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## Verbal/Symbolic Aggression in Couples: Incidence Rates and Relationships to Personal Characteristics

*This paper describes the incidence, chronicity, and correlates of verbal/symbolic aggression between partners in a nationally representative sample of 5,232 American couples. Verbal/symbolic aggression was measured by the Conflict Tactics Scales. It was found that men and women engage in about equal amounts of verbal/symbolic aggression against their partners. The probability of frequent verbal/symbolic aggression against a partner tends to decrease with age and the number of children in the family, and to increase with the occurrence of alcohol abuse and the use of other drugs. Socioeconomic status and race were not found to be related to verbal aggression. Verbal aggression is part of a pattern of abusive and problematic interpersonal relationships within the family that has antecedents similar to those of physical aggression.*

The last decade has provided considerable research on the causes and effects of *physical* aggression in the family, but much less research has been done on *verbal* aggression. Physical aggression ("violence") between partners has been shown to cause both physical and psychological damage (Stets & Straus, 1990), but much less is

known about nonphysical forms of aggression such as verbal aggression.

While the effects of physical aggression are often immediately apparent in the form of bruises and broken bones, the effects of verbal aggression are often less readily observed. However, verbal aggression may be just as damaging or more so (Vissing, Straus, Gelles, & Harrop, 1990). A statement by an acquaintance who is a blue-collar worker illustrates this point: "My father used to drink a lot and would slap us kids around. I remember one time I swung back at him and I was beaten until I was bloody. . . . You know something, those cuts and bruises healed but to this day I can still hear my father yelling at me. That's what really hurts, it was the yelling that really hurt."

This case poses several interesting questions on which information is needed. Does drinking cause verbal aggression? How is verbal aggression related to socioeconomic status? Who are more verbally aggressive, men or women? The research literature provides only limited findings on these and other aspects of verbal aggression.

In addition to the lack of empirical information, there is also a lack of theoretical work on the antecedents of verbal aggression within the family. There are, however, what can be called folk theories. For example, it is commonly believed that, while men may more often tend to lash out

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at women physically, women tend to engage in verbal assaults more than men. Another aspect of verbal aggression which has been the focus of scientific as well as folk theory, and also of empirical research, is the presumed cathartic effect of releasing pent up aggression verbally. Despite wide acceptance of the catharsis theory, the empirical evidence has shown that "venting" aggression against a partner verbally tends to increase rather than reduce the probability of subsequent physical aggression (Murphy & O'Leary, 1989; Straus, 1974).

Given the limited theoretical and empirical research on intra-family verbal aggression, the objectives of this paper are primarily descriptive and exploratory. First, we report estimates of the incidence and frequency of verbal aggression by men and women. Second, we present data on personal and family characteristics which may be antecedents of verbal aggression, specifically age, gender, race, socioeconomic status, number of children, and alcohol and drug use. The analysis presents the relation between these characteristics and aggression in the context of previous findings on physical aggression.

An important theoretical issue which the results of this study may clarify is whether verbal aggression against a partner is fundamentally similar to or different from a physical attack. If verbal aggression is similar to physical aggression, the findings will be similar to those reported in the literature on physical violence in families. If, on the other hand, verbal aggression is an alternative to physical aggression, key relationships may be reversed. For example, it may be that as verbal aggression increases, so does physical aggression. Alternatively, according to catharsis theory, venting one's aggression verbally could serve as a substitute for physical aggression.

#### VERBAL AGGRESSION

A variety of terms have been used to refer to the behavior which is the focus of this paper. Often these terms are not explicitly defined, but they generally include both verbal and nonverbal symbolically meaningful acts. The definition used for this research probably encompasses the core of what has been previously investigated. We define the term "verbal/symbolic aggression" (sometimes shortened to just "verbal aggression") as: A communication, either verbal or nonverbal, in-

tended to cause psychological pain to another person, or perceived as having that intent. Examples include name calling or nasty remarks (active, verbal), slamming a door or smashing something (active, nonverbal), and stony silence or sulking (passive, nonverbal).

#### CHARACTERISTICS ASSOCIATED WITH USE OF VERBAL/SYMBOLIC AGGRESSION

Many variables may reasonably be related to verbal aggression. The variables were chosen from those available in the 1985 National Family Violence Survey (Gelles & Straus, 1988; Straus & Gelles, 1986, 1990). We believe that each of the independent variables selected influences the incidence of verbal aggression. The hypothesized causal direction is most clear in the case of age, gender, and race because these are biologically based attributes which are established prior to, or occur regardless of, the incidence of verbal aggression. We also included four variables for which the time order is less clear—socioeconomic status, number of children, abuse of alcohol, and abuse of drugs. The causal direction issue for these variables is discussed below.

#### *Gender*

A review of over 150 articles by Frodi, Macaulay, and Thome (1977) found little support for the folk theory that men generally use more physical aggression and that women more indirect or displaced aggression. In an experiment designed to elicit verbally aggressive responses, similar amounts of aggression were displayed by both men and women (Golin & Rovanowski, 1977). In other experimental situations, such as horn honking at a car which stops too long, men were found to be more symbolically aggressive than women (Doob & Gross, 1968; Harris, 1973). The contradictory evidence leads us to hypothesize that, after controlling for all other variables:

1. There is no significant difference between men and women in the rate of verbal aggression against a partner.

#### *Age*

Age has been shown to be a strong predictor of physical aggression between partners (Stets & Straus, 1990; Straus, Gelles, & Steinmetz, 1980).

Younger couples generally engage in more physical aggression than any other age group and the incidence of physical aggression decreases steadily with age. This may also apply to verbal aggression. If verbal aggression replaces physical aggression, we would expect that as physical aggression decreases with age, verbal aggression will increase. On the other hand, if couples become *generally* less aggressive with age, we would expect a decrease in verbal aggression with age. Because we do not know the relationship between age and verbal aggression, we tested the null hypothesis:

2. There is no relationship between age and verbal aggression.

#### *Race and Ethnicity*

There is conflicting data on the relationship between race and aggression. In a study of American dating violence, nonwhite subjects (primarily Asian) experienced less physical and verbal aggression than white subjects (Lane & Gwartney-Gibbs, 1985). An experiment designed to measure verbal aggression in response to a frustrating phone call found no significant differences in the reactions of Anglo-Americans and Chicano-Americans (Harris, 1974). A study of aggressiveness of teenagers found that black teens were generally less aggressive than white teens. Once aggression had occurred, however, the black teens were more likely to respond with physical aggression (Luchterhand & Weller, 1976). Straus et al. (1980) and Straus and Smith (1990) found blacks to be more likely than whites to engage in physical aggression against a partner. To what extent this applies to verbal aggression against a partner is unknown. We therefore tested the following hypothesis:

3. There is no significant difference between whites and nonwhites in the probability of verbal aggression occurring between partners.

#### *Socioeconomic Status*

Although some previous research suggests a relationship between socioeconomic status (SES) and verbal aggression (Rubin, 1976), our review of the literature did not find any studies that directly addressed this issue. Previous research has identified a negative correlation between physical abuse of partners and children and occupational prestige and income (Straus et al., 1980). This relationship

might also apply to verbal/symbolic aggression against partners. On the other hand, since the findings on physical aggression apply most strongly to severe assaults on a partner or child, and since verbal aggression may be more similar to minor physical assaults than to severe physical assaults, there may be no significant relationship between SES and verbal aggression. It could also be possible that verbal aggression may replace physical aggression on high SES families. To investigate this issue we tested the following hypothesis:

4. There is no relationship between the socioeconomic status of the family and the probability of verbal/symbolic aggression occurring.

#### *Number of Children*

Children are a source of both pleasure and conflict. Each child poses unique problems, and parents often disagree about how to deal with these problems. In fact, one out of five couples has persistent and unresolved conflicts concerning their children (Straus et al., 1980). Consequently, we hypothesize that, after controlling for age:

5. The more children, the higher the probability of verbal aggression.

#### *Alcohol and Drugs*

Previous research generally has shown alcohol use is associated with increased levels of aggression (Bond & Lader, 1987; Gustafson, 1987; Kaufman Kantor & Straus, 1987; Pihl & Zacchia, 1986; Steele, 1986), although Rohsenow and Bachorowski (1984) found contradictory findings. Peltoniemi (1980) found that most calls to police concerning family violence are associated with use of alcohol and unrestrained verbal aggression. We therefore hypothesized that:

6. The higher the incidence of drunkenness, the greater the rate of verbal aggression against a partner.

The research on the relationship between drug use and aggression is less clear and more limited than that regarding alcohol. Illicit drug use has been shown to be related to theft, but not to interpersonal aggression (Kandel, Fagan, & Davies, 1986). Khantzian (1985) theorizes that some drug addicts select certain drugs, opiates for example, for their mitigating effects on feelings of rage and aggression. Lundberg-Love and Geffner (1988)

suggest that drug use is one of the strongest risk factors for aggressive acts such as date rape. The limited amount of previous research on the effects of drugs and aggression, especially verbal aggression, has not yet established a conclusive relationship. Consequently we hypothesized:

7. There is no relationship between the frequency of drug use and the rate of verbal aggression.

## METHODS

### *Sample*

An important aspect of this study is that it is based on a large and nationally representative sample of American couples—the National Family Violence Survey (Straus & Gelles, 1986, 1990). The data were obtained by interviewing one partner each from current or former couples. Each respondent was asked to provide information on his or her own behavior and that of their partner, as well as characteristics of the couple such as length of the marriage. Interviews with the 6,002 respondents were conducted by telephone in the summer of 1985 (for information regarding the validity of telephone interviews in this survey, see Straus & Gelles, 1986, p. 472). To be eligible for inclusion, the respondent had to be age 18 or older and either (a) currently married, (b) currently living as a man-woman couple, or (c) a single parent with a child under 18 living with the parent, including divorced, separated, or never married parents. If the respondent had a relationship that ended within the previous 2 years, the couple interaction questions were asked about interactions with their former partner in the last year of cohabitation. If the relationship ended before that, single parents were excluded from the analyses reported in this paper.

The response rate was 84%. Of the 6,002 respondents, 41.3% were men and 58.7% were women; 5,232 lived with a partner currently or within the previous 2 years, of whom 4% were cohabiting but not married and data from this group are reported here. Further information on the sampling design and the characteristics of the sample is given in Straus and Gelles (1986, 1990).

Although the data were obtained from one partner only, the verbal aggression data are inherently information on interaction of the couple. Because there was only one informant per family,

the information provided on the couple could differ according to the gender of the respondent. This possibility, and the extent to which gender affects other findings, are discussed later.

### *Measurement of Verbal/Symbolic Aggression*

The Conflict Tactics Scale or CTS (Straus, 1979, 1990) was used to measure verbal/symbolic aggression. The CTS measures three tactics used in interpersonal conflict within the family: reasoning, verbal aggression, and physical aggression. The CTS begins with the following introduction:

“No matter how well a couple gets along, there are times when they disagree, get annoyed with the other person or just have spats or fights because they’re in a bad mood or tired or for some other reason. They also use many different ways of trying to settle their differences. I’m going to read a list of things that you and your partner might do when you have an argument. I would like you to tell me how many times in the past 12 months you: insulted or swore at him/her; sulked and/or refused to talk about it; stomped out of the room or house or yard; did or said something to spite him/her; threatened to hit him/her or throw something at him/her; threw or smashed or hit or kicked something.”

The respondent was then asked how many times their partner engaged in the above behaviors in the previous year, thus giving information on the amount of verbal aggression that was both inflicted and received by each partner.

The response categories were none, once, twice, 3–5 times, 6–10 times, 11–20 times, and 21 or more times. These categories were coded as approximate midpoints of 0, 1, 2, 4, 8, and 15, with the last category set to 25 to reduce skewness. The verbal aggression index is the sum of these frequency codes. The alpha coefficients of reliability are .77 for man-to-woman verbal aggression and .76 for woman-to-man verbal aggression.

Questions can be raised about whether two items in the verbal aggression scale are truly indicators of verbal/symbolic aggression: stomping out of the room and refusing to talk. These items might indicate “flight” rather than “fight.” We do not think this is usually the case because the first of the two items was deliberately phrased “stomped out of the room” rather than “ran out,” and the second item deliberately began with the word “sulked.”

### Statistical Analysis

**Logistic regression.** Although, for simplicity of exposition, the hypotheses are stated in bivariate form, it is important to control for confounding of the independent variables with each other and with the two control variables described below. This control permits focusing on the net effect of the specific independent variable specified in each hypothesis. Logistic regression (logit) was used for this multivariate analysis. The independent variables were the respondent's gender, age, race, socioeconomic status, number of children, drunkenness, and use of drugs. These independent variables, plus the two control variables, were entered into the logit equation in a manner similar to that for OLS regression. A process of backward stepwise elimination was manually performed, removing nonsignificant variables from the statistical model until we arrived at the final model presented in Table 1. We tested for the possible effects of multicollinearity by correlating the independent variables with each other. The correlations ranged from  $-.01$  to  $-.39$ , none of which was large enough to pose a serious risk of multicollinearity.

Logit, rather than OLS regression, was used because at least some verbal aggression is common in relationships. The important issue, both theoretically and clinically, is the occurrence of a high or chronic level of verbal aggression (Jacobson & Revenstorf, 1988). We therefore dichotomized the sample by classifying couples as engaging in chronic verbal aggression if their score was 13 or above (the 75th percentile).

Logit was also used because, as Figure 1 shows, the distribution for verbal aggression is severely skewed. It is inappropriate to use OLS regression with a skewed dependent variable. One of the strengths of logit over OLS is that it allows for the analysis of strongly skewed dependent variables once they are recoded into dichotomous variables, as we have done with verbal aggression.

A limitation of logistic regression is that logit coefficients are logs and the size of the coefficient does not directly indicate the "effect size." To overcome this limitation, we used the procedure described by Hamilton (1990) to compute predicted probabilities of verbal aggression. The plots of these predicted probabilities enable one to visually determine the nature and extent of the relationship between any one of the social psychological characteristics we used as independent

variables and verbal aggression, net of other variables in the model.

**Controls for conflict and physical aggression.** Physical aggression and conflict were used as "controls" because the central issue of this paper is not whether physical aggression and couple conflict are related to verbal aggression, for this is apparent (Chandler-Sabourin, 1991; Murphy & O'Leary, 1989; Straus, 1974). Rather, we are concerned with whether the independent variables (age, gender, etc.) are related to verbal aggression regardless of the level of physical aggression and conflict in the family. Were these variables not included in the model, it could be argued that we are measuring differences in physical aggression or couple conflict in the guise of verbal aggression. Although the relationship of the control variables to verbal aggression is not an issue for this paper, the logistic regression results will show that this study, like the studies of Murphy and O'Leary (1989) and Straus (1974), found a strong relationship between the two types of aggression.

The basis for using physical aggression as a control variable are the studies which show a correlation between verbal aggression and physically aggressive acts, such as slapping and punching (Infante, Chandler, & Rudd 1989; Murphy & O'Leary, 1989; Straus, 1974). The physical aggression scale of the Conflict Tactics Scales (Straus, 1979, 1990) was used to classify respondents into the following categories: no violence, minor violence (e.g., slapping), and severe violence (e.g. punching, kicking, hitting with an object).

Conflict was included as a control variable because previous analyses have shown that couples with a high level of conflict engage in more verbal aggression (Straus et al., 1980). Since conflict is also associated with the family characteristics used as the independent variables, relationships between these variables and verbal aggression might be spurious. A measure of couple conflict was therefore included in the logit model. The index was computed from five items which ask how often the respondent disagrees with his or her partner in regard to managing money; cooking, cleaning, or repairing the house; social activities and entertaining; affection and sexual relations; and things about the children. See Straus et al. for data on the reliability and validity of this measure. The index was computed by averaging the fre-

quency of disagreement (provided that respondent answered at least four of the questions), thus giving comparable conflict indices for those couples with and without children.

INCIDENCE RATES AND CHRONICITY

Before presenting the results of the multivariate analysis, it is helpful to have in mind the extent to which verbal aggression occurs between partners. Figure 1 shows that no instance of verbal aggression was reported for 26% of the men and 25% of the women. Conversely, 74% of men and 75% of the women reportedly engaged in one or more such attacks during the year covered by this survey. The median was 3 to 4 incidents per year for both partners. The means are 10.0 incidents per year for man-to-woman verbal aggression (standard deviation = 16.1, range = 0-130) and 10.3 for woman-to-man verbal aggression (standard deviation = 16.3, range = 0-150).

These rates and frequencies are best regarded as "lower bound" estimates. The underreporting can occur because it is difficult to remember

events such as these over a year's time. In addition, some respondents may have been reluctant to provide the information. This also has implications for the findings on sex differences in verbal aggression. That issue is addressed below.

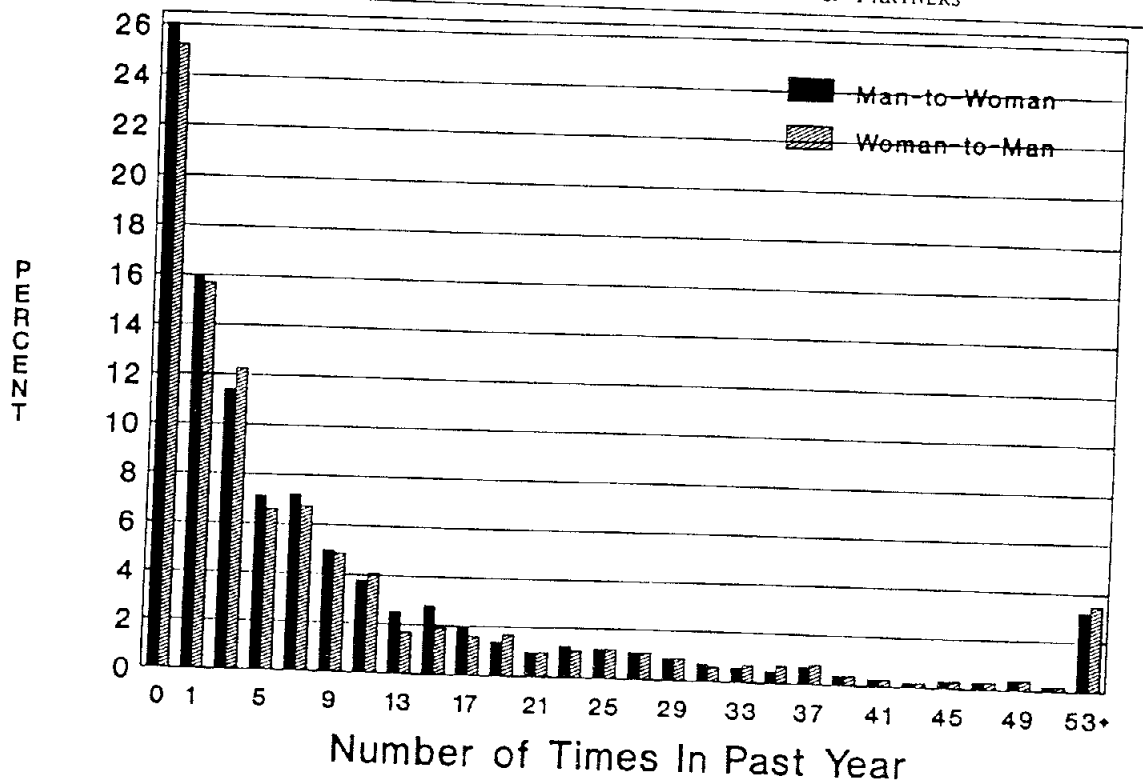
ANTECEDENTS OF VERBAL AGGRESSION

Gender and Victim-Aggressor Differences

*Gender differences in verbal aggression.* The very similar means and frequency distributions presented above support the hypothesis of no significant difference between man-to-woman and woman-to-man verbal aggression. These findings therefore contradict the folklore that women verbally aggress against their partners more than men.

The correlation of the dichotomized measures of man-to-woman verbal aggression and woman-to-man verbal aggression is .67. This strong correlation probably indicates that when one partner engages in verbal aggression, the other usually responds in kind.

FIGURE 1. FREQUENCY OF VERBAL/SYMBOLIC AGGRESSION BETWEEN PARTNERS



X axis shows lower limits of class intervals of 2

*Reporting effects: men versus women.* The above results indicate that man-to-woman and woman-to-man verbal aggression occur with the same general frequency. However, the apparent equality between men and women in verbal aggression might be an artifact of the gender of the respondent who was interviewed or of differences between reports of victims and of aggressors. We used two methods to investigate these issues.

The first method was a comparison of the verbal aggression scores based on interviews with men and women. We found that the mean man-to-woman verbal aggression score is 11.4 as reported by women, and 8.3 as reported by men. Similarly, the mean woman-to-man verbal aggression score is 11.4 as reported by women, and 8.8 as reported by men. Thus, women report more acts of verbal aggression regardless of whether women are victims or aggressors in the acts.

A second method of investigating gender differences was to include gender of the respondent (coded men = 0, women = 1) in the logit analysis. (The inclusion of gender in the logit analysis, in addition to providing further information on gender differences, also controls for possible confounding of gender with the other independent variables.) The significant positive logit coefficients in the first row of Table 1 show that women tend to report more verbal aggression by their partner, and even more by themselves, than men do.

These gender differences in retrospective reporting of aggressive behavior suggest that men tend to minimize the incidence of aggressive behavior within the family. They may be deliberately concealing things, or they simply may be less sensitive to the occurrence of verbal aggression. Other interpretations of the data are possible—

that women exaggerate the incidence of verbal aggression or that the true incidence is somewhere in between the reports of men and women. The discrepancy may not be the effects of a conscious decision on the part of the respondent to exaggerate or minimize the behavior. Rather, it may result from different interpretations of men and women as to what constitutes "yelling" and "stony silence."

Whatever the reason, these findings are consistent with research which shows that men are less self-revealing, not only to interviewers but also to their partners (Jourard, 1964; Jourard & Lasakow, 1958). This raises the question of whether the relationship of the other independent variables to verbal aggression is affected by the presumed underreporting of verbal aggression by men. We therefore plotted all relationships separately for men and women. In every case we found the same relationships, regardless of whether the results are based on data obtained from men or women. These parallel findings based on data provided by men and women are illustrated in Figure 3. The other similar plots are not shown because of the large number of graphs this would require.

*Reporting effects: victims versus aggressors.* The four mean scores presented above to examine gender differences can also be used to examine the question of whether victims report more verbal aggression than aggressors. The man-to-woman verbal aggression frequency as reported by men (the aggressors) is 8.3 whereas as it is 11.4 as reported by women (the victims). But the reverse is the case for woman-to-man verbal aggression: The mean as reported by women (the aggressors) is 11.4, but as reported by men (the victims), the

TABLE 1. LOGISTIC REGRESSION OF VERBAL/SYMBOLIC AGGRESSION

Independent Variable	Verbal/Symbolic Aggression			
	Man-to-Woman		Woman-to-Man	
	Coefficient	SE	Coefficient	SE
Gender	0.20**	.077	0.39**	.077
Age	-0.02**	.003	-0.02**	.003
Number of children	-0.09**	.033	-0.05	.030
Drunk	0.01**	.003	0.04**	.009
High on drugs	0.00	.001	0.01**	.002
Physical aggression	1.35**	.082	1.30**	.074
Couple conflict	0.93**	.052	0.83**	.050
Logit Constant	-1.82**	.162	-1.66**	.163

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

rate is 8.8. If the means are combined according to whether they are reports by victims or by aggressors, the average frequency of verbal aggression as reported by victims is 10.1 ( $11.4 + 8.8 / 2 = 10.1$ ). This is slightly higher than the estimate based on reports by aggressors of 9.9 ( $8.3 + 11.4 / 2 = 9.9$ ), but the difference is not statistically significant. Thus what might at first seem to be differences between respondents who were victims as compared to those who were aggressors is the result of confounding of gender and victimization.

#### Age

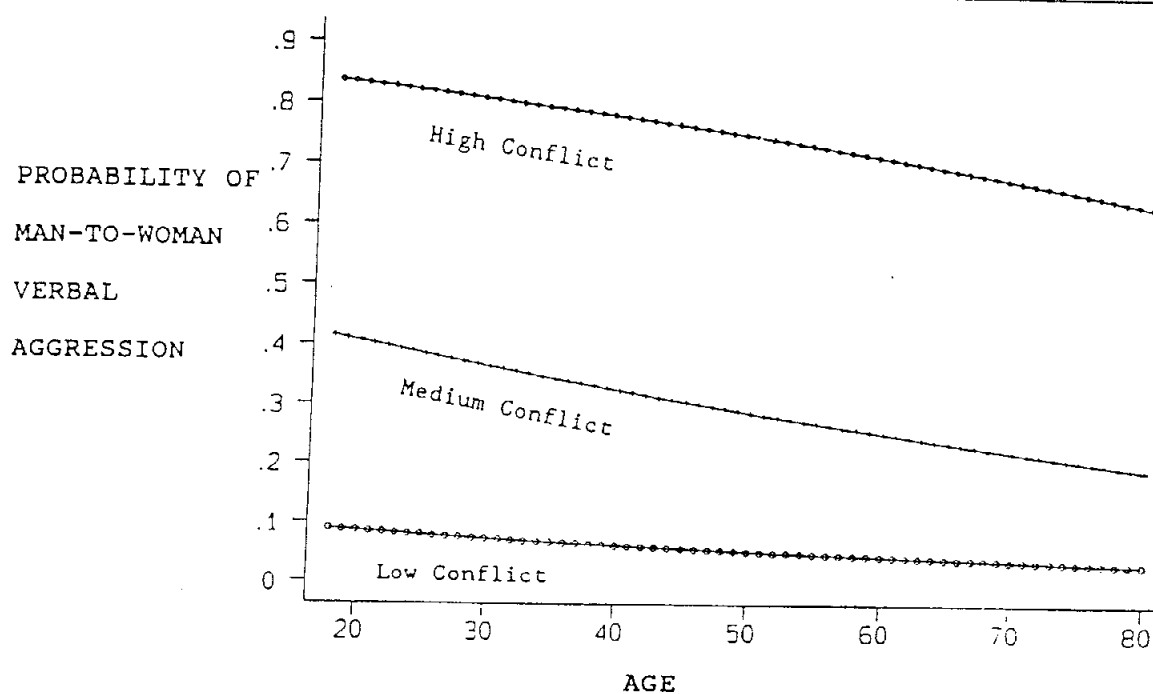
The significant logit coefficients for age indicates that couples tend to become less verbally aggressive toward each other with age. This relationship is shown in Figure 2, with a control for couple conflict. As previously stated, the reason for including the level of conflict in the logit model was not to test the hypothesis that conflict and verbal aggression are related. Rather, it was included to control for possible confounding of conflict with the other independent variables. By including the level of conflict in the model, we can conclude that each of the variables in Table 1 has a significant relationship to verbal aggression, net of any

overlap with conflict. The results plotted in Figure 2 are consistent with that reasoning. They show that regardless of the level of conflict, the older the respondent, the lower the probability of verbal aggression. However, while the logit coefficient is statistically significant, examination of Figure 2 indicates that the "effect size" for age is small, especially by comparison with the effect of conflict.

The decrease in the probability of verbal aggression with age and children probably reflects a number of factors. It is well documented that physical aggression of all types decreases with age, and it is therefore not surprising that this also applies to verbal aggression. Evidently people tend to mellow with age.

One interpretation of the decrease in verbal aggression with age is that, as a relationship continues, couples adapt to conflict by withdrawing or disengaging (Blood & Wolfe, 1960; Feldman, 1966). This produces a lower level of manifest conflict (even though the underlying conflicts may not have changed) and therefore less "need" to use verbal aggression, physical aggression, and reasoning. We investigated this possibility (data not shown) and, contrary to the disengagement theory, found a significant decrease with age in the level of conflict itself.

FIGURE 2. PROBABILITY OF MAN-TO-WOMAN VERBAL AGGRESSION BY AGE AND LEVEL OF CONFLICT



### Race and Ethnicity

The preliminary logit analysis using race (dichotomized as white and minority group) revealed no relationship to verbal aggression and therefore requires acceptance of Hypothesis 3. Race was therefore dropped from the final logit analysis shown in Table 1. It is possible that the dummy coding of race as white/minority was too crude a distinction between racial groups and this may have resulted in homogenizing the effects of race and ethnicity in our analysis.

### Socioeconomic Status

Socioeconomic status (SES) was measured by an index that was constructed with the SPSS-X principle components procedure using the following five items: Trieman occupational prestige score of husband and wife, education of husband and wife, and family income. A single factor was identified which accounted for 58% of the variance of these items. The FACSCORE procedure was then used to output a standardized factor weighted sum of these items. A preliminary logit analysis using this index found no relationship between SES and either man-to-woman or woman-to-man verbal aggression. Before accepting hypothesis 4

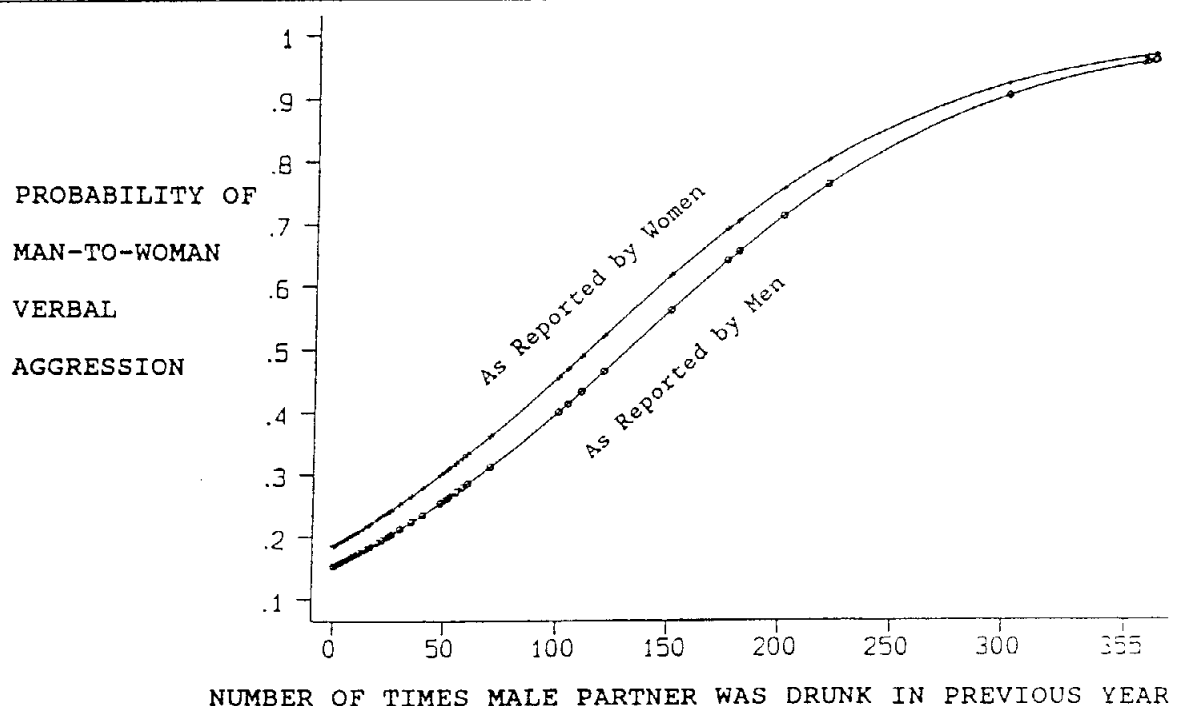
(no relationship between SES and verbal aggression), it seemed advisable to use two further approaches.

The first of these additional analyses examined each of the indicators the SES index (occupation, education, and income) independently for their relationship to verbal aggression. No significant relationships were found for any of the SES indicators. The second additional approach examined the possible interaction effect of disparity in the education of the partners and disparity between the partners' occupations. Again, no significant interaction effects were found in either case. (For a summary of the procedure used to examine interaction effects, see Smith, 1988.) Since none of these analyses found a relationship between SES and verbal aggression, SES was dropped from the final logit analysis shown in Table 1.

### Number of Children

Although we hypothesized that the more children, the greater the probability of verbal aggression, the logit analysis found a significant relationship only for man-to-woman verbal aggression. Moreover, that relationship is opposite the hypothesis; that is, we found that the more children the lower

FIGURE 3. PROBABILITY OF MAN-TO-WOMAN VERBAL AGGRESSION BY DRINKING AND SEX OF RESPONDENT



the risk of man-to-woman verbal aggression. There are several possible explanations. For example, with increasing number of children, there may be increasing role differentiation and the couple may spend less time interacting with each other. When there are many children there may be less time available to engage in verbal aggression. Another possibility may be a reluctance to argue in front of the children, at least in the more hurtful ways measured by the verbal aggression index. Finally, the reverse causal sequence may be reflected in these findings; namely, that couples who engage in these types of attacks may be concerned about the continuance of the relationship and may therefore choose to have fewer children.

*Alcohol and Drug Use*

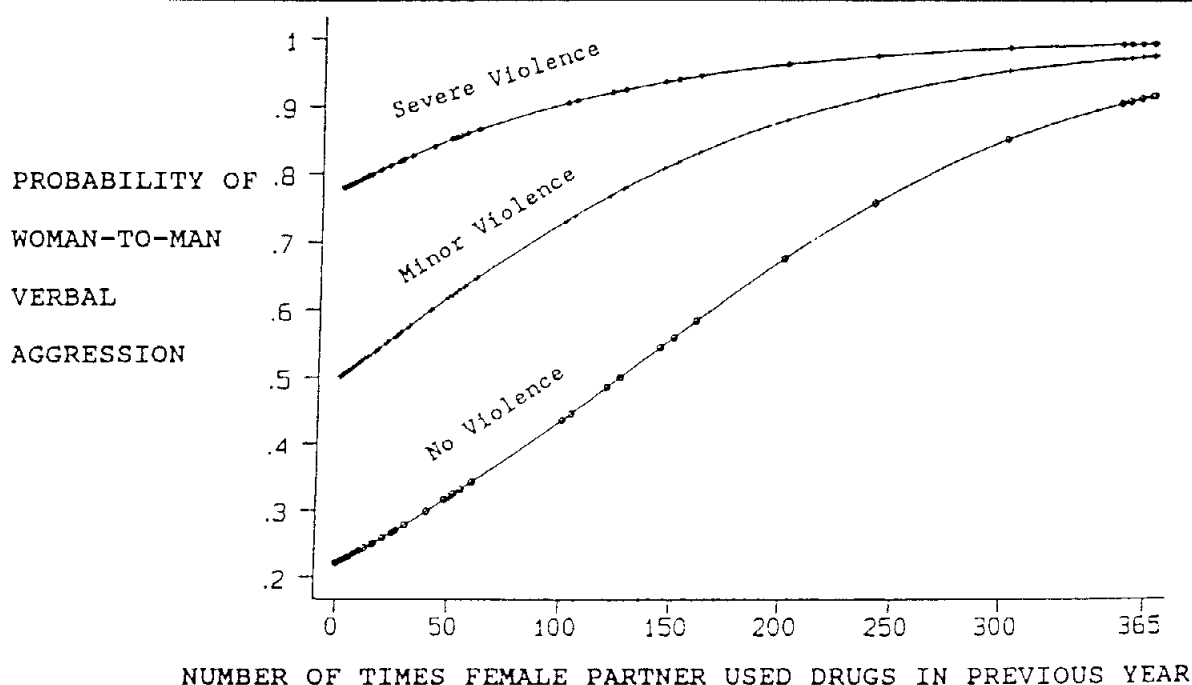
*Alcohol.* Since our interest is in alcohol abuse rather than drinking per se, it was measured as the number of times drunk in the preceding year. Alcohol abuse was treated as an independent variable because we believe that drinking often precedes verbally aggressive behavior. This causal model is consistent with previous experimental work on alcohol and aggression (Rohsenow & Bachorowski, 1984), and with self-reports of the sequence of events preceding instances of wife-

beating (Kaufman Kantor & Straus, 1987).

The logit coefficients in the fourth row of Table 1 and the plot lines in Figure 3 show that, as the number of occasions of drunkenness by the man in the preceding year increased, the probability of engaging in verbal aggression dramatically increased. The plot for drunkenness by women (not shown) is almost identical. Figure 3 also shows that the effect size for drunkenness is large. These results are consistent with hypothesis 6. Finally, Figure 3 illustrates the parallel results obtained using data from women and men.

*Drugs.* The mixed evidence on drug use and physical violence led us to hypothesize no significant relationship between drug use and verbal aggression. Drug use was measured by asking: "In the past year, how often would you guess you got high on marijuana or some other drug?" The logit coefficient in the fifth row of Table 1 for man-to-woman verbal aggression is not significant and therefore supports the hypothesis. However, the logit for the relationship between drug use and woman-to-man verbal aggression is significant. This relationship is plotted in Figure 4. It shows that, the more use of drugs by a woman the greater the probability of her engaging in a high level of verbal aggression, which is contrary to hy-

FIGURE 4. PROBABILITY OF MAN-TO-WOMAN VERBAL AGGRESSION BY DRUG USE AND PHYSICAL VIOLENCE



pothesis 7. Moreover, this relationship is present regardless of the level of physical violence (no violence; minor violence such as slapping; or severe violence such as punching, kicking, or hitting, with an object).

Figure 4 also illustrates that it is difficult to simply judge an effect size from the size of a logit coefficient because logits are logs. In this case the logit is .01. If that were an OLS coefficient it would indicate a very small effect size. But the plot of the logit in Figure 4 shows that an increase in frequency of drug use is associated with large increases in the probability of chronic verbal aggression.

These findings need to be interpreted with caution. The problem goes beyond the fact that the data are cross-sectional and therefore do not provide evidence on the direction of the effect. Even when it is assumed that the drinking comes first (as in Kaufman Kantor & Straus, 1987), the underlying motivational processes do not necessarily follow that sequence. In fact, we and others have argued, in regard to drinking and physical aggression, that many persons drink in order to provide themselves with an excuse for subsequent aggressive behavior (Coleman & Straus, 1983; Kaufman Kantor & Straus, 1987).

#### CONCLUSIONS AND DISCUSSION

An earlier section posed the question: Is verbal aggression an alternative to physical aggression, or does it hold similar relationships with physical aggression to social psychological variables? Our results show that, even when physical aggression is held constant as a control variable, verbal aggression is very similar to physical aggression in its relationship to specified social psychological variables. In no case was the relationship between verbal aggression and these variables contrary to the relationships found (in previous studies) for physical aggression.

This finding suggests that verbal aggression does not serve as a replacement of physical aggression. On the contrary, it can be seen as part of a maladaptive behavioral pattern that is very similar to that of physical aggression in the family. Like physical aggression, there is a positive relationship between verbal aggression, drunkenness, and drug use. Like physical aggression, the incidence of verbal aggression declines with increasing age of respondent and number of children in the family.

We found no statistically significant relationships between verbal aggression, race, and SES. This seems to differ from studies which find that both race and SES are related to physical assaults against partners. However, those studies also found that the less severe the level of physical assault, the smaller the SES difference. If one regards verbal assaults as a less severe form of aggression than physical assaults, then relationship of verbal aggression to SES should be even weaker.

Although these findings are based on a logistic regression analysis which rules out spuriousness due to confounding with the other variables in the model, the use of cross-sectional data leaves the question of causal direction ambiguous for some of the findings. Whatever the causal direction, the results of this study have shown that there is a high rate of verbal aggression in American couples and that the correlates of verbal aggression follows patterns very similar to that previously found for physical aggression.

#### NOTE

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