in the meta-analysis.

For the literature search the electronic databases of Scopus, ERIC, PsychInfo, Online Contents, and Picarta will be searched for empirical, peer-reviewed articles using the following search terms: ((premarital AND sex\* AND standard\*) OR (sex\* AND double AND standard\*) OR (sex\* AND permissive\* AND gender AND attitude\*)). These search terms are based on the search terms used in previous systematic narrative reviews on the SDS. We will check whether the search terms yield all articles included in previous narrative reviews on the sexual double standard.

# 8) Anything else you would like to pre-register? (e.g., secondary analyses, variables collected for exploratory purposes, unusual analyses planned?)

1) The following data will be extracted from the included studies: Sample characteristics include the participant's mean age at the time of the assessment (continuous and categorical), educational level of the sample, the continent where the study was conducted, the ethnicity of the sample, and the religion of the sample. Sample size is also coded, in order to assign weight to the effect sizes. Procedural moderators regarding the measurement of sexual double standard endorsement are the measurement type (questionnaire, vignettes/scenarios, other), questionnaire type (double standard scale; sexual double standard scale; premarital sexual permissiveness scale; other), cognition type (stereotype, attitude, other), sexual behavior type (e.g., sex in power/age hierarchy, casual premarital sex), evaluation type (behavior, character, other), and evaluation valence (positive, negative, mixed/neutral). Publication moderators are gender of the first author, gender composition of authors, publication outlet, year of publication (continuous and categorical), and design of study (cross-sectional, within-subjects design, between-subjects design).

2) Publication bias will be determined using Funnel plots