A Multidimensional Approach to Sexual Aggression: Combining Measures of Past Behavior and Present Likelihood

NEIL M. MALAMUTH[a]

Departments of Communication Studies and Psychology
University of California, Los Angeles
Los Angeles, California 90024

Researchers have recognized the inadequacy of studying the general topic of sexual aggression by relying exclusively on samples of rapists identified by the judicial system.[1,2] Not only is it well known that a small percentage of rapes are reported to the police,[3,4] but there are various sexually aggressive acts that do not necessarily meet the legal definition of rape or sexual assault. Acts reported to the police may be only the "tip of the iceberg" of sexual aggression. Researchers have therefore sought to obtain samples from the general population in addition to identified rapists.

Two types of self-report measures have been used to study heterosexual sexual aggression in general population samples. In the first, men indicated whether they had committed various forms of sexual aggression.[5-7] In the second, they reported the likelihood that they would engage in forced sex if they could be assured of not being identified or punished.[8-11] This latter measure appears to assess some aspect of the attraction or desire to commit sexual aggression (if there were no negative consequences to the aggressor). These two measures have at times been described as alternative approaches,[2] and researchers have relied on one or the other. The present article contends that rather than being differing ways of assessing the same continuum, these two approaches represent different dimensions, and that combining them results in more comprehensive information than using either one alone.

Theoretically, it may be expected that somewhat different information would be derived from the two variables of past sexual aggression and of desire to commit forced sex, as assessed by the likelihood of forcing sex measure. For the purposes of explication, consider crossing these two variables, with each having two levels, a low versus a high score, thereby yielding the following four cells: First, some men may not have engaged in any sexual aggression and may have no desire or attraction to do so. Second, some men may not have committed any sexual aggression, but may have some desire to do so if they could avoid punishment. Such desire may not have been expressed in actual behavior for various reasons. These could include fear of the consequences, the lack of opportunity to aggress, or having certain attributes or

[a] Address for correspondence: Neil M. Malamuth, Communication Studies, 334 Kinsey Hall, University of California, Los Angeles, Los Angeles, California 90024

emotions (e.g., empathy) that are incompatible with acting out aggressively. Third, some men have been sexually aggressive in the past but may now report relatively little desire for forcing sex. Some may regret their previous aggression or have changed their attitudes, emotions, or other characteristics. Others may not recognize or admit to themselves that their past behavior constitutes coercive sex or, in certain instances, rape. Fourth, some men who have been sexually aggressive still have considerable attraction and desire to engage in such behavior.

Although it is convenient for the purposes of explication to think of these two variables in the low versus high dichotomy, such a division may be too limited. Previous research has shown that more elaborate gradations are needed. For example, even though Malamuth and associates found that a two-level classification based on men's reported likelihood of raping was very useful,[8] later research showed that a three-level classification was preferable.[11] This classification was based on two questions. The first asked the likelihood that the man would force a female to do something sexual she didn't want to if ". . . assured that no one would know and that you could in no way be punished." The second question was similar, but the word "rape" was used instead of referring to forced sex. On the basis of these items, subjects were classified into one of three groups: (1) no likelihood of forcing or raping (LF−/LR−), (2) some likelihood of forcing but no likelihood of raping (LF−/LR+), and (3) some likelihood of both forcing and raping (LF+/LR+). Analyses of subjects' scores on measures of attitudes pertaining to aggression against women showed a linear pattern that provided support for this classification scheme: force-only subjects (i.e., LF+/LR−) were intermediate in their support of various types of violence against women, falling between those indicating no likelihood of either forcing or raping, and those indicating some likelihood of both.

Similarly, Koss and associates[6] found a four-level scheme useful for classifying the responses of college males to a questionnaire assessing different degrees of past sexual aggression: No Sexual Aggression, Sexually Coercive, Sexually Abusive, and Sexually Assaultive groups. (These categories are described in greater detail later in this article.) A discriminant analysis revealed significant differences among these groups on attitude measures assessing such areas as Adversarial Sexual Beliefs, Rape Myth Acceptance, and Relationships as Gameplaying.

In the present study, subjects are classified on both their past sexual aggression and reported likelihood of coercive sex. These two dimensions are factorially crossed, such that within each of the four levels of past sexual aggression there are three levels of likelihood of forcing sex.[b]

To examine the usefulness of this classification approach, I will present here analyses using variables available in two data bases we gathered earlier.[7,12,13] The past sexual aggression and likelihood of forcing sex dimensions are used here as the independent variables to examine their relations to variables referred to as "predictors" in earlier research.[7] Since the findings were very similar on the two data bases, they were combined in the analyses reported below. The new contribution of the present article is in revealing the theoretical and empirical utility of combining the measures of past sexual aggression and likelihood of forcing sex.

[b] Instead of using the classification schemes described here, the full range of responses on the sexual aggression and likelihood of forcing sex dimensions could have been used. That would have certain advantages,[14] such as increased statistical power. Due to the skewness of the distributions and for consistency with the existing literature, I decided to utilize the classification approach described here.

METHOD

The methods used (e.g., recruitment of subjects, instruments and procedures, etc.) have been described in detail elsewhere.[7,12] To summarize briefly here, the data for a total of 453 male subjects were analyzed from the two data bases. For all subjects, scores were available on a self-reported sexual aggression scale.[5] I used it to classify subjects according to the categories developed by Koss and associates:[6]

1. The Sexually Nonaggressive men did not admit to having engaged in any coercive, abusive, or assaultive sexual behavior toward women.
2. The Sexually Coercive men indicated that they had obtained sexual intercourse with a woman by using extreme verbal pressure (e.g., false promises, insistent arguments, or threats to end the relationship).
3. Men classified as Sexually Abusive reported either of two experiences. The first was having obtained some sexual contact (e.g., petting) by the use of threats of force or actual force. The second was having attempted to obtain sexual intercourse by the same means, but for various reasons intercourse did not occur.
4. The Sexually Assaultive men admitted coercing vaginal, oral, or anal intercourse either by the threat of harm or by actual physical force, such as twisting a woman's arm or holding her down.

Scores were also available on self-reported likelihood of sexual force (LF) and likelihood of rape (LR) if the man could be sure that others would not know and that he would not be punished. On the basis of these responses, subjects were classified into three levels of Likelihood of Forcing Sex (LFS) as described earlier in this article and elsewhere.[11]

The dependent measures were five "paper and pencil" scales that have been linked, on both theoretical and empirical grounds, to aggression against women. These included three of Burt's[15] attitude measures—the Acceptance of Interpersonal Violence (AIV) against women, the Rape Myth Acceptance (RMA), and the Adversarial Sexual Beliefs (ASB) scales. Also included were Nelson's[16] measure assessing dominance as a motive for engaging in sexual acts and Check and Malamuth's[12,13,17] Hostility Toward Women (HTW) scale.

RESULTS

Classification of Subjects

The Sexual Aggression (SA) and Likelihood of Forcing Sex (LFS) variables were not strongly correlated, $r(452) = .15$, $p < .005$. TABLE 1 presents a frequency distribution classifying the 453 subjects on the basis of the four SA and the three LFS levels. As can be seen in this table, the use of the latter variable enabled considerable differentiation within each of the sexual aggression levels. For example, of the 301 subjects not reporting any sexual aggression, 64 (or 21%) indicated that there was

TABLE 1. Frequency Distribution According to Sexual Aggression and Likelihood of Forcing Sex Dimensions

Likelihood of Forcing Sex	Sexual Aggression Category				
	Nonaggressive	Coercive	Abusive	Assaultive	Totals
LF−/LR−	196	59	15	4	274
LF+/LR−	64	28	13	3	108
LF+/LR+	41	18	8	4	71
Totals	301	105	36	11	453

NOTE: LF−/LR− = no likelihood of forcing or raping; LF+/LR− = some likelihood of forcing but no likelihood of raping; LF+/LR+ = some likelihood of both forcing and raping.

some likelihood that they would force a woman into sexual acts if they could be assured of not being punished (LF+) and another 41 (or about 14%) also reported some likelihood of raping (LR+). A similar distribution occurred within the Coercive group. As expected, within the Abusive and Assaultive groups, there appear to be somewhat higher percentages of LF+/LR− and of LF+/LR+ men than within the lower sexual aggression categories.

Overall Effects

An assessment of overall effects was obtained by a 4 (Sexual Aggression) by 3 (Likelihood of Forcing Sex) Multivariate Analysis of Variance (MANOVA) on the five dependent scales. To account for unequal sample sizes and nonorthoganality of the independent variables, an exact least-squares analysis was performed (on this and all other MANOVAs and ANOVAs in this article) by assessing each effect after first adjusting for its relationship to all other effects.[18] The results showed significant main effects for both the SA and LFS dimensions $(p < .0001)$. The interaction was not significant.

Regression Analyses

To assess directly whether using both classifications increased the amount of variance accounted for on each of the five dependent measures, regression analyses are presented in TABLE 2. The SA variable was "forced" entered first, followed by entering the LFS variable. On all five variables SA entered significantly and LFS increased significantly the overall amount of accounted variance. Entering interactions after the two "main effects"[14] did not significantly add to the accounted variance on any of the dependent measures. Examination of the squared semi-partial correlations on all the dependent variables suggests that the LFS variable may have accounted for

a higher percentage of unique variance than SA, although both dimensions contributed significantly (see TABLE 2). The simple correlations are also shown in this table.

Mean Scores

The importance of using both classification dimensions is further shown by examining the mean scores on the dependent variables. As presented in FIGURE 1, they are separated into the four SA levels (Nonaggressive, Coercive, Abusive, Assaultive) and, within the first three of these, also separated by the LFS classification (LF−/LR−; LF+/LR−; LF+/LR+). Due to the small number of Sexually Assaultive men, however, and since the analyses reported below did not show significant differences within this group, their mean data are not divided into the three LFS levels. On the whole, though, their pattern of means on the dependent variables was similar to that of the other groups when separated by LFS levels.

TABLE 2. Simple Correlations and Regression Analyses on Dependent Variables Using Sexual Aggression and Likelihood of Forcing Sex Dimensions ($n = 453$)

Independent Variable	r^a	Multiple R	sr^{2b}
		AIV	
SA	.21^c	.21^c	.03^c
LFS	.29^c	.34^c	.07^c
		ASB	
SA	.13^d	.13^d	.01^d
LFS	.20^c	.22^c	.03^c
		HTW	
SA	.20^c	.20^c	.03^c
LFS	.23^c	.28^c	.04^c
		RMA	
SA	.18^d	.12^d	.01^e
LFS	.28^c	.30^c	.07^c
		DOM	
SA	.26^c	.26^c	.04^c
LFS	.32^c	.40^c	.10^c

NOTE: SA = Sexual Aggression; LFS = Likelihood of Forcing Sex; AIV = acceptance of interpersonal violence (against women) scale; RMA = rape myth acceptance scale; ASB = adversarial sexual beliefs scale; DOM = dominance motive; HTW = hostility toward women scale.

^{a} Pearson product-moment correlation coefficient.

^{b} Squared semipartial correlation coefficient indicating unique contribution of independent variable to dependent variable after both independent variables have been entered.
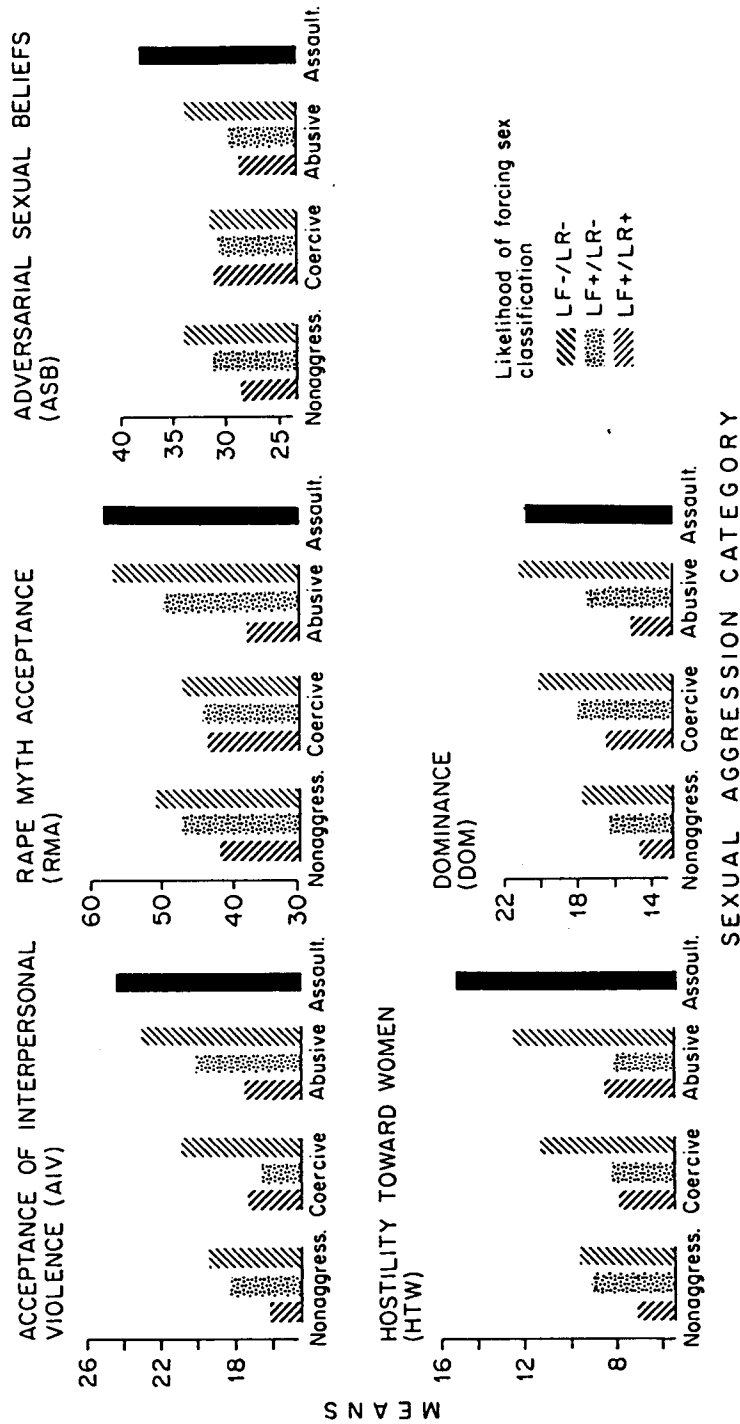
^{c} p < .0001.

^{d} p < .05.

^{e} p < .07.

FIGURE 1. Means of dependent variables as a function of Sexual Aggression and Likelihood of Forcing Sex dimensions.

In keeping with the regression results, the means suggest that (a) higher levels of sexual aggression are associated with higher scores on the dependent measures, and that (b) within the Sexual Aggression categories, higher Likelihood of Forcing Sex levels show higher scores on the dependent variables. To assess these latter differences statistically, additional analyses within each of the SA levels are reported below.

Analyses within Sexual Aggression Categories

Using only the Sexually Nonaggressive group, a MANOVA was performed on the five dependent variables with LFS as the independent variable. This analysis yielded a highly significant effect, Wilks' Lambda = .85, F(10, 588) = 4.91, p < .0001. Univariate analyses also showed significant effects (p < .001) on all the dependent variables. Post-hoc comparisons among individual means using the conservative Scheffé[19] test (particularly suited for unequal n's) indicated that in all instances the LF+/LR+ group was significantly higher than the LF−/LR− group. Further, except for ASB, the LF+/LR− group was always significantly higher than the LF−/LR− group. These data show that using the LFS measure enabled very clear discrimination among sexually nonaggressive men.

Similar analyses were performed on the Sexually Coercive group. Here, as well, a significant MANOVA effect was obtained for LFS, Wilks' Lambda = .79, F(10, 196) = 2.51, p < .007. Significant univariates were found on the AIV, HTW, and Dominance variables. Scheffé follow-ups showed that the LF+/LR+ group was significantly higher than the LF−/LR− group on all of these three variables, and higher than the LF+/LR− group on the AIV measure.

Similar analyses on the Sexually Abusive group yielded a significant MANOVA for LFS, Wilks' Lambda = .50, F(10, 58) = 2.44, p < .02. Significant univariates were found on the RMA, Dominance, and HTW variables. Scheffé comparisons showed the LF+/LR+ group significantly higher than the LF−/LR− group on the RMA and Dominance variables, and higher than the LF+/LR− group on the HTW measure.

No significant effects were obtained within the Sexually Assaultive group. This may be due to the small sample (n = 11) and/or because once men have committed acts that would legally be defined as rape, a "ceiling effect" may occur.

Overall, these analyses show consistently that using the LFS classification yields statistically significant differences within levels of sexual aggression. This is particularly important for the lowest level of sexual aggression, in which the majority of men are classified. Previous research using a classification typology based only on the SA dimension[6] did not enable differentiation within this majority.

Sexually Experienced Only

In their analyses, Koss and associates[6] excluded subjects who had not engaged in mutually consenting intercourse. In order to perform a similar assessment here, the analyses reported above were also conducted using only those subjects who were

relatively highly sexually experienced in heterosexual relations, as indicated by Bentler's[20] sexual experience scale. The results were very similar to those reported above for all subjects.

DISCUSSION

The findings show very clearly that using information derived from both the dimensions of past sexual aggression and reported likelihood of forcing sex resulted in a much more comprehensive account of men's attitudes, dominance motives, and hostility toward women than using either dimension alone. It appears, then, that focusing either only on actual aggressive behavior or only on attraction to such aggression is insufficient. Both dimensions are important, although the data suggest that the LFS dimension may generally account for more of the variance on the type of dependent variables used here. It is reasonable that with these variables (e.g., attitudes) there would be stronger links with attraction to sexual aggression rather than with actual behavior.

On the basis of the data patterns appearing in FIGURE 1, however, we might speculate that two of the measures used here, the Hostility Toward Women and the Adversarial Sexual Beliefs scales, might be most capable of differentiating between those men who actually commit the highest levels of sexual aggression (i.e., the Assaultive Group) and those who may be strongly attracted to such aggression but are not actually assaultive. Examining the items of these two scales, as well as statistical assessments of their overlap,[12] suggest that both scales tap a hostile-emotional reaction to women. Future research should systematically assess whether such a reaction may be a crucial contributor to converting a high attraction for sexual aggression into actual assault, at least in the type of subjects we have studied here.

The findings advance considerably the goal of developing multivariate models of sexual aggression. In order to develop such models within a structural equations context,[21,22] it is important to use a multivariate approach both to assess the factors leading to aggression and to measure aggression itself. While previous work documented the desirability of the former,[7] the present article demonstrates the usefulness of the latter as well. It is hoped that future research will combine both, employing a multivariate approach at both "sides of the equation." Such an approach should use both multiple indicators of the same dimensions[21] as well as multiple dimensions.

In future research, it may be useful to go beyond even the two dimensional approach described here. For example, researchers might measure (1) past sexual aggression, (2) how the person feels about his past behavior, (3) an estimate of the likelihood that he will aggress in the future,[23] and (4) his likelihood of doing so if assured of not being punished. It may be useful also to obtain more detailed information than is usually gathered about the type of sexual aggression the person is attracted to or has engaged in. This may enable better comparisons with taxonomies being developed with incarcerated sexual offenders.[24,25] Such a multidimensional approach will, it is hoped, contribute to understanding the factors leading to attraction to various forms of sexual aggression, and when such attraction is or is not expressed in actual behavior.

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