

If “Boys Will Be Boys,” Then Girls Will Be Victims? A Meta-Analytic Review of the Research That Relates Masculine Ideology to Sexual Aggression

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In feminist sociocultural models of rape, extreme adherence to the masculine gender role is implicated in the perpetuation of sexual assault against women in that it encourages men to be dominant and aggressive, and it teaches that women are inferior to men and are sometimes worthy of victimization. Many researchers have linked components of masculine ideology to self-reports of past sexual aggression or future likelihood to rape. Thirty-nine effect sizes were examined in this meta-analysis across 11 different measures of masculine ideology to determine how strongly each index of masculine ideology was associated with sexual aggression. Although 10 of the 11 effect sizes were statistically significant, the 2 largest effects were for Malamuth's construct of “hostile masculinity” (e.g., Malamuth, Sockloskie, Koss, & Tanaka, 1991) and Mosher's construct of “hypermasculinity” (e.g., Mosher & Sirkin, 1984), both of which measure multiple components of masculine ideology including acceptance of aggression against women and negative, hostile beliefs about women. The next strongest relationships concerned measures of agreement that men are dominant over women and measures of hostility toward women. Scores on general measures of gender-role adherence, such as the Bem Sex Role Inventory (Bem, 1974), were not strong predictors of sexual aggression. Sociocultural models that link patriarchal masculine ideology and situational factors to sexual aggression should prove most predictive in future research.

KEY WORDS: masculinity; sexual aggression; rape.

Feminist sociocultural models of rape posit that the patriarchal structure of society perpetuates sexual violence against women. According to the social control model of rape, the male-dominated structure of society is maintained by various societal factors including sexual violence against women (e.g., Brownmiller, 1975; Griffin, 1979; Sheffield, 1987). Sexual violence keeps women in a state of fear so that they are dependent on others for their survival. Such theories have a relatively long history. One of the first people to propose and begin to test a feminist sociocultural model was Martha Burt

(1980) who hypothesized that “rape is the logical and psychological extension of a dominant-submissive, competitive, sex-role stereotyped culture” (p. 229). The purpose of the present study is to examine the sociocultural model of sexual aggression (SA) by synthesizing quantitatively the body of research that links masculine ideology to sexual violence. It is hypothesized that to the extent that men agree with an extreme form of masculinity that represents support for patriarchy ideology, they are more likely to be sexually aggressive toward women.

In support of sociocultural models of rape, cross-cultural researchers have found that rape rates vary along with aspects of the societal structure. In a study of 156 tribal societies, Sanday (1981) found that there was cross-cultural variation in rape rates and that there were reliable differences between “rape-prone”

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and “rape-free” societies. In rape-prone societies the genders were more segregated, women were less powerful, and rates of interpersonal violence were higher than in rape-free societies. Similarly, Reiss (1986) found that in rape-prone societies there was more endorsement of a “macho personality” (e.g., accepting of physical aggression and high risk-taking, casual attitudes toward sex) and more agreement with belief in the inferiority of females. Lottes (1984, cited in Lottes, 1988) found that in societies with high rape rates, women had lower status and violence was more common.

The United States has been classified as a rape-prone society; it has the highest rape rate of any industrialized country (Allison & Wrightsman, 1993). Many studies have documented high rates of sexual violence against women. In early rape research, the focus was on rape that was reported in national crime statistics, and most people’s idea was rape by a stranger (see Muehlenhard & Kimes, 1999). In the 1980s it became clear that there were many unreported cases of rape and many undetected offenders. The research reviewed in this paper deals with such undetected offenders who are likely to have sexually aggressed against someone they know. The United States has a high rate of “acquaintance rape” according to a variety of anonymous, self-report surveys. For example, Koss and Oros (1982) reported that 20–30% of a large sample of college students had engaged in or been the victim of sexual aggression. Rapaport and Burkhart (1984) found that about 28% of the college men they studied had engaged in sexual coercion. In a comprehensive study of a sample of students from 34 colleges and universities across the country it was found that about 12% of women students had been victims of rape or attempted rape, and an additional 15% had experienced assault that met the legal definition of rape (Koss, Gidycz, & Wisniewski, 1987). More recent studies confirm these high rates (e.g., Calhoun, Bernat, Clum, & Frame, 1997; DeKeseredy, 1997). Further, across a number of anonymous self-report studies, about one third of the college men sampled indicated some likelihood that they would rape a woman if guaranteed that they would not be caught or punished (e.g., Greendlinger & Byrne, 1987; Malamuth, Haber, & Feshbach, 1980; Rapaport & Burkhart, 1984; Smeaton & Byrne, 1987).

Along with high rape rates, it is likely that attitudes about sexuality and violence in the United States parallel those of other rape-prone cultures. Sheffield (1987) specifically linked the sociocultural structure with individual attitudes and argued that

traditional gender-role attitudes are one of the social forces that maintain the existence of sexual violence against women. Traditional gender roles encourage men to be violent in the name of “masculinity” and women to be sexually passive in order to be “feminine.” (In addition, “societal propaganda” such as pornography and our use of language help to construct and support attitudes and behaviors that are consistent with the patriarchal structure.)

Similarly, Byers (1996) summarized how theorists have discussed the relationship between the traditional sexual script (TSS) and SA by indicating that

the TSS pits the oversexed, aggressive, emotionally insensitive male initiator who is enhanced by each sexual conquest and taught not to accept “no” for an answer against the unassertive, passive woman who is trying to protect her worth by restricting access to her sexuality while still appearing interested, sexy, and concerned about the man’s needs. Sexual coercion is believed to be learned and maintained through widespread socialization for this behavioral sexual script, traditional gender roles, and attitudes and beliefs that support, condone, and legitimize sexual coercion in at least some circumstance. (p. 11)

Others have expressed similar views. Warshaw and Parrot (1991) wrote that girls learn that they are “supposed to be friendly and to yield to others’ needs and wants even if it means sacrificing their own. . . . They learn to defer to men, to rely on men to provide them with social status, protection, and ultimately, a secure future” (p. 73). On the other hand,

many boys are steered on an “aggression” track that guides them toward a self-centered view of their place in society. They learn to set aside the needs of others, to use physical responses to beat an opponent when faced with conflict, and to equate showing empathy with being weak and “girlish.” This training often leads to beliefs in sexual entitlement and social superiority over women. (p. 74)

Similarly, Mahoney, Shively, and Traw (1986) argued that adherence to the traditional masculine gender role makes sexual assault possible along with lack of social conscience, irresponsibility, and situational characteristics like heavy alcohol consumption and peer pressure.

Thus the masculine gender role is particularly implicated as problematic with respect to SA. The appropriate sexual role for men in the TSS is one of power. With respect to the male role in sexuality, Griffin (1979) wrote that

male eroticism is wedded to power. Not only should a man be taller and stronger than a female in a perfect

lovematch, but he must also demonstrate his superior strength in gestures of dominance which are perceived as amorous...Heterosexual love finds an erotic expression through male dominance and female submission. (pp. 188–189)

Kilmartin (1994) used Brannon's four themes of masculinity [i.e., antifemininity ("no sissy stuff"), status and achievement ("big wheel"), inexpressiveness and independence ("sturdy oak"), and adventurousness and aggression ("give 'em hell")] to describe traditional masculine sexuality as aggressive and goal-oriented, as not concerned with emotion, and as objectifying women in order to keep them at an emotional distance (Brannon, 1976). Similarly, in examining themes of male sexuality, Gross (1978) hypothesized that sex is perceived as more important for men and that men tend to isolate sex from other aspects of social life. Some common themes of male sexuality are achievement, control and power, and aggression and violence. These themes promote maladaptive sexual behavior (Gross, 1978).

There is not one single gender-role standard for all men, however (see Fischer & Good, 1998). Fischer and Good (1998) examined different types of masculine ideology using Thompson and Pleck's multidimensional Male Role Norms Scale (Thompson & Pleck, 1986), which was patterned after Brannon's "blueprint for manhood" (Brannon, 1976). Their cluster analysis revealed the five patterns of moderately traditional, high status/low violence, nontraditional, high violence/moderately traditional, and traditional. These five groups of men were different from one another with respect to how gender-role egalitarian they were. Two groups were high in violence (i.e., high violence/moderately traditional and traditional), and it was hypothesized that men in these groups would be the ones most likely to perpetrate SA because they combine traditional attitudes with an endorsement of violence.

Byers (1996) reviewed research on the TSS and how it was related to sexual violence. She found that men did not rigidly adhere to the TSS. Her research "calls into question the assertion that the TSS is the normative script for dating interactions" (p. 23). Rather, the TSS is just one of a number of common and traditional scripts. She found that men's and women's roles in sexual relationships overlapped quite a bit, especially in established relationships. Thus, traditional masculinity does not inevitably guide men's behavior and it does not inevitably lead to SA. However, after a recent literature review Krahe (2000) concluded that heterosexual

interactions among young adults are still guided by the TSS. For purposes of the present study, it is hypothesized that an extreme form of masculinity that has been labeled "hypermasculinity," "hostile masculinity," and "patriarchy ideology" will be most strongly related to the perpetration of SA.

Hypermasculinity or the "macho personality constellation" is an example of extreme adherence to the masculine gender role. Mosher and Sirkin (1984) indicated that macho men believe that "violence is manly" and "danger is exciting," and they have sexually calloused attitudes toward women. They devised a scale to measure adherence to the macho personality and found that men high in hypermasculinity had a higher self-report of SA against women (Mosher & Anderson, 1986; Mosher & Sirkin, 1984). Mosher and Tomkins (1988) used script theory to discuss the development of the macho personality. They proposed that feelings such as excitement and anger are socialized to replace "inferior, feminine" feelings such as distress and fear. Macho men are taught such rules as "Don't be scared. Be brave. Be tough. Be daring. Become excited by the danger. Risk injury or death. Be proud of fearlessness. Be contemptuous of danger and cowards." Adolescent rites of passage in male peer groups and various aspects of American culture perpetuate the macho script. According to this model macho males are more susceptible to peer influence because of rejecting parents. Fighting, seeking out danger, and calloused sexual encounters that are shared with peers help perpetuate this script.

Malamuth and colleagues described a similar construct called "hostile masculinity" (Malamuth, Sockloski, Koss, & Tanaka, 1991), which combines 1) a desire to be in control, to be dominating, particularly in relation to women, and 2) an insecure, defensive, and distrustful orientation to women. The construct is operationalized by measures of hostility toward women, dominance in sexual relations, and an acceptance of violence against women (Malamuth & Thornhill, 1994). Malamuth's model suggested two causal paths toward SA: 1) hostile attitudes and personality reflected in attitudes like endorsement of rape myths, and adversarial sexual beliefs; and 2) sexual promiscuity, which in interaction with hostility, produces SA (Malamuth, 1996; Malamuth et al. 1991).

A third, related construct was described by Sugarman and Frankel (1996) as "patriarchy ideology." They conducted a meta-analysis for which they operationalized patriarchy ideology with measures

of attitudes toward violence, gender attitudes (gender-role conservatism), and measures of gender schema (gender-role traits), and examined how this ideology related to domestic violence. Attitudes toward violence measures were strongly associated with domestic violence with 10 effects, $d = .71$; gender attitudes were less strongly associated with 10 effects, $d = .54$; and masculinity was not strongly associated (and the effect was not in the predicted direction), $d = -.14$, but it was based on only four studies.

With respect to SA, there are many individual studies of how aspects of masculine ideology are related to self-reported sexual aggression. The purposes of the present meta-analysis were to bring the data together in one study to examine the links between various components of masculine ideology and self-report of SA and to examine how strong the associations were between the variables. Such an examination of the data should indicate how much support there is for a sociocultural model of SA that links extreme adherence to the masculine gender role with self-report of SA.

In order to operationalize masculine ideology, we drew on past research and theory, as well as on the existing data concerning sexual violence. The available measures that relate masculinity to sexual violence include measures of attitudes toward violence and dominance in general, measures of attitudes toward women, measures of attitudes toward violence in relationships with women, and gender-role adherence measures. Of these dimensions, it is proposed that measures of general gender-role adherence would not be as strongly related as would attitudes that indicate support of SA against women. So, for example, one measure of masculinity is whether men possess instrumental personality characteristics such as "aggressiveness" as measured by scales such as the Bem Sex Role Inventory (Bem, 1974). This measure should not be strongly associated with SA because no specific traits concerning acceptance of violence against women are measured by this scale. However, the Hostility toward Women (HTW) Scale (Check, 1985), which asks specifically about negative attitudes toward women, or the Hypermasculinity Scale (Mosher & Sirkin, 1984), which measures acceptance of violence against women and sexually calloused attitudes toward women, should show stronger associations because they specifically ask about negative attitudes toward women and acceptance of violence in sexual relationships.

The Rape Myth Acceptance (RMA) Scale (Burt, 1980) is another scale thought to be related strongly

to SA as it contains attitudes that are cognitive justifications for sexual aggression. Burt (1980) defined rape myths as "false beliefs about rape, rape victims, and rapists," and she argued that such attitudes are important in creating a climate that allows rape to occur. She developed a widely used measure of RMA that includes such ideas as "only bad girls get raped." In reviewing the research and theory on rape myths, Lonsway and Fitzgerald (1994) indicated that various researchers have argued that rape myths might function to deny and trivialize rape to protect people's beliefs in a just world and to control women. Lottes (1988) reviewed the evidence in support of a sociocultural model and discussed calloused attitudes toward rape victims as being an important part of societal acceptance of SA.

In terms of how these attitudinal indices of masculine ideology might relate to sexual violence, Hall and Barongan (1997) argued that a person whose sexually aggressive behavior is motivated by cognitive distortions, such as rape myths, might believe that SA is benign or even beneficial to the victim. Rape myths reflect a lack of empathy for the victim and are perpetuated in patriarchal societies. Further, they argued that anger toward women may result from sexually aggressive men's suspiciousness of women. Rape is then a way to reassert power over women. They pointed out that anger toward women is also perpetuated in societies in which women are subordinate (Hall & Barongan, 1997).

In addition to a variety of measures related to masculine ideology, there are several ways that SA is operationalized in the literature. Some early research focused on incarcerated rapists (e.g., Groth, Burgess, & Holmstrom, 1977). There are a few studies concerning the masculine personality characteristics of incarcerated rapists (e.g., Epps, Haworth, & Swaffer, 1993; Marolla & Scully, 1986; Scott & Tetreault, 1987), but most researchers have examined college men who report sexually aggressive behavior through anonymous, self-report survey methods. The data from convicted rapists were excluded from the present study because it is likely that convicted rapists differ from men who are undetected offenders. Hall and Hirschman (1991) presented a quadripartite model of SA, and argued that the factors of physiological sexual arousal, cognitions that justify SA, affective dyscontrol, and personality problems are likely to be involved in sexual assault. They proposed that the relative prominence of the four factors might be used to differentiate between different types of sexually aggressive men. For example, they described a

group that would be highly aroused by sexual violence and would be likely to commit more than one act of SA with different victims. This group might represent many of the incarcerated rapists. In contrast, a group for whom cognitive motivations (e.g., rape myths) are the precursors for SA might choose situations for expressing sexual aggression in which they perceive (or at least argue) that there is some justification for their aggression. With this group the amount of physical violence against the victim would be low, and the assault would not likely be reported. This second group is likely the one that has predominantly been studied by researchers concerned about how adherence to masculine ideology relates to SA. In this group, SA is measured in one of two general ways: self-report of the frequency of sexually aggressive behavior in the past or hypothetical likelihood of sexual aggression in the future.

The most frequently used measure of past sexually aggressive behavior is the Sexual Experiences Scale (SES; Koss & Gidycz, 1985; Koss & Oros, 1982). On this scale people are asked to indicate the frequency with which they have forced someone to engage in a number of different behaviors from kissing to oral sex and intercourse. A total score is computed by summing the frequencies across all of the behaviors. A similar scale is the Coercive Sexuality Scale (CSS; Rapaport & Burkhart, 1984), which has been used in fewer studies. In contrast to a self-report of past behavior, Malamuth (1981) developed a measure, the Likelihood to Rape (LR) Scale, that asks men to indicate the likelihood that they would rape a woman "if guaranteed they would not be caught or punished." Across a number of studies, about one third of college men sampled indicate some likelihood to rape under these conditions (e.g., Greendlinger & Byrne, 1987; Malamuth et al., 1980; Rapaport & Burkhart, 1984; Smeaton & Byrne, 1987).

Thus, data were aggregated across all found studies that related an aspect of masculine ideology to the incidence of SA measured by self-report of past aggression (SES, CSS) or future likelihood to rape (LR). It was predicted that measures that specifically concerned acceptance of violence against women and measured negative, hostile attitudes toward women would be more strongly associated with SA than would measures of general gender-role attitudes. The analysis was expected to help clarify the extent to which masculine ideology is related to SA and which specific elements of masculine ideology seem problematic.

METHOD

Computerized literature searches were conducted using PsycInfo, ERIC, and Medline with the terms "rape," "coercion," "sexual coercion," or "sexual aggression" alternately combined with the terms "attitudes," "personality," "hostility," "masculinity," "sex roles," "gender roles," or "beliefs." The references of all collected articles and book chapters were examined for additional references. Further, all citations from authors with multiple citations were examined for more data including articles by Abbey, Bart, Byers, Donnerstein, Fischer, Hall, Kanin, Koss, Linz, Lisak, Lottes, Malamuth, Mosher, Muehlenhard, and Quinsey.

Data were included in the analysis if the study included a personality measure that was related to masculine ideology and if the study also included a measure of SA. Data from studies in which the hostile personality traits of convicted rapists were compared to another group (Epps et al., 1993; Marolla & Scully, 1986; Scott & Tetreault, 1987) were excluded from the analysis. In order for the data to be included, statistics needed to be provided that examined the association between the component of masculine ideology and the sexual aggression measure, such as a Pearson correlation coefficient, means and standard deviations, a *t* value, an *F* statistic, a chi-square value, or percentages.

Masculine Ideology Measures

A variety of scales have been used in the literature to measure aspects of masculine ideology that might relate to SA. Sufficient data were found to examine 11 different measures related to masculine ideology.

Acceptance of Interpersonal Violence (AIV)

AIV is one of the measures developed by Burt (1980). The 6-item scale measures the extent to which men think that force and coercion are legitimate ways to gain compliance, and more specifically that these methods are legitimate to use in sexual relationships. Burt (1980) reported an internal consistency coefficient alpha of .586. Examples of items on the scale include "People today should use 'an eye for an eye and a tooth for a tooth' as a rule for living" and "Being roughed up is sexually stimulating to many women."

Adversarial Sexual Beliefs (ASB)

ASB is another of Burt's measures (Burt, 1980). It is a 9-item scale that measures how much men agree that interpersonal relationships are fundamentally exploitative and that each party is manipulative. Burt (1980) reported an alpha of .802. An example of an item on this scale is "Men are out for only one thing."

Attitudes Toward Women (AWS)

The AWS (Spence, Helmreich, & Stapp, 1975) measures people's attitudes toward women's rights in society. The original scale had 55 items, but there are also 15- and 25-item scales that are more commonly used that are correlated with the 55-item scale. Spence and Hahn (1997) reported that the shorter versions of the scale typically have alpha coefficients in the mid-.80s or higher. An example of an item on the scale is "The intellectual leadership of a community should be largely in the hands of men." A higher score on the scale means stronger agreement that women should have equal rights with men.

Dominance/Power Over Women

The idea that men should be dominant or more powerful with respect to sexual behavior was measured by two different scales. An 8-item Dominance Scale created by Malamuth (1986) measures the importance of dominance as a motive in sexual relations, and he reported an alpha coefficient of internal consistency of .78. An example of an item on the scale is "I enjoy the feeling of having someone in my grasp." Lisak and Roth (1988) devised a measure of power that is similar. It contains six items including "Have you ever felt the urge to assert yourself with a woman because she was getting a little too 'pushy,' too dominant?" Lisak and Roth (1988) reported an alpha coefficient of .67.

Hostile Masculinity

In three of Malamuth's studies (some of which have multiple samples) (Malamuth, 1989a, 1989b; Malamuth, Linz, Heavey, Barnes & Acker, 1995), he combined various scales to measure "hostile masculinity." For example, he created a scale in which he combined items from AIV, ASB, and RMA (Malamuth, 1989a, 1989b) and in one study

he combined ASB, HTW, and "negative masculinity" (Malamuth et al., 1995). There were sufficient studies to examine this as a separate, combined measure of masculine ideology.

Hostility Toward Women (HTW)

HTW is a 30-item scale developed by Check (1985, cited in Malamuth et al., 1991) who reported an alpha of .80. Examples of items are "I feel upset even by slight criticism from women" and "I rarely become suspicious with women who are more friendly than I expected." A similar measure was used by Lisak and Roth (1988) to measure underlying anger and hurt from women. Lisak and Roth (1988) reported an alpha of .76 for their 6-item measure.

Hypermasculinity

Mosher and Sirkin (1984) developed the hypermasculinity scale to measure agreement with notions that "violence is manly" and "danger is exciting" and agreement with sexually calloused attitudes toward women. The scale contains 30 forced-choice response items, and Mosher and Sirkin (1984) reported an alpha coefficient of .89. An example of a sexually calloused attitude on the scale is "Any man who is a man needs to have sex regularly."

Masculine Instrumental Personality Traits

In some studies, the extent to which men self-reported masculine or instrumental personality traits was measured by a version of the Bem Sex Role Inventory (BSRI; Bem, 1974). On the BSRI there are 20 stereotypically masculine traits such as "dominant" and "self-sufficient," and participants are asked to indicate on a Likert Scale the extent to which each trait described them. There are also 20 stereotypically feminine traits and 20 neutral traits, but the studies in the present analysis used only the masculinity scores, which are sometimes referred to as "instrumentality."

Rape Myth Acceptance (RMA)

Burt (1980) defined rape myths as "false beliefs about rape, rape victims, and rapists" and argued that such attitudes are important in creating a climate that allows rape to occur. She developed a widely used

measure of RMA that includes such ideas as “only bad girls get raped.” Her original scale contains an 11-item Likert scale with a reported alpha of .875.

Sex Role Conservatism (SRC)

Burt’s measure of SRC concerns whether men think that there should be restrictions on female sexual behavior that are consistent with gender-role stereotyping (Burt, 1980). SRC differs from general gender-role stereotyping in that it specifically concerns sexual behavior. Burt (1980) reported an alpha of .811 for this 10-item scale. An example of an item is “A nice woman will be offended or embarrassed by dirty jokes.”

Sex Role Stereotyping (SRS)

Burt’s measure of SRS (Burt, 1980) was used in some studies (Burt, 1980). It is a 9-item scale that measures the extent to which individuals believe that women and men should have separate and traditional roles in society. An example of an item on the scale is “A wife should never contradict her husband in public.” Burt (1980) reported an alpha coefficient of .80.

Sexual Aggression Measures

Most studies included in the analysis used the Sexual Experiences Survey (SES; Koss & Gidycz, 1985; Koss & Oros, 1982) to measure self-reports of sexually aggressive behavior. This is a 10-item scale on which people indicate the frequency with which they have perpetrated varying degrees of SA. Men (and sometimes women) are asked the frequency with which they have forced someone to engage in a variety of behaviors that range from kissing to forced intercourse and oral sex. A total score is computed by summing the frequencies across all of the behaviors. In terms of the validity of this measure, men’s levels of aggression as measured by the SES were correlated with report to an interviewer, $r = .61$ (Koss & Gidycz, 1985).

The Coercive Sexuality Scale (CSS; Rapaport & Burkhart, 1984) was used in some studies. This scale is similar to the SES in that men are asked to indicate on a 4-point Likert scale from *never* to *often* the frequency with which they have engaged in 19 different sexually coercive behaviors. Higher scores indicate more coercive behavior. Hall and Hirschman (1994)

reported an internal consistency of .96. Rapaport and Burkhart (1984) found that the CSS correlated with ASB and AIV. This scale was only used in a small number of studies, and because of its similarity to the SES, it was categorized with the SES in the analysis.

Some researchers used Malamuth’s LR measure. On this self-report measure, men are asked to rate the likelihood that they would rape a woman if “you were sure that no one would ever find out and you’d never be punished for it.” Sometimes the likelihood of “forced sex” is asked in addition to rape. Responses are measured on a 5-point scale from 1 (*not at all likely*) to 5 (*very likely*).

Statistical Procedures

The effect size r was used for the meta-analysis to represent the average correlation between a measure of masculine ideology and an SA measure. Some studies used both the SES and the LR to measure sexual aggression in one sample. Both effects could not be entered into the aggregate analysis because of the dependence of samples. In such cases, the LR measure was chosen as the measure of SA for the total effect size because fewer studies used this measure, and, if they were all included in the analysis, we would be able to compare effect sizes aggregated from SES studies to those aggregated from LR studies. To make sure this procedure did not have undue influence on the effect size, though, an effect size that used all of the SES data and none of the LR data was calculated as well.

To calculate a total effect size, each correlation was translated to a Fisher r because as the population value of r gets further from zero, the distribution of r ’s sampled from that population becomes more skewed (Rosenthal, 1994). The effect sizes were aggregated using a procedure discussed by Shadish and Haddock (1994) in which each effect size is weighted by sample size. When the final Fisher r was obtained it was translated back to Pearson r for easier interpretation. The effect size was also translated to d to compare it to other studies. The statistical significance of the effect size was examined with a z score.

Variation in the effect size across all studies was also examined to see if there was heterogeneity across studies. If there was significant heterogeneity, a procedure analogous to analysis of variance was used to examine variation in the effect sizes to see if the influence of the type of SA measure, LR or SES, predicted variation in the size of r across studies.

RESULTS

Thirty-nine studies were included in the analysis. Some studies had multiple samples; most studies related more than one masculine ideology measure to SA and so contained data for multiple effect sizes. Table I lists each effect size by study and measures. Table II contains a summary of total effect sizes across all studies and across all measures of masculine ideology. In calculating the total effect size across studies, if a study measured SA by both the SES and the LR, the LR effect size was used. This was done because a smaller number of studies used the LR measure, and, if a sufficient number were included, the effect sizes for these studies could be statistically compared to the effect sizes from SES studies to see if type of SA measure predicted variation in the effect size. The effect size using only all of the SES studies was examined as well for comparison purposes. A positive effect size indicated a positive association between the measures such that the more sexually aggressive, the more agreement with the measure of masculine ideology.

Acceptance of Interpersonal Violence

We found 15 studies that used Burt's AIV measure (Burt, 1980). Across these studies an effect size of $r = .251$ was calculated ($d = .519$). It was found to be statistically significant, $z = 17.72$, $p < .01$, but also to be heterogeneous across studies, $\chi^2 = 65.39$, $p < .05$. The effect size using only LR studies, $r = .278$, $k = 8$, was not significantly different from the effect size using only SES studies, $r = .229$, $k = 7$, $\chi^2(1) = 3.19$, $p > .05$. An effect size using all of the SES studies and none of the LR studies was statistically significant, $r = .221$, $k = 12$, $z = 14.92$, but also significantly heterogeneous across studies, $\chi^2 = 23.123$, $p < .05$.

Adversarial Sexual Beliefs

Sixteen samples that used Burt's ASB measure were aggregated (Burt, 1980). Across these studies an effect size of $r = .191$ was calculated ($d = .389$). It was found to be statistically significant, $z = 13.03$, $p < .01$, but also to be heterogeneous across studies, $\chi^2 = 41.80$, $p < .05$. The effect size using only LR studies, $r = .152$, $k = 7$, was significantly smaller than the effect size using only SES studies, $r = .215$, $k = 9$, $\chi^2(1) = 4.72$, $p < .05$. An effect size based on all of the SES studies and none of the LR studies was also

statistically significant, $r = .209$, $k = 13$, $z = 143.54$, and it was homogeneous across studies, $\chi^2 = 14.97$, $p > .05$.

Attitudes Toward Women

We found eight studies that included the AWS. A total effect size of $r = -.201$ was calculated ($d = -.41$), and it was found to be statistically significant, $z = -7.96$, $p < .01$, but also to be heterogeneous across studies, $\chi^2 = 23.615$, $p < .05$. The effect size using only LR studies, $r = -.248$, $k = 4$, was significantly larger (in absolute value) than the effect size using only SES studies, $r = -.147$, $k = 4$, $\chi^2(1) = 4.23$, $p < .05$. An effect size using all of the SES studies and none of the LR studies was also statistically significant, $r = -.116$, $k = 5$, $z = -3.88$, but also significantly heterogeneous across studies, $\chi^2 = 15.687$, $p < .05$.

Dominance/Power

Across the 12 studies that examined dominance/power, a total effect size of $r = .270$ was calculated ($d = .56$). It was found to be statistically significant, $z = 11.63$, $p < .01$, but also to be heterogeneous across studies, $\chi^2 = 41.97$, $p < .05$. The effect size using only LR studies, $r = .169$, $k = 5$, was significantly smaller than the effect size using only SES studies, $r = .35$, $k = 7$, $\chi^2(1) = 16.53$, $p < .05$. (None of the possible SES studies was excluded from the analysis described above.)

Hostile Masculinity

Malamuth and colleagues used a combined measure in six different samples. A total effect size of $r = .278$ was calculated ($d = .579$). It was found to be statistically significant, $z = 8.565$, $p < .01$, and homogeneous across studies, $\chi^2 = 3.12$, $p > .05$. The effect size using only LR studies, $r = .274$, $k = 3$, was not significantly different from the effect size using only SES studies, $r = .287$, $k = 3$, $\chi^2(1) = .039$, $p > .05$. (None of the possible SES studies was excluded from the analysis described above.)

Hostility Toward Women

There were 20 effect sizes for hostility toward women. Across these studies an effect size of $r = .260$ was calculated ($d = .538$). It was found to be

Table I. Studies Used in Meta-Analysis by Construct

Authors	Masculinity Measure	SA Measure	N	r value
Abbey, McAuslan, and Ross (1998)	AIV	LR	798	.15
	ASB	LR	798	.10
	RMA	LR	798	.14
Briere and Malamuth (1983)	ASB	LR	242	.10
Byers and Eno (1991)	AIV	SES	90	.44
	ASB	SES	90	.13
	HTW	SES	90	.22
	RMA	SES	90	.26
Check and Malamuth (1983)	SRS	LR	54	.36
Check and Malamuth (1985)	AIV	LR	57	.32
	ASB	LR	57	.25
	RMA	LR	57	.45
Dean and Malamuth (1997)	AIV	LR	323	.38
	BEM	SES	323	.21
	HTW	LR	323	.35
	RMA	LR	323	.33
Demare, Briere, and Lips (1988)	AIV	LR	165	.61
	ASB	LR	165	.43
	AWS	LR	165	-.38
	RMA	LR	165	.58
Demare, Lips, and Briere (1993)	AIV	LR	383	.26
	AWS	LR	383	-.18
	RMA	LR	383	.17
Epps et al. (1993)	AIV	SES	58	.38
	ASB	SES	58	.45
	RMA	SES	58	.55
Greendlinger and Byrne (1987)	RMA	LR	114	.21
Hall, Sue, Narang, and Lilly (2000): Sample 1	HTW	SES	91	.24
	RMA	SES	91	.24
Hall et al. (2000): Sample 2	HTW	SES	377	.48
	RMA	SES	377	.28
Hamburger, Hogben, McGowan, and Dawson (1996)	ASB	SES	108	.28
	AWS	SES	108	-.31
	HMA	SES	108	.25
	SCO	SES	108	.15
Hersh and Gray-Little (1998)	AIV	SES	104	.23
	ASB	SES	104	.37
	RMA	SES	104	.42
Koss and Dinero (1988)	AIV	SES	1940	.20
	ASB	SES	1940	.19
	BEM	SES	1940	.20
	HTW	SES	1940	.20
	RMA	SES	1940	.09
Koss and Gaines (1993)	SCO	SES	1940	-.04
	HTW	SES	530	.19
Lackie and deMan (1997)	HTW	SES	86	.17
	HMA	SES	86	.31
	SRS	SES	86	.28
Lalumiere and Quinsey (1996)	AIV	SES	99	.12
	ASB	SES	99	.15
	HTW	SES	99	.00
	SRS	SES	99	.00
Lisak (1994): Sample 1	DOM	SES	172	.27
	HTW	SES	172	.42
Lisak (1994): Sample 2	DOM	SES	237	.31
	HTW	SES	237	.44
Lisak (1994): Sample 3	DOM	SES	120	.28
	HTW	SES	120	.16

Table I. (Continued)

Authors	Masculinity Measure	SA Measure	N	r value
Lisak and Ivan (1995)	RMA	SES	198	.36
Lisak and Roth (1988): Sample 1	DOM	SES	141	.30
	HTW	SES	141	.34
Lisak and Roth (1988): Sample 2	DOM	SES	59	.58
	HTW	SES	59	.64
Lisak and Ivan (1995)	BEM	LR	198	-.06
Mahoney et al. (1986)	AWS	SES	130	-.05
	HMA	SES	130	.27
Malamuth (1986)	AIV	SES	155	.38
	HTW	SES	155	.30
Malamuth (1989a)	HOM	SES	288	.33
Malamuth (1989b): Sample 1	DOM	LR	206	.15
	HOM	SES	206	.25
Malamuth (1989b): Sample 2	DOM	LR	158	.33
	HOM	SES	158	.20
	HTW	LR	158	.20
Malamuth and Check (1983)	DOM	LR	112	.30
Malamuth et al. (1995): Sample 1	HOM	SES	64	.32
Malamuth et al. (1995): Sample 2	HOM	SES	57	.37
Malamuth et al. (1995): Sample 3	HOM	SES	145	.24
Mosher and Anderson (1986)	HMA	SES	175	.33
Muehlenhard and Linton (1987)	AWS	SES	294	-.24
	RMA	SES	294	.23
Murnen (1988)	AWS	LR	143	-.26
	HMA	LR	143	.27
	RMA	LR	143	.36
Murphy, Coleman, and Haynes (1986)	ASB	LR	208	.02
	RMA	LR	208	.09
	SRS	LR	208	.01
Osland, Fitch, and Willis (1996)	AIV	LR	127	.28
	AWS	LR	127	-.26
	RMA	LR	127	.41
Quimette and Riggs (1998)	ASB	SES	103	.29
	DOM	SES	103	.50
	HTW	SES	103	.38
	SRS	SES	103	.19
Petty and Dawson (1989)	DOM	LR	99	.20
Rapaport and Burkhart (1984)	AIV	SES	201	.25
	ASB	SES	201	.27
	AWS	SES	201	.03
	SCO	SES	201	-.12
	SRS	SES	201	.001
Smeaton and Byrne (1987)	HMA	LR	70	.32
Spence, Losoff, and Robbins (1991)	ASB	SES	113	.26
	BEM	SES	113	-.04
	HTW	SES	113	.24
	RMA	SES	113	.25
Truman, Tokar, and Fischer (1996)	AIV	LR	106	.23
	ASB	LR	106	.15
	RMA	LR	106	.26
Walker, Rowe, and Quinsey (1993)	AIV	LR	198	.33
	ASB	LR	198	.28
	HTW	LR	198	.23
	RMA	LR	198	.38
	SRS	LR	198	.29

Note: AIV = Acceptance of Interpersonal Violence; ASB = Adversarial Sexual Beliefs; AWS = Attitudes Toward Women Scale; BEM = Bem Sex Role Inventory; DOM = Dominance/Power Over Women; HMA = Hypermasculinity; HOM = Hostile Masculinity; HTW = Hostility Toward Women; LR = Likelihood to Rape; RMA = Rape Myth Acceptance; SCO = Sexual Conservatism; SES = Sexual Experiences Survey; SRS = Sex Role Stereotyping.

Table II. Effect Sizes by Measures of Patriarchy Ideology

Measure	<i>r</i> value	<i>d</i> value	<i>k</i>	<i>N</i>	Heterogeneity
Acceptance Interpersonal Violence	.251*	.529	15	4804	65.40*
Adversarial Sexual Beliefs	.191*	.389	16	4590	41.80*
Attitudes toward Women	-.204*	-.41	8	1551	23.62*
Dominance/Power	.270*	.560	12	1804	41.97*
Hostile Masculinity	.278*	.579	6	918	3.12
Hostility toward Women	.260*	.538	20	5608	84.04*
Hypermasculinity	.292*	.610	6	712	0.769
Instrumentality	.173*	.350	4	2574	17.52*
Rape Myth Acceptance	.216*	.442	21	5995	121.18*
Sexual Conservatism	-.038	-.077	4	2491	5.55
Sex Role Stereotyping	.132*	.265	7	949	19.08

* $p < .05$.

statistically significant, $z = 19.8$, $p < .01$, but also to be heterogeneous across studies, $\chi^2 = 84.04$, $p < .01$. The effect size using only LR studies, $r = .282$, $k = 3$, was not significantly different from the effect size using only SES studies, $r = .257$, $k = 17$, $\chi^2(1) = .431$, $p > .05$. An effect size using all of the SES studies and none of the LR studies was also statistically significant, $r = .247$, $k = 19$, $z = 18.54$, but also significantly heterogeneous across studies, $\chi^2 = 88.95$, $p < .05$.

Hypermasculinity

The Hypermasculinity Scale was used in six studies with a total effect size of $r = .292$ ($d = .61$). It was found to be statistically significant, $z = 7.92$, $p < .01$, and it was homogeneous across studies, $\chi^2 = .769$, $p > .05$. The effect size using only LR studies, $r = .286$, $k = 2$, was not significantly different from the effect size using only SES studies, $r = .294$, $k = 4$, $\chi^2(1) = .013$, $p > .05$. (None of the possible SES studies was excluded from the analysis described above.)

Instrumentality

We found four studies that used Bem’s measure of masculine instrumentality and the SES as the measure of sexual aggression (Bem, 1974). The total effect size was $r = .173$ ($d = .35$). It was found to be statistically significant, $z = 8.83$, $p < .01$, but also to be heterogeneous across studies, $\chi^2 = 17.52$, $p < .05$.

Rape Myth Acceptance

We found 21 studies that used Burt’s RMA measure. Across these studies an effect size of $r = .216$

was calculated ($d = .442$). It was found to be statistically significant, $z = 16.90$, $p < .01$, but also to be heterogeneous across studies, $\chi^2 = 121.18$, $p < .05$. The effect size using only LR studies, $r = .256$, $k = 11$, was found to be significantly larger than the effect size using only SES studies, $r = .211$, $k = 10$, $\chi^2(1) = 49.54$, $p < .05$. An effect size using all of the SES studies and none of the LR studies was also statistically significant, $r = .184$, $k = 17$, $z = 13.76$, but also significantly heterogeneous across studies, $\chi^2 = 58.65$, $p < .05$.

Sexual Conservatism

We found four studies that included a measure of sexual conservatism. All of them used the LR to measure sexual aggression. Across these studies an effect size of $r = -.038$ ($d = -.077$) was not found to be statistically significant, $z = -1.91$, $p > .05$, although it was homogeneous across studies, $\chi^2 = 5.55$, $p > .05$.

Sex Role Stereotyping

We found seven studies that used SRS. Across these studies an effect size of $r = .131$ was calculated ($d = .265$). It was found to be statistically significant, $z = 4.03$, $p < .01$, but also to be heterogeneous across studies, $\chi^2 = 19.08$. The effect size using only LR studies, $r = .175$, $k = 3$, was not significantly different from the effect size using only SES studies, $r = .089$, $k = 4$, $\chi^2(1) = 1.74$, $p > .05$. An effect size using all of the SES studies and none of the LR studies was also statistically significant, $r = .149$, $k = 5$, $z = 4.107$, but also significantly heterogeneous across studies, $\chi^2 = 14.84$, $p < .05$.

DISCUSSION

Various theorists have argued that masculine ideology is associated with the existence of SA against women because such ideology perpetuates the ideas that men are sexually dominant and aggressive, that women are inferior, and that sexual violence against women is justified in certain situations. Much research has been conducted on the relationship of various aspects of masculine ideology to SA. Thirty-nine studies were examined in this analysis across 11 different measures related to masculine ideology to determine how strongly such measures were related to SA. All but one measure of masculine ideology was found to be significantly associated with SA, but there was much variability in the size of r across the 11 measures.

Among the measures that showed the smallest effect sizes, sexual conservatism was not found to be significantly associated with sexual aggression, $r = -.038$. However, only four studies were aggregated for this effect size. The next two smallest effect sizes were for measures of gender-role stereotyping, $r = .132$, and masculine instrumentality, $r = .173$, as measured by a version of the BSRI (Bem, 1974). The fact that these were the smallest effect sizes was consistent with predictions. These measures assess general gender-role attitudes and do not include measures of the acceptance of violence in relationships or hostility toward women, which should be more closely associated with sexual violence against women.

The rest of the effect sizes were larger but still varied in magnitude. The rank order of the remaining effect sizes from the smallest to the largest was as follows: Adversarial Sexual Beliefs (Burt, 1980), $r = .191$; Attitudes Toward Women (Spence et al., 1975), $r = -.201$; Rape Myth Acceptance (Burt, 1980), $r = .216$; Acceptance of Interpersonal Violence (Burt, 1980), $r = .251$; Hostility Toward Women (Check, 1985, cited in Malamuth et al., 1991), $r = .260$; dominance/power measures, $r = .270$; Malamuth's combined attitudinal measure of Hostile Masculinity (e.g., Malamuth, 1989a), $r = .278$; and Hypermasculinity (Mosher & Sirkin, 1984), $r = .292$. The last two effect sizes were almost moderate in size, according to Cohen's guidelines (Cohen, 1977), and they were homogenous across studies. (The rest of the effect sizes were significantly heterogeneous across studies.) The fact that the largest effect sizes were measures that combined various aspects of masculine ideology is consistent with our predictions. In order to be sexually aggressive toward women, one would need to be accepting of violence in relationships,

believe that women deserve violence (hostility toward women), and think that it is men's place to be dominant (e.g., dominance/power ideology). Malamuth's measures in several studies combined these ideas, and the Hypermasculinity Scale (Mosher & Sirkin, 1984) contains items that measure the ideas that violence is manly, danger is exciting, and sexually calloused attitudes toward women. To the extent that men possess all of these types of attitudes and beliefs, they were more likely to report SA.

It is somewhat surprising that rape myth acceptance did not show a stronger association with SA. This measure has been of great interest to researchers as indicated by the fact that over half of the studies compiled for this analysis examined the association between RMA and SA. Although the scale measures false beliefs about rape that can serve to justify rape, it does not ask men about their individual attitudes toward women that might lead them to commit SA. That is, the scale does not question whether men harbor hostility toward women or believe that sex should be used to dominate women.

Taken together, our findings suggest that hostile masculine ideology is moderately associated with SA. Thus, a measure that combines all of the attitudes that describe a hostile form of masculinity or patriarchy ideology would likely be the best attitudinal predictor of sexual aggression. General gender-role traits do not strongly predict sexual violence. These data suggest that a sociocultural model of sexual aggression is still a useful way to conceptualize SA in that attitudinal variables predicted SA. This issue is important, given that there is a recent trend to conceptualize human SA as a biological and/or sociobiological phenomenon (e.g., Thornhill & Palmer, 2000). We argue that the sociocultural model, including acceptance of patriarchy ideology, is still very relevant to understand SA by humans.

On the other hand, it is likely that the possession of patriarchal attitudes toward women is not sufficient to perpetuate SA behavior. Various theorists have suggested ways that such attitudes might combine with situational factors to predict SA. For example, Hall and Hirschman (1991) discussed how RMA might act as cognitive precursors for some men, but they would need to be activated in situations in which some justification is perceived. Similarly, Craig (1990) presented a situational model of SA and argued that coercive men create situations in which coercive sexual encounters can occur. For example, they misperceive women's friendliness as interest in sex, or use alcohol or drugs to manipulate sexual interest. In

addition, Mahoney et al. (1986) argued that the traditional male gender role makes sexual assault possible along with lack of social conscience, irresponsibility, and situational characteristics like heavy alcohol consumption and peer pressure.

Hill and Fischer (2001) found that men's sexual entitlement mediated the relationship between masculinity and SA. Malamuth and Brown (1994) found empirical support for the idea that sexually aggressive men used a suspiciousness schema when interacting with women and discounted the truthfulness of women's communications. Abbey and her colleagues have examined the influence of alcohol in a number of studies (e.g., Abbey & Harnis, 1995; Abbey, McAuslan, Ross, & Zawacki, 1999; Abbey, Ross, McDuffie, & McAuslan, 1996). Schwartz and DeKeseredy (1997) provided a model of how peer support might affect SA.

In future research, we need to test personality/situation models of SA more specifically by combining a measure of masculine ideology with situational variables to try to increase prediction of SA. The results of the present research suggest that a measure of masculine ideology that combines hostile attitudes toward women, acceptance of men's dominance, and acceptance of men's sexual aggression against women would measure the problematic aspects of masculinity whether it is conceptualized as "hostile masculinity" (Malamuth et al., 1991), "patriarchy ideology" (Sugarman & Frankel, 1996), or "hypermasculinity" (Mosher & Anderson, 1986; Mosher & Sirkin, 1984; Mosher & Tomkins, 1988). In future research we should be more consistent in the measures used. Malamuth and colleagues combined different measures in different studies to assess hostile masculinity. In future research one measure of hostile masculinity that combines relevant attitudes should be used. Mosher's measure was consistently used in the same manner in his and his colleagues' studies, but it has not been adopted for use by a large number of other researchers.

If patriarchal masculine ideology continues to be an important predictor of SA, we need more data to determine how such ideology develops and how it is maintained. In terms of the development of such attitudes, Mosher and Tomkins (1988) suggested that the macho personality develops in part from parents who do not allow their sons to express "feminine" emotions such as fear and anxiety. Instead, these emotions are transferred into anger and excitement, and macho males seek out danger and impersonal sexual experiences that are shared with peers to help

perpetuate the script. Similarly, Kanin's data suggest that rape calloused attitudes develop among males from "hypersexualized" socialization (Kanin, 1984, 1985); i.e., peer and family influences that condoned and encouraged sexual activity as important to masculinity. Bell et al. (1992) tested Kanin's model in a larger sample. Attitudes toward gender roles, sexuality, and more general social attitudes learned before college accounted for more than one third of the variability in rape calloused attitudes. It is important to understand more about how peer support might relate to the development and support of such attitudes.

Other researchers have tested the importance of the family of origin of sexually aggressive men. Lisak and Roth (1990) found that unincarcerated rapists disclosed more negative relationships with both parents, but particularly fathers, than did men who were not sexually aggressive. Lisak (1991) argued that when father-distant child rearing is exacerbated by a negative father-son relationship, it might amplify hostility toward women. Malamuth et al. (1991) found that delinquency and a hostile home environment were significant contributors to SA. Negative father-son relationship correlated significantly with the son's hostility toward women and need to dominate women.

On a more general level, Sheffield (1987) argued that traditional gender role attitudes help maintain SA along with "societal propaganda" such as pornography and our use of language. Consistent with this idea, Cowan and her colleagues found that dominance of men over women and exploitation of women were the primary themes in their analysis of X-rated videocassettes (Cowan, Lee, Levy, & Snyder, 1988). Language use also might support the patriarchal social structure (see DeLamater and Hyde, 1998, for the role of language in social construction). Murnen (2000) found that some men (particularly those involved in all-male peer groups) used sexual language that objectifies and degrades women. Further, a person who was sexually degraded in a conversation was liked less and seen as less intelligent than one who was not so degraded (Murnen, 2000), which suggests a possible role of language in the perpetuation of sexual violence against women. We need to understand more about how cultural products such as pornography and language use might influence the development and maintenance of patriarchal ideology in boys and men.

Further, although the feminine gender role does not play a causal role in perpetuating SA against women, it is likely to play a supportive role in that in the traditional sexual script that women are taught complements the aggressive male role. Women are

taught to be the gatekeepers of “uncontrollable” male sexuality, and if they experience sexual victimization, they are encouraged to blame themselves rather than the men. More feminine women have been found to respond less harshly to depictions of sexual coercion and to tend to blame themselves more than less feminine women if they experienced sexual coercion (Murnen, 1998a). Our society expects women to behave in a feminine way and rewards them when they do. In another study researchers found that when women presented themselves as sex objects (consistent with traditional femininity), they were likely to influence men to agree with them but they were also judged less competent than women who did not present themselves as sex objects (Matschiner & Murnen, 1999). Gender roles place women in a double bind where they can risk societal rejection by being unfeminine, or they can risk personal unhappiness (and perhaps even harm) by adhering to the traditional feminine role.

There are obvious limitations to the data and the analysis used in the present study. The issue of using self-report measures of SA, the lack of diversity in the samples studied, and the relative size of the relationships found are important issues to discuss. First, SA was measured by self-report scales in all of these studies. Most studies used either the SES (Koss & Gidycz, 1985; Koss & Oros, 1982) or the LR Scale (Malamuth, 1981). Koss and Oros (1982) indicated that the SES was significantly correlated with self-report of SA to an interviewer, but it is still questionable whether men would accurately report their level of SA either anonymously or to an interviewer. However, it is obviously unethical to study these relationships in an experimental way; we cannot manipulate variables and measure actual sexually aggressive behavior. Some researchers have tried to devise behavioral measures that might correlate with SA, such as Hall and colleagues’ measure of men who impose pornography on women when they are told the women dislike it (Hall, Hirschman, & Oliver, 1994) or the use of physiological sexual arousal to stimuli that depict SA (see Hall, Shondrick, & Hirschman, 1993). These measures are not likely to be more direct measures of SA than self-report scales. Further, the validity of sexual arousal to rape images in men who engage in acquaintance rape is questionable, especially if Hall and Hirschman (1991) are correct in their opinion that men who are motivated to rape by attitudinal variables are different from men who are motivated by sexual arousal. Along the same lines, one might say that it would be of benefit to study

incarcerated rapists and compare them to a control group, but it is likely that they do not represent the same group of men discussed in the acquaintance rape literature.

Related to the issue of the self-report nature of these scales is the finding that it did not seem to matter much whether the SES or the LR was used to measure SA. The effect size was usually fairly similar for the SES and the LR as they related to a measure of masculine ideology. When a significant difference was found between the SES and the LR, it was not consistently in the same direction. Although there is some variability in these relationships that cannot be accounted for in the present study, the fact that all of the effect sizes for a particular measure were in the same direction (with the exception of sexual conservatism) suggests that there is an association between these variables.

The data are also limited in that most of the samples consisted of college men (a few studies included some men from the “general community” in addition to their college sample), and most of the participants presumably were White and middle class. One exception is a study Hall et al. (2000) conducted, in which they examined culture-specific models of men’s SA. They found that among the European-American men they studied, their data were consistent with a hostile masculinity model in that intrapersonal variables predicted SA. Among Asian-Americans, though, in addition to intrapersonal variables, there were also collectivist determinants that emerged in the model such as concerns over “loss of face” and the impact of one’s behavior on one’s reputation. It is possible that different cultural groups have different values that relate to the way men interact with women. From the cross-cultural research (e.g., Lottes, 1984, cited in Lottes, 1988; Reiss, 1986; Sanday, 1981) and the results of the present study, one would predict that any society that strongly differentiates between women and men, that devalues women, and that promotes aggressive and dominant behavior among men would likely have a high rate of SA.

Another issue to discuss is the strength of the association between masculine ideology measures and SA. The largest associations we found were only moderate in size, according to Cohen’s guidelines (Cohen, 1977). How do these effects compare to other meta-analyses in this general research area? The largest effect sizes of $d = .58$ for Malamuth’s combined measure of hostile masculinity (e.g., Malamuth, 1989a) and $d = .61$ for the Hypermasculinity Scale (Mosher & Sirkin, 1984) are similar in size to the

largest ones found by Sugarman and Frankel (1996) in their analysis of patriarchy ideology and domestic violence. These researchers found that attitudes toward violence were associated with domestic violence, $d = .71$, and with gender attitudes, $d = .54$. Hall et al. (1993) conducted a meta-analysis of data on sexually aggressive men's sexual arousal to rape stimuli compared to men who were not sexually aggressive. Across nine studies (mostly of clinical populations), an effect size of $d = .27$ was found on the raw score data, and of $d = .71$ on rape index data (for which there was significant heterogeneity across studies). In a meta-analysis of the relationship between pornography and SA (Oddone-Paolucci, Genuis, & Violato, 2000), an unweighted effect size of $d = .67$ (weighted $d = .46$) was found across 34 studies. Thus, the larger effect sizes found in the present study are somewhat similar to those found in past meta-analyses.

Even accounting for the issue of self-report problems and the limitations of the samples, it seems clear that there is at least a small to moderate association between hostile masculine ideology and sexual aggression. We need more research on the development of such attitudes and their maintenance in order to work effectively on prevention. One promising idea for prevention was suggested by Hall and Barongan (1997). The fact that they found cultural differences in predictors of SA led them to suggest that one way to try to change men's attitudes is feminist and multicultural education that would promote "collectivist" ideas that people are to get along with one another and not to dominate others. They argued that interpersonal contact with women and ethnic minority persons communicating these values would help provide effective education. However, schools would first need to end gender segregation in play and work groups. Other parts of the educational program would involve teaching young boys child care skills to teach them empathy and teaching all students to be critical of media messages that promote violence, sexism, and racism. Of course, standards of male domination and entitlement at a societal level would need to change as well (Hall & Barongan, 1997).

In conclusion, Burt's comments are still as true today as they were almost 20 years ago: "Research is badly needed to describe how children absorb the components of our cultural ideology which specifically target women for male violence, and to analyze how these components mesh with simple sex-role differentiation and stereotyping in the learning process" (Burt, 1983, p. 184). And we should also heed her words that

Only by promoting the idea of sex as a mutually undertaken, freely chosen, fully conscious interaction, in contradistinction to the too often held view that it is a battlefield in which each side tries to exploit the other while avoiding exploitation in turn, can society create an atmosphere free of the threat of rape. (Burt, 1980, p. 229)

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