Journal of Family Violence, Vol. 3, No. 1, 1988

Multiple Stressors, Violence in the Family of Origin, and Marital Aggression: A Longitudinal Investigation[1]

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The negative perception of stress is significantly associated with marital aggression, as is violence in one's family of origin. However, most individuals experiencing stress do not engage in family violence. The present study tests an aspect of social learning theory, proposing that violence in one's family of origin predisposes one to react to stress by aggressing against one's spouse. Two hundred and seventy five couples completed questionnaires measuring multiple (work and life) stress, and marital aggression 6 and 18 months following their wedding. Information on violence in their family of origin was collected 1 month prior to their wedding. Moderated multiple regressions showed that for women, stress predicted marital aggression 1 year later after controlling for age, education, and initial marital aggression. No effects emerged for violence in the family of origin for either men or women. Conceptual implications for further studying the role of violence in the family of origin and the relationship between multiple stressors and physical aggression are advanced.

KEY WORDS: stress; family violence; marital aggression; longitudinal research.

INTRODUCTION

Although physical marital aggression is prevalent (O'Leary *et al.*, 1986; Straus and Gelles, 1986; Straus *et al.*, 1980), it is poorly understood and often

[1]Completion of this research was supported by NIMH Grant MH35340 to Dr. K. D. O'Leary and Dr. A. Rosenbaum, Co-Principal Investigators, and grants from Imperial Oil and the Social Sciences and Humanities Research Council of Canada (Grant 410-85-1139) to the second author.

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0885-7482/88/0300-0073$06.00/0

researched without an adequate theoretical framework. Criticisms of research on family violence have emphasized the need for more complex models of family violence which address multivariate relationships between identified correlates of marital aggression (Farrington, 1986; Geffner *et al.*, 1986; Gelles, 1983; O'Leary, 1987). The present study addresses these criticisms by investigating the prospective relationship between marital aggression and two of its correlates (multiple stress and violence in the family of origin) within the context of a modeling hypothesis derived from social learning theory (Bandura, 1977).

There are numerous and consistent indications that stress is associated with the occurrence of marital aggression (e.g., Barling and Rosenbaum, 1986; Justice and Justice, 1976; Mason and Blankenship, 1987; Rosenbaum, 1986; Straus, 1980). Recent research has refined the conceptualization of the stress/family violence relationship in two ways. First, negative perceptions of stressful events may be better predictors of strain in general (Vinokur and Selzer, 1975), and family violence in particular (Barling and Rosenbaum, 1986; Egeland *et al.*, 1980), than the objective occurrence of such events. Second, most studies have examined the relationship between marital aggression and single sources of stressors, such as work stress (Barling and Rosenbaum, 1986; Justice and Justice, 1976; Steinberg *et al.*, 1981), rather than obtaining an indication of stress occurring in diverse aspects of an individual's life. Studying only one source of stress may provide a truncated perspective of the multiplicity and diversity of stressors experienced by an individual (Bhagat *et al.*, 1985). Examining multiple stressors is more likely to achieve an accurate indication of the variety of stressors to which an individual is subjected. Consistent with these two recent refinements, negative perceptions of multiple negative stress (work and life stress combined) are assessed in the present study.

Despite the existence of a relationship between stress and marital aggression, most individuals experiencing work or life stress are not violent toward their marital partner (Egeland *et al.*, 1980; Straus, 1980). For example, Barling and Rosenbaum (1986) found that perceived work stress explained less than 10% of the variance in marital aggression. Thus, marital violence is just one possible response to stress (Straus, 1980). Straus (1980) maintained that marital aggression will occur in response to stress only when marital aggression is within the behavioral and social repertoire of the individual. This suggests the viability of social learning theory (Bandura, 1977) as a context for understanding why marital aggression will occur when a marital partner is under stress. It is proposed in the present study that individuals exposed to violence in their family of origin are more likely to respond to stress by aggressing against their spouse than are individuals reporting a nonviolent family of origin, because these individuals have learned that interpartner violence is an available response to stress.

There is much support for the hypothesis that exposure to violence in one's family of origin is associated with the occurrence of violence in one's family of procreation (Perry *et al.*, 1983; Rosenbaum and O'Leary, 1981; Telch and Lindquist, 1984). Indeed, violence in the family of origin is frequently cited as the most consistent demographic factor characterizing abusive families (Gelles, 1980; Rosenbaum, 1986), and sons who witness their fathers' violence toward their mothers are more likely to abuse their own wives than those who were not exposed to family violence (Wolfe *et al.*, 1985). In the present study, it is suggested that individuals who were exposed to aggression between family members when they were growing up will be more likely to be aggressive toward their spouse when under stress. In addition to testing this global hypothesis, one additional specific hypothesis is tested. Exposure to violence in the family of origin can be of two types: experiencing violence at the hands of a family member, or observing violence between other family members. Extrapolating from social learning theory (Bandura, 1977), it is suggested that being abused as a child is more influential in predicting subsequent abuse than witnessing interparental violence. The influence of behavioral experience may be greater than that of vicarious experience because behavioral experience provides a more reliable source of experiential feedback.

Because of emerging sex differences in the relationship between current physical aggression and aggression in the family of origin, the present study examines the moderating influence of violence in the family of origin separately for men and women. Arias (1984) found that for men, violence in the family of origin was related to spouse abuse, but this relationship did not emerge for women.

Most research on the intergenerational transmission of family violence and the relationship between stress and family violence has not progressed beyond cross-sectional, univariate analyses (Kalmuss, 1984; O'Leary, 1987), even though many remaining issues can only be addressed using longitudinal analyses. For example, the possibility that maritally violent husbands report more negatively perceived stressful events as a rationalization for their aggressive behaviors cannot yet be excluded. The aim of the present study is to assess the predictive value of two correlates of marital aggression within a longitudinal design. It is proposed that violence in the family of origin moderates the prospective relationship between the negative perception of multiple stressors (work and life stress) and marital aggression. That is, when a spouse has experienced or observed violence in his/her family of origin, it is predicted that negatively perceived stress will predict future marital aggression. Conversely, no relationship between stress and future marital aggression is predicted in the absence of violence in the family of origin. Furthermore, the present study compares the moderating influence of witnessing and experiencing aggression in the family of origin as a specific test of one aspect of social learning theory.

METHOD

Subjects and Setting

The 275 couples who participated in the present study form part of a sample of 398 couples who were voluntary participants in a four-wave, panel investigation of the etiology of marital satisfaction and aggression in beginning first marriages (O'Leary *et al.*, 1986). Couples from the larger sample were included in the present study only if both partners were employed both 6 and 18 months after their wedding—a necessary precondition to measuring work stress. Thus, the only basis for excluding couples was their employment status.[3] Couples were recruited via newspaper and radio announcements in Onondaga and Suffolk counties in New York. The subjects from the two counties did not differ on any demographic variables. At all time periods, all subjects were separated in different rooms while completing the questionnaires, and were paid $40.00 for their participation.

The present data are derived from couples at three time periods, namely one month prior to their weddings, and six and 18 months thereafter. Demographic characteristics of the husbands and wives are presented separately (see Table I). Husbands were significantly older and earned significantly more than their wives, reported lower marital satisfaction at time 1, and experienced more physical abuse as a child, but no other differences emerged between them. Both husbands' and wives' marital satisfaction scores were well above the score at which a marriage is considered to be "at risk" (ie., both > 100) (O'Leary and Turkewitz, 1978). The attrition rate from 1 month premarriage to 18 months after the wedding was 19%, and because couples who did not present for assessment at 18 months were younger and had less education than those who presented for all three testing phases, age and education are statistically controlled in all analyses.

Measurement

Multiple Stressors

The multiple stressor index was derived from two sources: namely, work and life stress. To assess life stress, Sarason *et al.*'s (1978) 47-item Life Experiences Survey (LES) was completed by all subjects. Work stress was as-

[3]Subjects from the general sample who were excluded because they were not employed did not differ from subjects who were employed on any demographic variables or on aggression measured at each of the three time periods.

sessed using Sarason and Johnson's (1979) 32-item Organizational Change Inventory. The format of the two questionnaires is identical. Subjects indicate whether any of the events have occurred and rate the relative positive or negative impact of each occurrence. In this way, three indices can be derived from each scale, but only the negative stress index was used in this study as it is most predictive of subsequent psychopathology (Vinokur and Selzer, 1975; Zuckerman *et al.,* 1986). Also, using only the negative index avoids any problem with multicolinearity because of high intercorrelations between the three indices (mean intercorrelations between three indices for life stress: $M\,r = 0.42$, range = 0.05 – 0.62 for males; $M\,r = 0.40$, range = 0.02 – 0.60 for females; mean intercorrelations between three indices for work stress: $M\,r$ for males = 0.48, range = 0.11 – 0.68; for females $M\,r = 0.44$, range = 0.003 – 0.69). The multiple stress index was derived by summing scores on the negative work and life stress indices.

Family of Origin

Rosenbaum and O'Leary (1981) constructed a scale to assess the extent to which individuals had experienced or witnessed violence in their family of origin. For the purposes of this study, two separate four item subscales were extracted from Rosenbaum and O'Leary's (1981) scale. The first subscale assessed the extent to which the respondent had been abused as a child ("how often were you hit by a parent?", "how often were you beaten by a parent?", "how often were you hit by a parent with a belt, stick or some other object?", "how often did a beating result in cuts and/or bruises?"). These four items yielded satisfactory internal consistency (alpha: 0.74 and 0.72 for males and females respectively). Although the items "how often were you beaten" and "how often did a beating result in cuts and/or bruises" may seem to overlap considerably, in many instances beatings may have resulted in little or no visible injury. The second subscale assessed the extent to which individuals had witnessed aggression in their family of origin ("how often did you see your parents argue?", "how often did you see your father hit your mother?", "how often did your father beat your mother?", and "how often did your mother hit your father?"). All eight items are rated on a three-point scale ("never," "sometimes," "often"), and provide an indication of the existence and extent of violence in the family of origin. Again, the internal consistency was adequate (alpha: 0.58 and 0.64 for males and females respectively). High internal consistency cannot be expected from items measuring behaviors which do not necessarily co-occur. Possible scores on each of the two indices range from 4 to 12.

In comparing different predictors, no hypothesis should be biased as a function of the care with which different predictors are operationalized.

Table I. Demographic, Predictor, Moderator and Criterion Variables for Males and Females

	Males			Females			
	M	*SD*	Range	*M*	*SD*	Range	*t*
1. Age	25.23	3.66	19–37	23.41	2.98	18–36	7.62[a]
2. Education	14.59	2.34	9–21	14.49	1.97	9–20	0.69
3. Annual income ($1,000)	18.68	7.27	0–53	13.09	5.48	0–33	10.12[b]
4. Multiple negative stess	15.59	10.46	1–66	14.69	8.90	1–79	1.21
5. Observe parents abuse	5.26	1.05	4–12	5.31	1.04	4–11	0.84
6. Abused as child	5.75	1.38	4–11	5.48	1.36	4–10	2.72[a]
7. Martial aggression[c] (time 1)	−0.25	4.09	–	−0.18	4.43	–	−0.33
8. Marital aggression (time 2)	−0.16	4.30	–	0.00	4.95	–	−0.69
9. Marital satisfaction (time 1)	116.69	22.48	35–156	119.61	22.33	40–157	−2.00[a]
10. Marital satisfaction (time 2)	115.98	24.45	29–156	118.73	25.25	31–157	−1.81

[a] $p < 0.05$.
[b] $p < 0.01$.
[c] No range is provided for these scores because they are standardized, and further information is provided on marital aggression in Table II.

The separate variables of witnessing and experiencing violence in the family of origin are measured with the same number of items and the same format and yield similar means and standard deviations across males and females (see Table I), which reduces the possibility of an "unfair comparison" (Cooper and Richardson, 1986).

Marital Aggression

Items 11-17 of Straus' (1979) Conflict Tactics Scales were used to assess physical marital aggression. In a recent factor analysis of the Conflict Tactics Scales (Barling *et al.*, 1987), items 11-17 were found to load on a separate factor for both a community and clinic sample, justifying the use of those items as a physical aggression index. Hornung *et al.*'s (1981) revision of the Conflict Tactics Scales was used, as it provides not only a self-rating of each spouse's aggression, but also an index of each spouse's rating of the other's physical aggression.

Following recent suggestions (Barling *et al.*, 1987), the reliability of the physical aggression index was increased by averaging husbands' and wives' scores (i.e., the husbands' index was the average of both his own self-rating and his wife's rating of his aggression, and vice versa) (Horowitz *et al.*, 1979). This procedure is important because interspousal agreement of reports of the reliability of physical aggression are only moderate (Jouriles and O'Leary, 1985). In addition, because Straus' (1979) original 7-point rating scale results in highly skewed item distributions amongst nonclinical samples who typically do not engage frequently in physical aggression, a three-point rating scale was used (nonoccurrence, single occurrence, or multiple occurrence of aggression). Finally, items 11-17 typically receive an equal weighting, even though the more "severe" items occur less frequently. More severe behaviors that occur less frequently should receive a greater weighting than less severe behaviors that occur more frequently. To ensure that the items are weighted appropriately for their severity, standardized item scores were used throughout (Barling *et al.*, 1987) (see Table II for percentage of respondents endorsing each physical aggression item).

Table II. Percentage Endorsement of Aggressive Behaviors

	Males	Females
Threw something	14.2	28.1
Pushed, grabbed or shoved	31.6	35.1
Slapped	11.8	23.1
Kicked, bit, or hit with fist	7.6	16.9
Hit or tried to hit with something	6.2	16.8
Beat up	1.2	1.6
Threatened with knife or gun	0.9	2.2

Marital Satisfaction

Marital satisfaction was assessed using the 15-item Short Marital Adjustment Test (Locke and Wallace, 1959), which repeatedly differentiates between clinically distressed and nondistressed marriages (O'Leary and Arias, 1987). The Short Marital Adjustment Test is a self-report measure of global marital satisfaction and is highly reliable and stable over a three month period (MacEwen and Barling, in press). The range of possible scores extends from 0 to 158.

Design and Analysis

Information about violence in the family of origin was collected 1 month premarriage, thereby avoiding any contamination due to the simultaneous reporting of violence in the family of origin and violence in the family of procreation. Marital satisfaction and marital aggression were assessed both at time 1 (6 months following marriage), and at time 2 (18 months following marriage), whereas stress was measured only at time 1.

Data analysis was completed using hierarchical regression procedures. As in previous longitudinal research on the effects of psychological stress, initial levels of the criterion, in this case marital aggression, were controlled statistically. This is especially important in the present study given the stability of interspousal aggression for both males and females over a 12-month period (see Table III). One purpose of the present study is to remove variance attributable to stable aggression and to predict the occurrence of new aggression on the basis of stress and violence in the family of origin.

RESULTS

Three assumptions central to moderated multiple regression analyses were assessed. First, for both males and females, none of the relationships between the predictor and criterion variables violated the linearity assumption. Second, the low correlations between the predictor variables (see Table III) ensures that the multicolinearity assumption was not violated for either males or females. Third, Zedeck (1971) notes that moderators should not be substantially correlated with the predictor variables, and this condition was achieved in the present study (see Table III).

In all regression analyses, the influence of age and educational level was controlled statistically due to the possibility that nonrandom experimental mortality had occurred. Specifically, couples who did not present for testing

Table III. Intercorrelations of Predictor, Moderator, and Criterion Variables

	1	2	3	4	5	6	7
1. Age		30[a]	−27[a]	−05	−10	−17[a]	−08
2. Educational level (years)	33[a]		−18[a]	−02	−22[a]	−18[a]	−17[a]
3. Multiple negative stress	−20[a]	−10[b]		08	17[a]	07	02
4. Observe parents abuse	00	08	00		31[a]	15[a]	17[a]
5. Abused as child	01	−11[b]	22[a]	29[a]		23[a]	02
6. Marital aggression[c] (time 1)	−16[a]	−19[a]	05	13[b]	11[b]		65[a]
7. Marital aggression (time 2)	−07	−11[b]	14[b]	09	08	72[a]	

[a] $p < 0.01$.
[b] $p < 0.05$.
[c] Data for males above diagonal; females below diagonal.
[d] Decimal points omitted throughout.

18 months after their weddings were significantly younger and less educated ($p < 0.05$). Educational level also serves as one indicator of socioeconomic status. (A summary of the four regression analyses appears in Table IV).

Predicting Women's Marital Aggression

Multiple stress measured 6 months after marriage predicted women's marital aggression 18 months after their wedding ($F(4,270) = 5.39, p < 0.05$); beta = 0.11; with 1.00% of the incremental variance accounted for). In the case of this main effect, 50.75% of the variance had already been accounted for by statistically removing the effects of prior marital aggression, age, and education. No effects emerged for violence in the family of origin, nor was there a stress × violence in the family of origin interaction.

Predicting Men's Marital Aggression

Neither main effects nor the multiple stressor × family of origin (experiencing or witnessing of violence) interactions significantly predicted men's marital aggression at 18 months postwedding. The covariates (age, education, and marital aggression 6 months after the wedding) accounted for 38.91% of the variance in men's marital aggression 18 months postwedding.

DISCUSSION

The present study assessed whether experienced or witnessed violence in men's and women's families of origin moderates the relationship between

Table IV. Four Moderated Multiple Regression Analyses with Marital Aggression at Time 2 as the Dependent Variable

	Males						Females					
	Family of origin moderator						Family of origin moderator					
	Experience			Witness			Experience			Witness		
	R^2ch[a]	Beta	*F*ch	R^2ch	Beta	*F*ch	R^2ch	Beta	*F*ch	R^2ch	Beta	*F*ch
Covariates												
Physical aggression (time 1)		62			62			71			71	
Age		00			00			00			00	
Education	39	−06	45.44[b]	39	−06	45.44[b]	51	04	77.97[b]	51	04	77.97[b]
Predictors												
Family of origin (A)	01	−09	3.01	01	−07	1.87	00	06	1.65	00	01	0.02
Multiple stress (B)	00	−01	0.03	00	−03	0.26	01	11	5.39[c]	01	11	6.22[c]
A ×B	00	08	0.07	00	−29	1.07	00	11	0.16	01	−53	3.33

[a]"ch" refers to "change."
[b]$p < 0.01$.
[c]$p < 0.05$.

stress and marital aggression. Stress exerted a main effect on marital aggression 1 year later for women, but not for men, and no effects emerged for violence in the family of origin.

One difficulty with previous research showing a stress/marital aggression relationship is that most research fails to compare results for men and women (e.g., Egeland *et al.,* 1980; Justice and Justice, 1976), or considers either men or women, but not both (e.g., Barling and Rosenbaum, 1986; Perry, Wells, and Doran, 1983). Straus (1980) did examine the relationship between stress and marital aggression separately for men and women. He found that at low or no levels of stress, men were twice as likely to assault their spouse than wives under low or no stress. However, women under high stress were significantly more likely to assault their spouse than men under high stress. Similarly, Mason and Blankenship (1987) found that negatively perceived life events were associated with the use of aggression by women but not by men. The present finding of a stress main effect for women but not for men is consistent with Straus' (1980) findings. Straus (1980) also found that men who were high in marital satisfaction were less likely to be violent toward their wife when they were under high stress. In the present sample, marital adjustment scores were well above the score considered to indicate a marriage at risk (see Table I), suggesting perhaps that no stress effect emerged in the present study because the men were enjoying high marital satisfaction. Straus (1980) presents no analysis of women's marital satisfaction, and so it remains unknown whether the present findings replicate patterns among the women as well as the men in Straus' study. To adequately address the issue of whether marital satisfaction moderates the stress/marital aggression relationship for men and women, a methodology similar to that of Rosenbaum and O'Leary (1981) is required. That is, couples who are maritally distressed, yet nonabusive should be contrasted with maritally distressed, abusive couples to control for level of marital satisfaction. As well, future research should conduct analyses on both men and women to delineate possible sex differences in the stress/marital aggression relationship.

The failure to find a stress main effect for men in the present study may also be due to the longitudinal, prospective design and/or the specific time lag employed (viz. 12 months). When studying the association between variables over time it is critical to employ an appropriate time lag because any relationship between variables measured at different points in time may be an artifact of the time interval (Gollob and Reichardt, 1987). Thus, future research should employ multiple time series designs with different time lags from which it would be possible to isolate any predictive relationships between stress and marital aggression.

A related issue concerns the nature of the stressor. As in previous research, the measure of multiple stress was derived by accumulating the nega-

tively perceived events over the previous 12 months, yielding a measure of chronic stress. Yet recent research findings suggest that the burden of *daily* living may be a better predictor of psychological strain than major life events (Ivancevich, 1986; Jandorf *et al.*, 1986). Future research should assess whether daily hassles and acute stressors predict marital aggression on the same day or immediately thereafter.

In addition, work and life factors represent distal stressors in that the source of the stress is different from the target of the aggression. Perhaps the stress/aggression relationship would have been higher had the victim also been the source of the stressor, as the perceived justification for aggression may then have been greater (Greenblat, 1983).

An advantage of the present study is that one indicator of socioeconomic status was controlled by including years of education as a covariate in all analyses. Socioeconomic status is widely recognized to be related to marital aggression (Farrington, 1986; Gelles, 1976), and is confounded with stress, in that individuals enjoying higher socioeconomic status may have more resources available to them to cope with stress, as well as fewer stressors to cope with. The finding of a stress main effect for women in the present study suggests that the stress/marital aggression relationship cited in previous literature emerges even when the confounding of years of education and stress is minimized.

Several possible explanations are offered for the failure to find any main or interaction effects for violence in the family of origin. First, it should be emphasized that the zero-order correlations between violence in the family of origin and marital aggression were significant, suggesting that violence in the family of origin is an important predictor of violence in the family of procreation. However, violence in the family of origin predicts an initial reaction of aggression, rather than new instances of aggression, because violence in the family of origin did not predict aggression 18 months after the wedding after controlling for earlier aggression in the regression analyses. Also, although the zero-order correlations between witnessed and experienced violence in the family of origin and marital aggression 7 months later were significant for both men and women before controlling for years of education (see Table III), the relationship between violence in the family of origin and marital aggression was not significant after controlling for years of education in the regression analyses (see Table IV). These results suggest the importance of controlling for years of education to minimize spurious conclusions about the relationship between violence in the family of origin and marital aggression. Second, the methodology of the present study differs from previous research by measuring violence in the family of origin 19 months before the criterion of marital aggression to ensure that reports of

violence in the family of origin were not contaminated by reports of marital aggression.

Further reasons for the failure to find violence in the family of origin effects are inadequacies in the measure of violence in the family of origin, and the limited modeling hypothesis tested. The "witnessed" and "experienced" scales measure a limited range of behaviors and contain only four items each. Scales measuring a wider range of behaviors are needed (e.g., threw an object, hit with fist, threatened with a lethal object), especially since severity of violence may exert an impact on later aggression (Gelles, 1980). Also, the present measure of violence in the family of origin ignored any effects of the sex of a model by failing to distinguish which parent/s were aggressive even though model-observer similarity enhances the likelihood that the model's behavior will be emulated (Bandura, 1977). Fourth, no assessment was made regarding the situations under which violence in the family of origin occurred or individuals' expectations regarding the consequences of aggression. Finally, exposure to a model's behavior is not the only factor determining whether similar behaviors will be emulated later. Rather, the consequences provided for a model's behavior exert an impact on whether the modeled behavior will be enacted. Therefore, it is important to refine measures of violence in the family of origin to include information on the consequences of the violence. The present study was conducted with couples only 18 months into their marriage, and so it remains to be determined whether the present findings generalize to older couples who have been married for longer.

The strengths of the present study include its application of a theoretical framework, its prospective design, multivariate analyses in which years of education was treated as a covariate, and its focus both on experienced versus witnessed violence and possible sex differences in the stress/marital aggression relationship. In addition, even though prior marital aggression was the best predictor of later marital aggression (see Table III) a significant stress effect for women was obtained after controlling for prior marital aggression, educational level, and age.

ACKNOWLEDGMENTS

The authors express their appreciation to Drs. K. D. O'Leary and A. Rosenbaum for their assistance during all phases of this research, and to Dr. I. Arias and S. Grant for their constructive comments on an earlier draft of this manuscript. Portions of this research were presented at the 20th An-

nual Convention of the Association for the Advancement of Behavior Therapy, Chicago, November 1986.

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