

The Madonna-Whore Dichotomy Is Associated With Patriarchy Endorsement: Evidence From Israel, the United States, and Germany

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Abstract

The madonna-whore dichotomy denotes polarized perceptions of women as either good and chaste or as bad and promiscuous. In the present research, we examined the correlates of madonna-whore dichotomy among samples of heterosexual Israeli, U.S., and German women and heterosexual U.S. and German men. Demonstrating cross-cultural generalizability, madonna-whore dichotomy endorsement correlated with endorsement of patriarchy-supporting ideologies across samples. U.S. (but not German) men's madonna-whore dichotomy endorsement negatively correlated with their sexual satisfaction in romantic relationships, which in turn predicted lower general relationship satisfaction. Among women, madonna-whore dichotomy endorsement did not correlate with sexual or general relationship satisfaction. These findings (a) support the feminist perspective on the madonna-whore dichotomy, which points to the role of the stereotype in policing women and limiting their sexual freedom; and (b) provide evidence that madonna-whore dichotomy endorsement can have personal costs for men. Increasing awareness to the motivations underlying the madonna-whore dichotomy endorsement and its costs can be beneficial at the social and personal levels for women and men, by providing knowledge that may help in developing focused interventions to change existing perceptions and scripts about sexuality, and perhaps foster more satisfying heterosexual relationships.

Keywords

madonna-whore dichotomy, gender attitudes, sexual satisfaction, relationship satisfaction, sexism, patriarchy-supporting ideologies

The madonna-whore dichotomy (MWD) denotes polarized perceptions of women as either “good,” chaste, and pure “madonnas” or as “bad,” promiscuous, and seductive “whores” (Tanzer, 1985; Tavis & Wade, 1984). Diverse representations and manifestations of this dichotomous perception of women were prevalent in ancient cultures (e.g., Hellenistic Greece; Pomeroy, 1975), and are still prevalent today (Faludi, 2009). Research on cultural representations of women's sexuality shows that this polarized perception of women is evident in contemporary Western literature (Delany, 2007; Gottschall, Allison, De Rosa, & Klockeman, 2006), art (Haxell, 2000), films (Paul, 2013), and television (Tropp, 2006). In the current investigation, we examined the MWD empirically, deriving our predictions from a feminist perspective on this topic.

Whereas other theoretical perspectives on the MWD focused on unresolved sexual complexes (Freud, 1905, 1912; Hartmann, 2009), evolutionary pressures (Buss & Schmitt, 1993), socio-economic factors (Baumeister & Vohs,

2004), or efforts to cope with existential threats (Landau et al., 2006), feminists have theorized that the MWD stems from a desire to reinforce patriarchy (Conrad, 2006; De Beauvoir, 1949; Forbes, 1996; Tanenbaum, 2000; Wolf, 1997; Young, 1993). A recent study among heterosexual Israeli men (Bareket, Kahalon, Shnabel, & Glick, 2018) found that MWD endorsement correlated positively with patriarchy-enhancing ideologies and negatively with relationship satisfaction—in line with the feminist view that sexist attitudes have negative consequences for heterosexual romantic relationships (e.g., Hammond & Overall, 2013).

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The purpose of the current research was to extend Bareket, Kahalon, and colleagues' (2018) findings in three ways. First, Bareket, Kahalon, and colleagues examined only heterosexual men; we included both heterosexual men and women, and tested whether the association between MWD endorsement and patriarchy-enhancing ideology is gender specific. Second, to test the cross-cultural generalizability of our conclusions, we gathered further evidence for MWD endorsement using samples from three Western countries—the United States, Germany, and Israel. Third, Bareket, Kahalon, and colleagues found that MWD endorsement negatively predicted men's satisfaction in romantic relationships; we tested whether this association would occur also among women, and whether it could be explained by diminished sexual satisfaction in those with high MWD beliefs.

MWD: Theoretical Perspectives and Empirical Findings

The MWD was originally coined by Freud (1905, 1912) as the *madonna-whore complex*. According to the psychoanalytic perspective, the complex arises when men experience the affection once felt for their mothers with women they now sexually desire. In order to manage these anxiety-provoking feelings, some men categorize women into two groups: women they admire and women they find sexually attractive. Because these men cannot view women's sexuality as both "tender" and "sensual" at the same time, their love is directed toward admired women, but they despise and devalue sexualized women to whom they are attracted. This complex was assumed to be disturbing for adult heterosexual men and to result in relationship dysfunctions (Josephs, 2006; Silverstein, 1998) and inability to maintain sexual arousal within a committed, loving relationship (Kaplan, 1988). According to Hartmann (2009), this complex is still prevalent today among some patients who suffer from sexual dysfunction.

A psychoanalytic perspective focuses on men's experiences and fails to identify how this polarized perception of women is related to gender inequality and how it affects women's self-perception and expression of their sexuality. In the present study, we took a feminist perspective on the MWD (e.g., Wolf, 1997; Young, 1993). Feminists assume that conventional societal attitudes regarding women's sexuality (D'Emilio & Freedman, 1988; Tiefer, 2004) create a binary model, which treats women as either virgins (madonnas) or whores based on their alleged or actual sexual behavior. Women are pressured to follow the chaste path or else risk being perceived as unsuitable for long-term relationships (Fassinger & Arseneau, 2008). This causes women to be concerned about getting a "bad" sexual reputation, which leads some of them to feel shame about their sexual desires, reducing their sexual agency (Tolman, 2002). This creates a double bind for women (especially young women), as they are expected to be desired, but not desiring or responsive (Gavey, 2005; Tolman, 2002).

One way in which the MWD, as an ideology, is manifested in heterosexual relationships is through common cultural sexual scripts (i.e., cultural norms and expectations about sexuality) which affect individuals' behaviors and attitudes (Seabrook et al., 2016; Simon & Gagnon, 1986). The sexual scripts for women and men are different and complementary (Tolman, 2006). For example, although the normative social script expects men to always think about sex and try to get sex, the normative script for women expects them to keep their sexuality and number of sexual encounters at check. These scripts portray men as active participants in their expression of sexuality and women as passive. Women are pressured to enact these scripts and be "good girls" (Epstein, Calzo, Smiler, & Ward, 2009; Tolman & Porche, 2000); women who do not endorse the scripts are judged against its violation (i.e., slut shaming; Hamilton & Armstrong, 2009).

D'Emilio and Freedman (1988) conceptualized the MWD as a continuum, anchored by the presence of partnered sexual activity on one end and the absence thereof at the other end. They argued that this continuum corresponds with a gradual acceptance of sexual behaviors, especially those occurring within conventional (i.e., monogamous), long-term heterosexual relationships. Bay-Cheng (2015a) endorsed MWD as a continuum, and suggested a two-dimensional model, which takes into account not only women's alleged or actual sexual behavior but also the degree of control they proclaim (i.e., sexual agency). Research shows a shift in the meaning of "whore," from being sexually active to being "sexually out of control" (Bay-Cheng, 2015a). Women with high sexual agency are in control over their sexuality and sexual interactions and are portrayed as ambitious, independent, self-serving, and unapologetic (e.g., Harris, 2004). These women can be either sexually active or abstinent. Women with low sexual agency are perceived as victims, whether they are sexually active (i.e., sexually exploited by others) or not (i.e., not sexually active because they are undesired or unattractive). Both the agency and the virgin-slut continua are used to judge, divide, and disparage women regardless of what they do or feel (Bay-Cheng, 2015b). Whether viewing the MWD from a binary, a continuum, or a two-dimensional model, these different feminist frameworks converge to suggest that the MWD serves primarily the function of controlling women as a group by penalizing individual women who display "unacceptable" sexual behavior (Infanger, Rudman, & Sczesny, 2014). To illustrate, women viewed as displaying unapologetic sexuality may be presumed to be "up for anything" and "asking for it" based on their physical presentation or prior sexual experience (Edwards, Turchik, Dardis, Reynolds, & Gidycz, 2011). This presumption is similar to the penalties women incur when behaving unapologetically and assertively in other domains (e.g., agentic women leaders; Rudman, Moss-Racusin, Phelan, & Nauts, 2012) and may reflect the wish to put "uppity" women "in their place."

To empirically test the feminist argument about social function of the MWD, Bareket, Kahalon, and colleagues

(2018) developed a self-report measure to assess the MWD. In a sample of Israeli men, a stronger endorsement of the MWD was found to be associated with a host of patriarchy-reinforcing ideologies (e.g., benevolent and hostile sexism; Glick & Fiske, 2001) and decreased satisfaction in their romantic relationships. These findings suggest that the MWD stereotype works as a double-edged sword: On the one hand, endorsement of MWD might be beneficial for men, as it serves to keep them in their privileged social position, but it also may lead men to feel dissatisfied in their romantic relationships. Research, however, has been limited to men's MWD endorsement and its correlates. We sought to assess whether MWD endorsement among women similarly correlates with their support for patriarchal arrangements and relationship dissatisfaction.

Endorsement of MWD Among Women

Although the MWD serves to reinforce patriarchal arrangements that put women at a disadvantage relative to men, we expected that both men and women would endorse the MWD. Jackman (1994) reported that women play an important part in reinforcing patriarchal arrangements. Hierarchy-enhancing ideologies have been found to be widely endorsed by members of disadvantaged groups, which in turn lead people to behave in self-debilitating ways that justify and reinforce the existing social hierarchy (Jost & Banaji, 1994; Sidanius & Pratto, 1999). Many women endorse sexist beliefs (e.g., Barreto & Ellemers, 2005; Glick et al., 2000; Kilianski & Rudman, 1998; Swim, Mallett, Russo-Devosa, & Stangor, 2005)—especially in their more subtle, seemingly benevolent forms (Glick & Fiske, 2001). For example, although feminist theorists argue that viewing and treating women as if their value is determined by their physical appearance degrades and perpetuates their lower social status relative to men (e.g., Jeffreys, 2005; Wolf, 1991), many women internalize this view (Bartky, 1990) in a process called self-objectification (Fredrickson & Roberts, 1997). Women's self-objectification, in turn, leads them to justify the existing gender system and to refrain from engaging in gender-based social activism (Calogero, 2013).

Social psychological research on stereotypes and perceptions of women's sexuality provide some evidence to suggest that women might endorse the MWD. Earlier research by Allport (1958) revealed that both men and women described the sexual behavior characterizing women either as virginal, sexually inexperienced, innocent, and directed to child-rearing or as manipulative, seductive, and very sexually experienced. Friedman, Weinberg, and Pines (1998) found that the more sexual a target woman was described, the less she was perceived as a "good mother" (i.e., indicating that sexuality and motherhood are viewed as mutually exclusive) by both men and women. Although men in Friedman and colleagues' (1998) study exhibited a greater motherhood-sexuality split than women, the overall pattern of results was similar for both

men and women participants. A more recent study showed that women with higher social dominance orientation scores expressed more hostile attitudes toward a woman depicted as promiscuous and more benevolent attitudes toward a woman described as chaste (Fowers & Fowers, 2010). This finding indicates that hostility toward women who do not comply with the traditional prescribed role of women as chaste reflects both women's and men's motivation to reinforce hierarchical gender arrangements (Sibley & Wilson, 2004).

That women's dominance motive predicts hostility toward sexually agentic women may seem odd in light of our argument that such hostility reduces women's social power. However, this finding (Fowers & Fowers, 2010) is consistent with theory that posits women who accept patriarchal arrangements believe they personally benefit from powerful men's protection and provision (Glick & Fiske, 2001). Moreover, the MWD puts chaste women on a pedestal, promoting an idealized view of them as pure and admirable. This seemingly positive view of women perpetuates gender inequality through "sweet persuasion" (Jackman, 1994), as women who believe that they fall into the category of "madonnas" may feel good about, and even empowered by, this idealization, even though it carries a component of external and internal policing. Previous social psychology research on sexism suggests that, whereas manifestations of blatant hostile sexism (overt misogyny) raise women's resistance, manifestations of benevolent sexism (chivalrousness) often make women behave in ways that perpetuate patriarchal arrangements (Becker & Wright, 2011).

Based on the above studies, we expected that men would endorse MWD to a higher extent compared to women. This is consistent with the notion that men have a greater interest to maintain their group dominance (Sidanius, Pratto, & Bobo, 1994) and that women are more familiar with shifts between the experiences of motherhood and women's sexuality (Friedman, Weinberg, & Pines, 1998). Nevertheless, we expected that MWD endorsement among women would correlate positively with ideologies that reinforce gender inequality—just as it does for men.

The MWD and Relationship Satisfaction Among Men and Women

Our feminist conceptualization of the MWD as a sexist ideology implies that the MWD may relate to women's relationship dissatisfaction as well as men's. Women endorsing the MWD might encounter difficulties in expressing sexual passion within romantic relationships, either because they condemn themselves for feeling such passion or because they are concerned about being negatively perceived by their partners. This possibility is consistent with research showing that the desire to live up to gender ideals negatively affects sexual and relationship satisfaction for both (heterosexual) men and women, in part due to reduced sexual autonomy (Sanchez, Crocker, & Boike, 2005). By contrast, having a feminist

partner predicts healthy romantic heterosexual relationships (greater stability, sexual satisfaction, etc.) for both men and women (Rudman & Phelan, 2007).

Because sexism in general is negatively linked to sexual satisfaction in heterosexual romantic relationships (Sanchez et al., 2005), and because the view of women's sexuality as morally debased might inhibit sexual expression in such relationships, we expected both women's and men's MWD endorsement to correlate negatively with sexual satisfaction in their romantic relationships. Furthermore, because sexual satisfaction is a key predictor of relationship satisfaction (Butzer & Campbell, 2008; Byers, 2005; Heiman et al., 2011; Sprecher, 2002; Sprecher & Cate, 2004), we expected that reduced sexual satisfaction would be associated, in turn, with lower relationship satisfaction. Moreover, we examined whether reduced sexual satisfaction mediates the link between MWD endorsement and relationship dissatisfaction; to our knowledge, this is the first empirical test of this relation.

Cross-Cultural Perspective on the MWD

We also tested the cross-cultural generalizability of the association between the MWD and patriarchy-supporting ideologies and reduced relationship satisfaction (previously tested in Israel; Bareket, Kahalon, et al., 2018) in two additional Western countries—namely, the United States and Germany. These two countries were of interest because they score differently on the Gender Inequality Index (GII). With a higher rank indicating more gender inequality, the United States was ranked as 43, Israel as 20, and Germany as 9 (United Nations Development Programme, 2015).

Country differences in gender equality may lead to different levels of MWD between the three countries; the less equal (more patriarchal) country should have higher MWD endorsement, we nevertheless expected similar correlational patterns in the three samples. This expectation was based on previous social psychological research, which pointed to cross-cultural similarities for the various constructs of interest in the current investigation (e.g., Glick et al., 2000; Heiman et al., 2011; Jost, Kivetz, Rubini, Guermandi, & Mosso, 2005; Laumann et al., 2006; Levin & Sidanius, 1999; Shnabel, Bar-Anan, Kende, Bareket, & Lazar, 2016).

The Current Research

We hypothesized that (1) U.S. and German men's madonna-whore dichotomy endorsement would correlate positively with ideologies that reinforce gender inequality, including social dominance orientation (SDO; i.e., the preference for hierarchical social structures), gender-specific system justification (i.e., the legitimizing of the existing gender system), benevolent sexism (i.e., a chivalrous view of women as pure and moral but weak and passive, needing and deserving men's protection and provision), and hostile sexism (i.e., the

view of women as manipulative competitors who seek to gain control over men), objectification of women (i.e., treating women's bodies as a commodity to serve men's needs and pleasure), and sexual double standards (i.e., having favorable views of sexual activity for men but not for women).

Second, we hypothesized that (2) the same patterns would emerge among women. That is, Israeli, U.S., and German women's MWD endorsement would correlate positively with social dominance orientation, gender-specific system justification, benevolent and hostile sexism, trait self-objectification, and sexual double standards.

We also hypothesized that (3) among both women and men, MWD would negatively correlate with satisfaction in their romantic relationships, and this link would be mediated by sexual satisfaction. And (4), among both U.S. and German participants, men would endorse the MWD to a higher extent compared to women.

We did not have any specific predictions for how participants' country of origin might affect the strength of associations between the MWD and the constructs of interest. Because scholars recommend (e.g., Schimmack, 2012; Simmons, Nelson, & Simonsohn, 2011) avoiding false-positive rates from comparisons that were not determined prior to data collection, we avoided such comparisons. The data files of all samples can be accessed through the Open Science Framework (<https://osf.io/rb435>).

Method

Participants

An a-priori power analysis conducted using the G*Power calculator (Faul, Erdfelder, Buchner, & Lang, 2009) revealed that to detect medium effect sizes ($p = .30$), the minimum sample size required for a 5% significance level (one sided) and power of 80% was 67. We aimed to exceed the minimal sample size in all samples who completed our online questionnaire. The Israeli sample was a convenience sample of 123 Israeli heterosexual women volunteers who were recruited via social media groups at a large Israeli university and off campus. Of the participants, 95 (77%) were born in Israel and 102 participants (83%) reported Hebrew as their native tongue.

The U.S. sample consisted of 242 U.S. heterosexual women ($n = 119$) and men ($n = 123$) who participated online via Amazon Mechanical Turk (MTurk; Behrend, Sharek, Meade, & Wiebe, 2011) and were compensated US\$1.75. Most of the participants ($n = 235$; 97%) were born in the United States and 237 participants (98%) reported English as their native tongue. The German sample included a convenience sample of 351 German heterosexual women ($n = 190$) and men ($n = 161$) volunteers who were recruited via social media on and off a university campus. Most of the participants ($n = 312$; 96%) were born in Germany and 308 participants (88%) reported German as their native tongue.

Table 1. Demographic Information of Israeli, U.S., and German Participants.

Variables	Israel	United States		Germany	
	Women (n = 123)	Women (n = 119)	Men (n = 123)	Women (n = 190)	Men (n = 161)
Age					
Range	18–70	19–70	18–72	18–65	17–70
M (SD)	27.47 (10.35)	35.73 (12.04)	32.03 (10.13)	25.46 (8.41)	29.24 (11.00)
<30	86%	39%	50%	88%	77%
30–39	3%	38%	32%	3%	9%
>40	11%	26%	18%	6%	18%
Relationship status					
Single	34%	15%	41%	36%	46%
In a relationship	46%	28%	27%	52%	39%
Married	19%	50%	28%	9%	13%
Divorced	1%	5%	3%	1%	1%
Other	—	2%	1%	1%	1%
Had a serious relationship in the past	69%	90%	73%	53%	59%
Student	62%	12%	15%	77%	56%

Note. Religion was assessed differently between the samples as a factor of the common measurement in each country. For Israelis, all participants were Jewish; 85 (69%) were identified as secular, 12 (10%) as atheist/other, 9 (7%) as religious, and 17 (14%) did not report level of religiosity. For U.S. participants, 117 participants (48%) were identified as secular, 102 (42%) as religious, and 23 (10%) as other; 109 (45%) identified with Christianity. Among the Germans, 153 participants (47%) were identified as atheists/other, 63 (19%) as Catholic, 105 (32%) as Evangelical Lutheran, and 5 (2%) as Muslim. M = mean; SD = standard deviation.

Descriptive statistics for the three samples are presented in Table 1.

Procedure and Measures

Participants were invited to take an online survey on “attitudes regarding various social issues.” After providing demographic information, participants completed the following measures, which were presented in a randomized order with the following exceptions: (1) To minimize missing values in MWD (our main variable) due to participants’ fatigue, the MWD scale always appeared at the beginning of the survey; and (2) for the Premarital Sexual Double Standards scale, items referring to men and women targets appeared separately (at the beginning and the end of the survey) to reduce social desirability bias.

The versions of the survey for men and women were identical, except for the objectification measures. We measured men’s sexual objectification of women using Curran’s (2004) scale. This scale is designed to measure objectification among heterosexual men because it taps into the prevalent heteronormative culture (Gill, 2008; Herz & Johansson, 2015; Johnson, 2011), such as imagining how women they meet on a daily basis would look like naked. Based on objectification theory (Fredrickson & Roberts, 1997), however, we reasoned that for heterosexual women, the extent to which they internalize and accept the objectification of women would manifest in high trait self-objectification—namely, adoption of an observer’s perspective on their own body and treating their body as if it is capable of representing their self. Thus, women completed the Self Objectification questionnaire (Noll & Fredrickson, 1998).

With the exception of the MWD questionnaire, which was originally developed in Hebrew (and was translated to English in previous work; Bareket, Kahalon, et al., 2018), the other scales were originally developed in English. German translations were available for Social Dominance Orientation scale, Benevolent and Hostile Sexism subscales, Gender-Specific System Justification scale, and the Golombok Rust Inventory of Sexual Satisfaction; all other measures (i.e., MWD, Self-Objectification questionnaire, Men’s Objectification of Women measure, Premarital Sexual Double Standards scale, and Couple Satisfaction Inventory) were translated into German by the fourth author and then retranslated back to English by a third person. Comparisons were made between the original and back-translated versions, and where discrepancies existed, the authors worked to resolve them. Questionnaires were available in Hebrew for all measures.

Madonna-whore dichotomy. Participants completed the 9-item MWD scale (Bareket, Kahalon, et al., 2018; see Table 4), which assesses the tendency to view women’s nurturance and sexuality as mutually exclusive (e.g., “A sexy woman is usually not a good mother”) and negative views toward promiscuous women (e.g., “Women who are interested in and very liberal about sex are often problematic in terms of their personality”). The items were rated on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Items were averaged; higher scores indicated stronger MWD beliefs. Past research among Israeli men (Bareket, Kahalon, et al., 2018) found support for a unidimensional factorial structure of the MWD scale via both exploratory and confirmatory factor analyses. Validity of scores on the MWD was previously supported by its positive correlations with ideologies that

reinforce patriarchal arrangements and reduced satisfaction in romantic relationships, even when controlling for ambivalent sexism; reported internal consistency in two samples of Israeli men was $\alpha = .80$ and $\alpha = .86$ (Bareket, Kahalon, et al., 2018). In the current research, the internal consistency reliability was acceptable for the Israeli sample ($\alpha_{\text{women}} = .75$), the U.S. sample ($\alpha_{\text{men}} = .90$, $\alpha_{\text{women}} = .85$), and the German sample ($\alpha_{\text{men}} = .86$, $\alpha_{\text{women}} = .83$).

Social dominance orientation. Participants in the U.S. sample completed a 6-item Social Dominance Orientation (SDO) scale (Pratto, Sidanius, Stallworth, & Malle, 1994), which assesses their desire for social dominance and hierarchal social structures (e.g., “In getting what you want, it is sometimes necessary to use force against other groups”). Participants in the Israeli sample completed the Hebrew version (Levin & Sidanius, 1999), and participants in the German sample completed a German version of the SDO (Ksenofontov, 2016). In all samples, the items were rated on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) and were averaged; higher scores indicated stronger SDO. Predictive and discriminant validity of the SDO was supported in 13 samples of U.S. college students (Pratto et al., 1994) by showing its ability to predict prejudice over and above other attitudinal measures (e.g., Right-Wing Authoritarianism scale; Altemeyer, 1981). Reported internal consistency was $\alpha = .92$ (using a 16-item version; Shook, Hopkins, & Koech, 2016) in a U.S. student sample and $\alpha = .66$ – $.83$ in Israeli student samples (using an 8-item version; Shnabel, Dovidio, & Levin, 2016). In the current study, internal consistency reliability of the SDO scale was acceptable among Israeli ($\alpha_{\text{women}} = .70$), U.S. ($\alpha_{\text{men}} = .79$, $\alpha_{\text{women}} = .80$), and German ($\alpha_{\text{men}} = .78$, $\alpha_{\text{women}} = .80$) participants.

Gender-specific system justification. Participants completed a 5-item Gender-Specific System Justification scale (Jost & Kay, 2005, translated to Hebrew by Hässler, Shnabel, Ullrich, Arditti-Vogel, & SimanTov-Nachlieli, 2018; translated to German by Becker & Wright, 2011), which assesses the perceived legitimacy of the existing gender arrangements (e.g., “The division of labor in families between men and women generally operates as it should”). The items were rated on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) and were averaged; higher scores indicated stronger gender-specific system justification. The Gender-Specific System Justification scale represents a gender-focused rewording of the System Justification scale. Support of its convergent validity with conceptually related measures has been shown in previous research (e.g., Belief in a Just World scale; Kay & Jost, 2003). Internal consistency reliability obtained in the present study was acceptable for both the Israeli sample ($\alpha_{\text{women}} = .78$), U.S. sample ($\alpha_{\text{men}} = .79$, $\alpha_{\text{women}} = .86$), and the German sample ($\alpha_{\text{men}} = .75$, $\alpha_{\text{women}} = .77$), and it was similar to recent studies using U.S. community and student samples (e.g., $\alpha = .85$ using an 8-item version; Calogero, 2013).

Benevolent and hostile sexism. Participants completed a shortened 10-item version of the Ambivalent Sexism Inventory (Glick & Fiske, 1996; translated to Hebrew by Shnabel, Bar-Anan, et al., 2016; translated to German by Eckes & Six-Materna, 1999), which is composed of two subscales—Benevolent Sexism (e.g., “In a disaster, women ought to be rescued before men”) and Hostile Sexism (e.g., “Feminists are seeking for women to have more power than men”). The items were rated on a 6-point scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*) and were averaged; higher scores indicated stronger sexism. In past work, the Ambivalent Sexism Inventory (ASI) has shown a consistent factor structure across cultures, with distinct but correlated hostile and benevolent sexism factors, and its predictive validity was supported by correlations with structural inequality indices across nations (Glick et al., 2000). Although the original ASI uses 22 items, support for predictive validity of shorter versions of the scale was similar to that obtained for the full scale (e.g., Rollero, Glick, & Tartaglia, 2014).

Previous research using shorter versions of the ASI reported good reliability (e.g., $\alpha = .80$ for a 6-item Benevolent Sexism scale and $\alpha = .85$ for a 6-item Hostile Sexism scale in an Italian community sample; Rollero et al., 2014; $\alpha = .85$ for a 7-item Benevolent Sexism scale and $\alpha = .81$ for 7-item Hostile Sexism scale in Israeli student samples; Shnabel, Bar-Anan, et al., 2016). In the present study, the internal consistency reliability was acceptable for the Benevolent Sexism scale in the Israeli sample ($\alpha_{\text{women}} = .80$), U.S. sample ($\alpha_{\text{men}} = .84$, $\alpha_{\text{women}} = .87$), and German sample ($\alpha_{\text{men}} = .77$, $\alpha_{\text{women}} = .81$) as well as for the Hostile Sexism scale in the Israeli sample ($\alpha_{\text{women}} = .77$), U.S. sample ($\alpha_{\text{men}} = .85$, $\alpha_{\text{women}} = .86$), and German sample ($\alpha_{\text{men}} = .78$, $\alpha_{\text{women}} = .80$).

Self-objectification. We used Noll and Fredrickson’s (1998) Self-Objectification questionnaire (SOQ; translated to Hebrew by Kahalon, Shnabel, & Becker, 2018), a commonly used measure in the objectification literature (Calogero, 2011), to assess women participants’ tendency to self-objectify. Participants were asked to rank the importance for their physical self-concept of 10 body attributes ranging from 1 (*has the least impact on my physical self*) to 10 (*has the greatest impact on my physical self*). Half of the items were related to observable physical attributes (e.g., weight), and half were related to non-observable physical attributes (e.g., strength). When calculating the SOQ score, the sum of the non-observable attributes is subtracted from the sum of observable attributes; higher scores indicate higher self-objectification. The score can range from -25 to 25 . As for construct validity, in a sample of U.S. women college students (Noll & Fredrickson, 1998), this measure was shown to be positively correlated with appearance anxiety ($r = .52$) and body-size dissatisfaction ($r = .46$), indicating that, as intended, these constructs are related yet not overlapping. A limitation of the SOQ is that its rank-order format yields

ipsative data for which measures of internal consistency cannot be calculated.

Men's objectification of women. Men participants answered the 13-item Men's Objectification of Women measure (e.g., "I enjoy pornography"; Curran, 2004; translated to Hebrew by Bareket, Shnabel, Abeles, Gervais, & Yuval-Greenberg, 2018). The items were rated on a 5-point scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Items were averaged; overall higher scores indicated a stronger tendency to sexually objectify women. Curran (2004) reported high internal consistencies in U.S. student samples using both longer ($\alpha = .92$ when using a 22-item) and shorter ($\alpha = .86$ when using a 12-item) versions of the scale and good 2-week test-retest reliability ($r = .88$). Bareket, Kahalon, and colleagues (2018) reported good reliability using a short, 13-item version of the scale ($\alpha = .82$), among Israeli men. The internal consistency reliability obtained in the present study was acceptable for both U.S. ($\alpha = .80$) and German ($\alpha = .78$) men. Construct validity was supported by showing positive correlations with objectifying gazing behavior (Bareket, Shnabel, et al., 2018).

Sexual double standards. Participants completed the Premarital Sexual Double Standards subscale (Sprecher & Hatfield, 1996; translated to Hebrew by Bareket, Kahalon, et al., 2018) of the Premarital Sexual Permissiveness scale (Sprecher, McKinney, Walsh, & Anderson, 1988). Because premarital sex is widely accepted nowadays for Western women (Bordini & Sperb, 2013), we assessed the acceptability of sexual intercourse only at two early dating stages for which double standards still exist in Western society (Crawford & Popp, 2003; Sprecher & Hatfield, 1996). Using a 6-point scale ranging from 1 (*utterly unacceptable*) to 6 (*utterly acceptable*), participants indicated their agreement with the following 4 items: "I believe that sexual intercourse is acceptable for a [woman/man] on a first date" and "I believe that sexual intercourse is acceptable for a [woman/man] when casually dating someone (for less than 1 month)." Participants' Premarital Sexual Double Standards score was calculated as the averaged agreement with the two men-target items minus averaged agreement with the women-target items; higher scores indicated finding casual sex to be more acceptable for men than for women.

A prior U.S. study using the same items to measure general premarital sexual permissiveness, reported high internal consistency reliability ($r = .85$ for the 2-item version; Sprecher, 2011, 2013). Construct validity of these items was supported by correlations with another established sexual permissiveness scale (Sprecher, 2011). For sample of Israeli women, the women-target items correlated strongly ($r = .62$, $p < .001$), as did the men-target items ($r = .72$, $p < .001$). For U.S. participants, the men-target items correlated strongly in the samples of men ($r = .76$, $p < .001$) and women ($r = .81$, $p < .001$), as did the respective women-target items ($r = .79$, $p < .001$; $r = .84$, $p < .001$). Similarly, for German participants, the men-target items correlated strongly in the samples

of men ($r = .85$, $p < .001$) and women ($r = .87$, $p < .001$), as did the respective women-target items ($r = .79$, $p < .001$; $r = .85$, $p < .001$).

Relationship satisfaction. Participants filled out a 14-item version of the Couple Satisfaction Inventory (Funk & Rogge, 2007; translated to Hebrew by Bareket, Kahalon, et al., 2018). The items were rated on a 6-point scale ranging from 0 (*never*) to 5 (*all the time*). Participants currently in a serious relationship (i.e., indicated that they were currently in a relationship or married; see Table 1) were asked about their present relationships (e.g., "Do you enjoy your partner's company?"). Participants who reported no current relationship but a serious relationship in the past (including divorced) were asked about their past relationships (e.g., "Did you enjoy your partner's company?"). Participants who never had a serious relationship were not asked about relationship satisfaction. Items were averaged; higher scores indicated stronger relationship satisfaction. Previous research demonstrated high internal consistency reliability ($\alpha = .89$ in a U.S. community sample; Cacioppo, Cacioppo, Gonzaga, Ogburn, & Vander Weele, 2013; $\alpha = .94$ in an Israeli sample; Bareket, Kahalon, et al., 2018), as did the present study among Israeli ($\alpha_{\text{women}} = .95$), U.S. ($\alpha_{\text{men}} = .94$, $\alpha_{\text{women}} = .97$), and German ($\alpha_{\text{men}} = .91$, $\alpha_{\text{women}} = .94$) participants. Previous research demonstrated strong convergent validity of the Couple Satisfaction Inventory with other measures of satisfaction (Funk & Rogge, 2007).

Sexual satisfaction in relationships. For the U.S. and German samples, participants filled out an 11-item English version of the Golombok Rust Inventory of Sexual Satisfaction (GRISS; Rust & Golombok, 1986). The German version of the GRISS was requested from the original GRISS web page (<https://www.psychometrics.cam.ac.uk/services/psychometric-tests/GRISS>). The measure was built to assess the extent to which a person is satisfied with their sexual partner. The exact wording of items depended on participants' relationship status. Participants currently in a serious relationship were asked about their present relationships (e.g., "Do you find your sexual relationship with your partner satisfactory?"). Participants who reported a serious relationship in the past were asked about their past relationships (e.g., "Did you find your sexual relationship with your partner satisfactory?"). Participants who never had a serious relationship were not asked about sexual satisfaction. Items were rated on a 5-point scale ranging from 1 (*never*) to 5 (*always*) and were averaged to form a single measure so that higher scores indicated stronger sexual satisfaction in relationships. A review study by Rizvi, Yeung, and Kennedy (2011) reported low to acceptable internal reliabilities for the subscales in community and psychiatric populations ($\alpha = .61-.83$). In addition, evidence of the scale's inter-rater reliability comes from studies which examined change scores before and after therapy in 30 couples and found moderate correlations with therapists' blind ratings ($r = .54$ for men and $r = .43$ for women). In the present

research, the internal consistency was good for U.S. participants ($\alpha_{\text{men}} = .80$, $\alpha_{\text{women}} = .90$) and Germans ($\alpha_{\text{men}} = .80$, $\alpha_{\text{women}} = .84$).

For the Israeli women sample, we used the Israeli Sexual Behavior Inventory (Kravetz, Drory, & Shaked, 1999), which was developed in Hebrew and is widely used in Israel. Participants filled out the 5-point scale, ranging from 1 (*not at all*) to 5 (*very much*). The exact wording of items depended on participants' relationship status (e.g., "In general, how satisfied are you from your sex life within your current relationship?" for participants currently in a serious relationship vs. "In general, how satisfied were you from your sex life within your previous relationship?" for participants who reported a serious relationship in the past). Participants who never had a serious relationship were not asked about sexual satisfaction. Items were averaged to form a single measure so that higher scores indicated stronger sexual satisfaction in relationships. The internal consistency reliability of this scale was acceptable ($\alpha = .76$).

Results

Preliminary Analyses

Descriptive statistics for the three samples are presented in Table 2. For the U.S. sample, there were no missing data in the data set. We conducted analyses of the patterns of missing data separately for the German and Israeli samples because the sexual satisfaction measure differed between these samples. We analyzed the missing data at the level of variables and not items because a score was not given to participants if they did not fill out the entire scale. For the German sample, the analysis revealed that less than 3.93% of all variables for all cases were missing and 96.07% of the variables were not missing data for any case. Considering individual cases, 93.16% of participants had no missing data. Finally, no variables had 6.80% or more of missing values. For the Israeli sample, the analysis revealed that less than 7.80% of all variables for all cases were missing, and 92.20% of the variables were not missing data for any case. Considering individual cases, 85.48% of participants had no missing data. Finally, no variables had 14.50% or more of missing values. We used pairwise inclusion to deal with missing data in subsequent analyses (see Parent, 2013).

Testing the Cultural Invariance of the MWD Scale

Prior to hypotheses testing, we conducted a test of measurement invariance of the MWD scale across all the Israeli, U.S., and German samples, using multiple-group confirmatory factor analysis (CFA). A test of measurement invariance would support our assumption that the MWD measure has the same factorial structure (unidimensional; Bareket, Kahalon, et al., 2018) in the Israeli, U.S., and German samples.

We conducted a series of CFAs with the generalized least square method via AMOS Version 4.0. We used four

goodness of fit indices to evaluate the fit of the models: In addition to the chi-square (χ^2) statistic, which can be inflated due to large sample sizes (Cheung & Rensvold, 2002), we used the χ^2 to degrees-of-freedom ratio (χ^2/df ; recommended to be less than 3; Kline, 2011), the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI; both CFI and TLI are recommended to be close to .95), and the Root-Mean-Square Error of Approximation (RMSEA) Index (recommended to be $\leq .06$; Hu & Bentler, 1999).

Byrne (2001) suggested assessing model fit separately for each group as a first step before proceeding to a test of multi-group invariance. Thus, we first examined the fit of a unidimensional model (i.e., a one-factor model in which all items assigned to a single MWD factor) for the Israeli, U.S., and German samples separately. Examination of the fit indices of the model for U.S. and German participants suggested an excellent fit for both samples (see Table 3). Specifically, although the χ^2 value for both models was significant, the other fit indices (which are more robust with large sample sizes) indicated that the unidimensional model fits the data well. All factor loadings, presented in Table 4, were significant at $p < .001$. For the Israeli sample, however, the χ^2 to degrees-of-freedom ratio and CFI indicated an acceptable fit, yet TLI and RMSEA were below the recommended values. All factor loadings for the Israeli sample were significant at $p < .01$ (see Table 4). Table 4 also presents the means, standard deviations, and item-total correlations for all MWD items for the three countries.

Next, we performed a multiple-group model analysis in which the coefficients were constrained to be equal across the three countries. In the first model, all the paths were allowed to be free across U.S., German, and Israeli samples. In the second model, the measurement paths were constrained to be equal across the samples. Then, we compared the unconstrained and constrained models by the χ^2 difference test, which was non-significant ($\Delta\chi^2 = 22.21$, $\Delta df = 16$, $p = .136$), suggesting that imposing equality constraints across the three countries did not result in a significant reduction of overall model fit. Thus, we have no evidence that the model does not apply across the three countries. To make a more stringent test of invariance across groups, we also evaluated the decrement in CFI and RMSEA across the two models. A difference in CFI less than or equal to .010, and a difference in RMSEA less than or equal to .015, should be concluded to be invariant (Chen, 2007; Cheung & Rensvold, 2002). Further supporting measurement invariance across countries, the difference between the two models in CFI was .003 and in RMSEA was .003, $\Delta 90\% \text{ CI} = [.002, .004]$.

MWD and Hierarchy-Supporting Ideologies

As can be seen in Table 5, for Israeli women, MWD endorsement was significantly and positively correlated with social dominance orientation, gender-specific system justification, and benevolent and hostile sexism. The correlation between

Table 2. Descriptive Statistics for Israeli, U.S., and German Participants.

Variables	Israel			United States			Germany							
	Women (n = 123)			Women (n = 119)			Men (n = 123)			Men (n = 161)				
	Range	M (SD)		Range	M (SD)		Range	M (SD)		Range	M (SD)			
Madonna-whore dichotomy	1.00–3.33	1.43 (0.51)		1.00–4.78	1.89 (0.87)		1.00–6.11	2.57 (1.16)		1.00–4.56	1.64 (0.72)		1.00–5.56	2.01 (0.97)
Social dominance orientation	1.00–5.00	2.46 (0.97)		1.00–4.83	2.32 (1.07)		1.00–5.83	2.89 (1.13)		1.00–5	2.27 (0.97)		1.00–6	2.50 (1.04)
Gender-specific system justification	1.00–5.60	2.25 (0.97)		1.00–7	3.84 (1.48)		1.00–7	4.39 (1.16)		1.20–6.60	3.88 (1.09)		1.00–6.60	3.91 (1.20)
Benevolent sexism	1.00–5.33	2.17 (0.91)		1.00–5.83	2.64 (1.31)		1.00–5.83	3.32 (1.14)		1.00–5.33	3.01 (1.05)		1.00–5.50	3.62 (1.00)
Hostile sexism	1.00–5.75	2.41 (1.07)		1.00–5.75	2.61 (1.23)		1.00–5.75	3.12 (1.24)		1.00–5.50	2.78 (1.10)		1.00–6	3.07 (1.09)
Self-objectification	–25–25	–4.86 (11.67)		–25–25	–0.24 (13.47)		—	—		–25–25	–2.09 (12.90)		—	—
Objectification of women	—	—		—	—		1.00–4.46	2.83 (0.60)		—	—		1.08–4.15	2.76 (0.56)
Sexual double standards	–3.00–2.00	–0.10 (0.77)		–3–3.5	0.13 (0.76)		–2.5–5	0.16 (0.87)		–1.50–5	0.26 (0.88)		–1.5–4	0.45 (1.00)
Relationship satisfaction	2.43–6.00	4.92 (0.88)		1.43–6	4.42 (1.24)		1.93–6	4.62 (0.94)		2.29–6	4.79 (0.86)		2.29–5.93	4.72 (0.81)
Sexual satisfaction	1.60–5.00	3.96 (0.69)		1.55–4.91	3.51 (0.80)		2.55–4.82	3.74 (0.58)		2.18–4.91	3.91 (0.58)		2–5	3.90 (0.56)

Note. M = mean; SD = standard deviation.

Table 3. Goodness of Fit Indices for the Tested Confirmatory Factor Analysis Models.

	χ^2	df	χ^2/df	CFI	TLI	RMSEA (90% CIs)
Model for Israeli women participants	38.25**	18	2.13	.90	.80	.10 [.05, .14]
Model for U.S. women and men participants	33.14*	18	1.84	.99	.97	.06 [.03, .09]
Model for German women and men participants	37.01**	18	2.06	.98	.96	.06 [.03, .08]
Unconstrained multi-group model	108.51**	54	2.01	.98	.95	.04 [.03, .05]
Constrained multi-group model	130.72**	70	1.87	.97	.96	.04 [.03, .04]

Note. $N = 716$. CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root-Mean-Square Error of Approximation; CI = confidence interval. * $p < .05$. ** $p < .01$.

Table 4. Descriptive Statistics, Correlations, and Factor Loadings of Confirmatory Factor Analysis (CFA) for the Madonna-Whore Dichotomy Items for the Israeli, U.S., and German Samples.

Item	Israel			United States			Germany		
	M (SD)	Item-Total Correlations	Factor Loading	M (SD)	Item-Total Correlations	Factor Loading	M (SD)	Item-Total Correlations	Factor Loading
When a man truly loves a woman, his sexual passion toward her fades away.	1.33 (0.75)	.32	.41	1.90 (1.29)	.60	.61	1.83 (1.31)	.37	.40
A sexy woman is usually not a good mother.	1.11 (0.44)	.25	.36	1.65 (1.14)	.64	.64	1.43 (0.96)	.52	.51
A woman with whom you can establish a long-term relationship (like marriage) usually does not have much sexual experience.	1.21 (0.81)	.46	.55	2.17 (1.52)	.72	.74	1.64 (1.14)	.65	.65
A sexually modest woman is usually a woman with good values.	1.67 (1.01)	.45	.54	3.48 (1.81)	.46	.53	2.04 (1.42)	.57	.59
Women are typically either very liberal or very conservative sexually, but not in the middle.	1.41 (0.88)	.33	.37	2.21 (1.52)	.62	.62	1.71 (1.21)	.53	.59
A woman suitable for a short-term relationship is typically not suitable for a long-term relationship and vice versa.	1.72 (1.11)	.39	.48	2.27 (1.57)	.72	.78	2.44 (1.67)	.55	.65
Women who are interested in and very liberal about sex are often problematic in terms of their personality.	1.48 (0.86)	.61	.65	2.45 (1.57)	.73	.85	1.86 (1.36)	.66	.79
A woman who has been sexually free in the past would never be faithful in marriage.	1.45 (0.86)	.56	.62	1.88 (1.24)	.73	.81	1.64 (1.15)	.63	.73
Women who indulge their sexual desires are generally manipulative and out for themselves.	1.52 (0.97)	.55	.67	2.10 (1.47)	.76	.82	1.68 (1.17)	.72	.80

Note. $n_{\text{United States}} = 242$, $n_{\text{Germany}} = 351$, and $n_{\text{Israeli}} = 123$. Standardized factor loadings of CFA are reported. German and Hebrew versions are available through the Open Science Framework: <https://osf.io/rb435>. M = mean; SD = standard deviation.

MWD and trait self-objectification was in the expected direction but not significant ($p = .071$), and the correlation with sexual double standards was also not significant ($p = .183$).

As can be seen in Table 6, the results obtained for the U.S. sample partially supported our hypotheses; for both men and women, MWD endorsement was significantly, positively

Table 5. Correlations for Israeli Women.

Variables	1.	2.	3.	4.	5.	6.	7.	8.	9.
1. Madonna-whore dichotomy	—								
2. Social dominance orientation	.19*	—							
3. Gender-specific system justification	.41**	.22*	—						
4. Benevolent sexism	.46*	.18	.33**	—					
5. Hostile sexism	.20*	.43**	.16	.56**	—				
6. Self-objectification	.17	.11	.15	.08	.04	—			
7. Sexual double standards	-.13	-.22*	-.01	-.18	-.07	-.25**	—		
8. Relationship satisfaction	.08	.10	.05	.08	.15	.04	.17	—	
9. Sexual satisfaction	-.04	.27**	.11	.03	.15	-.01	.17	.50**	—

Note. $n = 123$. Missing cases were excluded pairwise.

* $p < .05$. ** $p < .01$.

Table 6. Correlations for U.S. Women and Men.

Variables	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Madonna-whore dichotomy	—	.36**	.24**	.50**	.44**	-.02	—	.20*	.02	-.01
2. Social dominance orientation	.45**	—	.31**	.34**	.53**	.02	—	.01	.05	.02
3. Gender-specific system justification	.31**	.46**	—	.44**	.57**	.04	—	.18*	.06	.19*
4. Benevolent sexism	.39**	.30**	.374*	—	.56**	.13	—	.23*	-.06	.01
5. Hostile sexism	.66**	.51**	.39**	.30**	—	-.06	—	.17	.01	.04
6. Self-objectification (W)	—	—	—	—	—	—	—	.02	-.07	-.16
7. Objectification of women (M)	.50**	.32**	-.23*	.21*	.41**	—	—	—	—	—
8. Sexual double standards	.07	.16	.19*	.14	.15	—	.20*	—	-.21*	-.11
9. Relationship satisfaction	-.20*	-.14	.07	.14	-.17	—	-.08	-.03	—	.75**
10. Sexual satisfaction	-.41**	-.13	.03	-.04	-.29**	—	-.20**	.10	.56**	—

Note. $n_{\text{women}} = 119$ and $n_{\text{men}} = 123$. Correlations for the women sample are presented above the diagonal and for the men sample below the diagonal. There were no missing cases. W = women; M = men.

* $p < .05$. ** $p < .01$.

correlated with social dominance orientation, gender-specific system justification, and benevolent and hostile sexism. For U.S. men, MWD was also significantly positively correlated with sexual objectification of women, whereas for U.S. women, MWD was also significantly positively correlated with sexual double standards. The correlation between MWD and sexual double standards for U.S. men and the correlation between MWD and trait self-objectification for U.S. women failed to reach significance. In addition, in line with our hypothesis, men's MWD endorsement was significantly higher than women's, $t(226) = 5.23$, $p < .001$, Cohen's $d = .66$ (means are presented in Table 2).

As can be seen in Table 7, the results obtained for German participants partially supported our hypotheses; for both men and women, MWD endorsement was significantly, positively correlated with social dominance orientation, gender-specific system justification, benevolent and hostile sexism, and sexual double standards. For German men, MWD endorsement was significantly positively correlated with sexual objectification of women, but for German women, the correlation between MWD endorsement and trait self-objectification was not significant, $p = .084$. Finally, as expected, German men's MWD endorsement was significantly higher than women's, $t(291) = 4.02$, $p < .001$, Cohen's $d = .44$.¹

Gender differences were also obtained on other measures, except the MWD; U.S. men had significantly higher scores on all the measures compared to women ($ts > 2.47$, $ps < .014$), besides sexual double standards and relationship satisfaction ($ts < 0.13$, $ps > .182$). German men had significantly higher scores compared to women on all the measures ($ts > 2.10$, $ps < .036$), aside from gender-specific system justification, sexual double standards, relationship satisfaction, and sexual satisfaction ($ts > 1.74$, $ps > .083$). Means and standard deviations are displayed in Table 2.

MWD and Sexual and Relationship Satisfaction

As seen in Table 6, in line with predictions, the associations between the MWD and U.S. men's sexual satisfaction, as well as overall relationship satisfaction in their romantic relationships, were significant and negative. Unexpectedly, as also seen in Tables 5–7, no correlations were found between the MWD, on the one hand, and sexual satisfaction and relationship satisfaction, on the other hand, for Israeli and U.S. women and for German men and women. These results precluded the possibility of mediation in these four samples (see Yzerbyt, Muller, Batailler, & Judd, 2018). Therefore, we decided to test the mediation hypothesis only in the sample

Table 7. Correlations for German Men and Women Participants.

Variables	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Madonna-whore dichotomy	—	.20**	.17*	.50**	.39**	.13 ^a	—	.15 *	.04	-.08
2. Social dominance orientation	.38**	—	.26**	.30**	.40**	.18*	—	.11	-.06	-.06
3. Gender-specific system justification	.31**	.29**	—	.26**	.30**	.12	—	-.05	.17*	.14
4. Benevolent sexism	.26**	.05	.26**	—	.66**	.05	—	-.02	.07	.02
5. Hostile sexism	.58**	.38**	.53**	.36**	—	-.01	—	.07	-.06	-.15
6. Self-objectification (W)	—	—	—	—	—	—	—	-.05	-.07	-.10
7. Objectification of women (M)	.25**	.07	.18*	-.01	.26**	—	—	—	—	—
8. Sexual double standards	.07	.07	.08	.18*	.17*	—	.07	—	-.07	-.12
9. Relationship satisfaction	-.01	-.12	.02	.18*	-.01	—	-.14	-.01	—	.52**
10. Sexual satisfaction	-.06	-.01	.14	.06	-.08	—	-.04	.11	.53**	—

Note. $n_{\text{women}} = 190$ and $n_{\text{men}} = 161$. Correlations for the women sample are presented above the diagonal and for the men sample below the diagonal. Missing cases were excluded pairwise. W = women; M = men.

^aMarginal significance ($p = .08$).

* $p < .05$. ** $p < .01$.

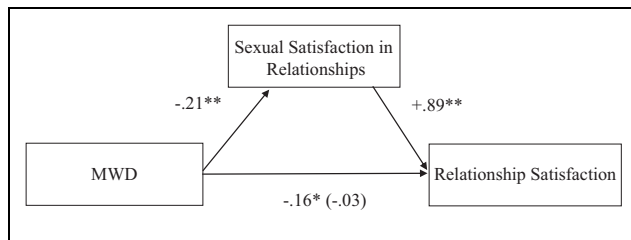


Figure 1. The proposed model of an indirect effect for U.S. men. $N = 109$ (only participants who completed the three measures were included in the analysis). Mediation model with the madonna-whore dichotomy (MWD) as the independent variable, sexual satisfaction in relationships as the mediator, and relationship satisfaction as the dependent variable. Standardized regression coefficients (β s) are presented. For the path between MWD and relationship satisfaction, the coefficients shown outside versus inside the parentheses represent the total and direct effects, respectively. * $p < .05$. ** $p < .01$.

of U.S. men for whom the basic conditions for mediation were met.

The mediated relation illustrated in Figure 1 was tested using Hayes’s (2013) PROCESS macro (version 3.1.9.2). A bootstrapping analysis (sample size = 1,000) revealed that the MWD’s indirect effect on relationship satisfaction through sexual satisfaction was significant (zero was not included in the 95% confidence interval $[-.27, -.02]$). Thus, in line with our hypothesis, U.S. men high on the MWD feel less sexually satisfied in their romantic relationships, which is in turn associated with less general satisfaction from these relationships.

MWD Correlations Controlling for Country

To examine whether the correlations remain significant across the three countries, we computed partial correlations separately for men (U.S. and German) and women (Israeli, U.S., and German) while controlling for country. As for

women, the associations of MWD with SDO, gender-specific system justification, and benevolent and hostile sexism were significant (partial r s $> .23$, p s $< .001$). The associations of MWD with trait self-objectification, sexual double standards, sexual satisfaction, and relationship satisfaction were non-significant (r s $< |.08|$, p s $> .122$). Among men, the associations of MWD with SDO, gender-specific system justification, benevolent and hostile sexism, objectification of women, and sexual satisfaction were significant (partial r s $< |.25|$, p s $> .001$); and the associations with sexual double standards and relationship satisfaction were non-significant (r s $< |.10|$, p s $> .134$).

Discussion

The present research provides evidence that the madonna-whore dichotomy (MWD), a polarized view of women as either chaste and pure or promiscuous and morally degraded, functions as an ideology designed to reinforce patriarchy. By showing that MWD correlates positively with a variety of sexist and derogatory ideologies among both women and men in three Western countries, the present research provides support for the feminist account of the MWD (e.g., Conrad, 2006; De Beauvoir, 1949). Specifically, the positive correlations found between Israeli, U.S., and German women’s MWD and endorsement of social dominance orientation, gender-specific system justification, benevolent sexism, and hostile sexism are consistent with the findings that members of subordinated groups (in this case, women) play an active role in perpetuating the status quo that disadvantages them (Jost & Banaji, 1994). Second, among men too, MWD correlated with ideologies that reinforce gender inequality; that is, social dominance orientation, gender-specific system justification, benevolent sexism, hostile sexism, and the sexual objectification of women, replicating previous findings in a sample of Israelis (Bareket, Kahalon, et al., 2018) in two other Western samples, namely, U.S. and Germany. Third, that men endorsed the MWD to a greater extent than women

is consistent with previous research showing that, in general, although members of subordinate groups endorse ideologies that keep them down, they still do it to a lesser extent than members of dominant groups (Sidanius & Pratto, 1999). Finally, we demonstrated that the MWD accounts for variance in the endorsement of a host of ideologies that reinforce patriarchal arrangements for both men and women as well as reduced sexual and relationship satisfaction (among U.S. men) that is not accounted for by country of origin.

The negative relation that we found between U.S. men's MWD endorsement and their satisfaction in romantic relationships supports the feminist notion that patriarchal arrangements have negative implications for both women and men (e.g., Dworkin, 1981). These results add to previous findings, extending them beyond Israel to the United States and suggesting that the association between men's MWD and their relationship satisfaction is explained by diminished sexual satisfaction.

Although the social ideology reflected in the MWD reinforces men's privileged social position (e.g., by constraining women's sexuality), the present findings strongly suggest that it might also impair men's ability to be fully satisfied in their romantic relationships; MWD endorsement might negatively be related to the way men see their own partner. It would be a valuable contribution to test these ideas in the future.

Inconsistent with our hypothesis, the correlations between MWD and trait self-objectification among women were not significant. In hindsight, although both MWD and trait self-objectification reinforce patriarchal arrangements, they might be incompatible with one another. Specifically, contrary to the MWD which attributes negative valence to sexual women, trait self-objectification has been related to the perception that being sexy is important and even enjoyable (Liss, Erchull, & Ramsey, 2011). Thus, women high on trait self-objectification may not associate sexual women with negative traits and may not see a contradiction between being sexy and being good wives/mothers (as both may be viewed as manifestations of being a "good" woman, who conforms to social expectations).

Our results also suggest that women's relationship and sexual satisfaction are not related to MWD. Although surprising, this result might stem from different reference groups when thinking about women as a target group (i.e., "women are...") compared to thinking about oneself (i.e., "I am..."). Previous research found that viewing the self as "collective" versus viewing the self as "private" involves different affective and cognitive categorization processes (Greenwald & Breckler, 1985; Triandis, 1989). It might be that women's personal experiences allowed both components, the sexual component and the nurturing, motherly component, to coexist.

Some differences that we found across samples are also worth mentioning. First, the correlation between MWD and sexual double standards was significant for U.S. and German women, but not for Israeli women and U.S. and German men.

The sexual double standards measure used in the present study assessed only a singular social script, acceptance of premarital sex during early dating stages. However, researchers have noted that perceptions of sexually active women and men are more equitable nowadays (Marks & Fraley, 2005). Researchers might examine additional contexts in which the relation between MWD and double standards might emerge (e.g., having many sexual partners; Sakaluk, Todd, Milhausen, Lachowsky, & Undergraduate Research Group in Sexuality, 2014).

Second, the results across U.S. and German samples suggest the possibility that the strength of the association between men's MWD and their relationship satisfaction may vary cross-culturally. German men did not show the same patterns of relations for relationship and sexual satisfaction than was found for U.S. men. This difference might stem from more tolerant attitudes toward sexuality in Germany compared to the United States (Widmer, Treas, & Newcomb, 1998) and Israel, where results similar to our U.S. men sample were obtained (Bereket, Kahalon, et al., 2018).

Limitations and Future Directions

An important limitation of the present investigation is that its correlational nature limits causal inference. Although we theorized that MWD beliefs stem from people's broader motives to maintain patriarchal arrangements (e.g., SDO, gender-specific system justification), future research using longitudinal or experimental designs is necessary in order to fully test this prediction. Specifically, the motivation to reinforce the gender hierarchy could be measured in advance or manipulated experimentally (by threatening the existing gender arrangements) to test whether it would lead to increased MWD endorsement.

Future research is also needed to test the causal effects of MWD endorsement on sexual and relationship dissatisfaction among men using a longitudinal design. Rather than reducing sexual and relationship satisfaction in men, MWD endorsement may develop over time in men who experience dissatisfying sexual relations with women to whom they feel committed. Also, based on previous research showing that unsatisfying marital sex influences divorce (Dzara, 2010), it would be interesting to examine whether MWD will positively predict higher rates of relationship dissolution and/or divorce.

Researchers might also test whether men's low sexual and relationship satisfaction, as a result of their MWD ideology, might in turn affect their partner's satisfaction. Even though no correlations were found between women's relationship satisfaction and their levels of MWD endorsement, men's high levels of MWD might predict their partner's relationship satisfaction. Within intimate heterosexual relationships, the more individuals objectify their partners, the less positively the partners rate the quality of their relationship (Strelan & Pagoudis, 2018). Future research taking a dyadic approach

(e.g., Gonzalez & Griffin, 2012) could examine whether men's MWD would negatively predict women's relationship and sexual satisfaction in romantic heterosexual couples.

Another direction would be to identify the conditions under which the endorsement of the MWD intensifies or weakens. For examples, individuals who hold more traditional attitudes toward gender equality, such as religious (Bettencourt, Vacha-Haase, & Byrne, 2011; Seguino, 2011) or less educated individuals (Inglehart & Norris, 2003; Winter, 2002), may endorse strong prohibitions against women's sexual expression (e.g., placement of restrictions on women's sexual behavior during courtship; Sakalh-Uğurlu & Glick, 2003; Viki, Abrams, & Hutchison, 2003), and men who self-identify as feminists may endorse more liberal attitudes toward women's sexuality, aligned with their egalitarian values (e.g., Boulton, 2008). Thus, because one's endorsement of feminist ideologies may be negatively related to their MWD endorsement, it is worth examining this relation in future research.

In addition, the strength of MWD endorsement may vary between heterosexual individuals and other populations. Our self-report measure of MWD was tailored to measure this construct in heterosexual samples; it taps into the prevalent heteronormative culture (e.g., the institution of heterosexual marriage; Herz & Johansson, 2015; Martin, 2009). This measure might be less suitable to assess polarized perceptions of women among other groups such as gay or bisexual women and men. Researchers should examine whether the MWD (assessed using a measure that suits other groups of participants besides heterosexuals) and its relations to patriarchal-enforcing ideologies are less pronounced among non-heterosexual individuals (but cf. e.g., J. Ward, 2000, for queer sexism).

Moreover, the average MWD scores in all samples were rather low. This might stem from the fact that MWD was assessed using a self-reported measure and may be subject to social desirability effects, which might result in underreporting of prejudice and negative social attitudes (Crandall, Eshleman, & O'Brien, 2002). Future research might study the MWD using implicit measures, such as the Implicit Association Test (Greenwald, McGhee, & Schwartz, 1998), in order to get a more accurate indicator for people's MWD belief endorsement. Future research may also examine the MWD in non-Western cultures, such as Latin and South America (Stevens, 1973) and the Middle East and East Asia (Sev'er & Yurdakul, 2001; Wright, 2010). Possibly, MWD scores are higher in these cultures, and it may be useful to explore whether our findings generalize to additional cultural contexts.

Finally, the results of the test of measurement invariance of the MWD showed that the model for the Israeli sample indicated an acceptable fit, which was not as good as the other two samples. In retrospect, the size of this sample (which was substantially smaller than the U.S. and German samples as well as below recommendations regarding minimum sample

sizes; see Comrey & Lee, 1992; MacCallum, Widaman, Zhang, & Hong, 1999) might have had a negative effect on the model fit.

Practice Implications

Deeper knowledge of the MWD could help parents and those who work with young adults (e.g., teachers and sex educators) encourage a more complex discussion about sexuality. Age-appropriate curricula could be developed, taking into account how social scripts and social constructs, such as the MWD, shape perceptions about sex and sexuality as well as how these scripts and ideologies develop (Kim et al., 2007). Moreover, understanding the social psychological motivations underlying the MWD could help address social phenomena, such as people's tendency to accept the public display of women's breasts when used in a sexualized manner (e.g., through media representations) but not maternal behaviors (such as breastfeeding [Ward, Merriwether, & Caruthers, 2006], which is sometimes perceived as disgusting and disrespectful [Cox, Goldenberg, Arndt, & Pyszczynski, 2007]). A more sophisticated knowledge of the MWD and its underlying motivation to control women's role in society may inform public policy regulating the use of women's sexuality in media and mothers' rights to breastfeed in public.

Knowledge of the social construction of the MWD may reduce women's feelings of guilt or shame about their bodies and sexuality, particularly those feelings that stem from cultural expectations regarding maternal modesty (Taylor & Wallace, 2012). A fuller understanding of the inner workings of the MWD and its consequences would also encourage both men and women to hold more complex and realistic beliefs about sexuality, which may allow them to experience more sexual freedom and more satisfying romantic relationships. Understanding the psychological motivations behind these beliefs, as well as their negative consequences for relationship satisfaction, could be beneficial in psychotherapy. Sex therapists and clinicians who work with couples or men who experience difficulties in their romantic relationships could use the knowledge gained in the current investigation in developing focused and, we hope, helpful interventions to change existing beliefs about sexuality.

Conclusions

Providing support for the feminist account of the MWD and demonstrating its cross-cultural generalizability, our findings suggest that women's and men's perceptions about women's sexuality and motherhood are strongly related to gender power structures. In addition, the negative consequences for the well-being of men who highly endorse the MWD add to previous claims that reducing gender inequality, and the ideologies that support it, can be in the best interests of both women and men.

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Note

1. Given that age may covary with relationship status, we computed partial correlations controlling for age and relationship status. Results are available through the Open Science Framework (<https://osf.io/rb435>).

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