

## **The Measure of Wife Abuse: Steps Toward the Development of a Comprehensive Assessment Technique**

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*The lack of an adequate assessment tool for wife abuse has hindered empirical research. The Measure of Wife Abuse (MWA) was developed to improve on previously developed instruments, mainly by using empirical methods of construction, which has enabled the MWA to assess a broader range of wife abuse behaviors. The purpose of this study was to determine the factor structure of the MWA items, and to assess its reliability and validity. Confirmatory multiple group factor analyses of the MWA responses of 164 abused women yielded four factors: Physical, Sexual, Psychological, and Verbal Abuse. The MWA was found to possess adequate levels of both reliability, estimated from its internal consistency, and concurrent validity, with the Conflict Tactics Scales as the criterion measure.*

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**KEY WORDS:** wife abuse; assessment; factor analysis.

### **INTRODUCTION**

Researchers have greatly expanded the body of knowledge about wife abuse in the last 20 years. However, empirical research in the area continues to be hindered by the lack of adequate and consistent nominal and operational definitions (Gelles, 1980, 1982, 1987). There is no consensus among researchers on how to define wife abuse operationally with precision. While the same problem exists for the definition of husband abuse, the differences in prevalence, severity of consequences, and social meaning of the two types of abuse indicate the importance of operationally defining

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wife abuse as a phenomenon separate from husband abuse (Dobash and Dobash, 1979; Gaquin, 1977-1978; Gelles, 1972; Levinger, 1966; Pagelow, 1981; Saunders, 1986; Walker, 1979, 1984; Wolfgang, 1958).

Many researchers have employed clinical samples as a way of operationally defining wife abuse or domestic violence (Dobash and Dobash, 1979; Flynn, 1977; Gelles, 1972; Hilberman and Munson, 1977-1978; Pagelow, 1981; Rounsaville, 1978; Snyder and Fruchtmann, 1981; Walker, 1979). Unfortunately, this method confounds the variables associated with wife abuse with the variables associated with a woman's help-seeking behavior. Further, results of these studies cannot be generalized to nonclinical populations (Gelles, 1980).

The study of wife abuse requires operational definitions that allow researchers to assess levels of violence in relationships independent of a woman's awareness of her being abused or her seeking out professional assistance. A standardized measuring device for wife abuse would allow more accurate selection of representative samples for study, matching of subjects in treatment and control groups, and assessment of treatment outcomes.

A precise measuring device for the construct "wife abuse" would be one that assesses all of its forms, not only some of them. Wife abuse is a complex behavior, manifested in a wide array of individual behaviors. Some of these behaviors are, for example, an abuser's attempting to inflict bodily harm on his wife, directing verbal insults and threats toward his wife, economically depriving the victim, forcing her to perform sexual acts, socially isolating her, and controlling and intimidating her. An accurate measuring device would assess the diversity of acts of abuse which are typically inflicted by abusers toward their wives.

The instruments that have been devised to quantify the incidence of women abused by their husbands are the *Family Violence Scale* (FVS; Bardis, 1973), a measure of courtship violence among students (MCV; Makepeace, 1981), the *Domestic Violence Assessment Form* (DVAF; Kuhl, 1982), the *Center for Social Research Severity Index* (CSRSI; Stacey and Shupe, 1983), the *Index of Spouse Abuse* (ISA; Hudson and McIntosh, 1981), the *Psychological Abuse Diagnostic Checklist* (PADC; Hoffman, 1984), the *Psychological Maltreatment of Women Inventory* (PMWI; Tolman, 1989), the *Aggression Dynamics Analysis* (ADA; Rhodes, 1985), the *Conflict Tactics Scales* (CTS; Straus, 1974, 1979, 1987), and an unnamed spouse abuse instrument (Lambert and Fantuzzo, 1988).

These measuring devices operationalize wife abuse in a manner more appropriate for research than the method of using clinical samples as one's operational definition. Yet, the measures are not equal in their ability to accurately assess wife abuse. The FVS is not intended as a measure of

current abuse between couples. The brevity of the MCV, DVAF, and CSRSI reduces their content validity. The ISA has been criticized for neglecting the assessment of many physically aggressive acts (Straus, 1987) and the measurement of several types of typical nonphysically abusive behaviors (Gondolf, 1987). The PADC and the PMWI appear to measure nonphysical abuse accurately, but not other types. Finally, the ADA items were grouped into categories arbitrarily rather than empirically, and it has not yet been examined for validity and reliability.

The next instrument mentioned, the CTS, is the most widely used instrument for research on intra-family violence (Straus, 1987) and the most frequently used measure of marital aggression (Barling *et al.*, 1987). In his evaluation of the CTS, Straus (1987) noted that: it measures only violence that occurs in interpersonal conflict, neglecting the measurement of malevolent acts not motivated by conflict; it is comprised of a limited list of violent actions, thus it fails to detect many types of abusive actions; it uses a 1-year referent period (which may be too long for accurate recall by respondent) and it fails to measure the consequences of the violent actions (e.g., physical injury, emotional trauma, property damage). Other researchers have added these criticisms: (a) different types of violent actions are combined into one CTS response (Dobash and Dobash, 1981); (b) some CTS items are very specific descriptions while others are quite general and open to interpretation; (c) one form of the CTS is used to assess all forms of family violence, which differ in etiology, dynamics, and reporting procedures (Rhodes, 1985); (d) the item pool for the CTS was generated through informal, collegial discussions rather than by empirical methods; and (e) Straus' hypothesized factors were replicated using an exploratory rather than confirmatory factor analysis (Lambert and Fantuzzo, 1988).

Unfortunately, most of the instruments described thus far are narrow in their focus. Consequently, they are not capable of sufficiently representing the various categories of wife abuse. The instrument used most consistently for the measurement of wife abuse, the CTS, possesses this weakness. It contains two categories of actions: Verbal Aggression (six items) and Physical Aggression (eight items). Yet, there are no CTS items that assess sexual or emotional abuse of the respondent.

The authors and their associates used empirical methods of test construction to develop the final measure listed, designed to address the limitations of the CTS and other existing measures (Lambert and Fantuzzo, 1988). The 60-item measure was designed to assess the type, frequency, and severity of abuse that occurs in a couples' relationship. The initial list of items for this measure had been compiled by Rhodes (1985) from 269 Temporary Restraining Orders (TROs) filed by clients in a program for abused women. The TROs contained detailed descriptions of acts of abuse

directed by men toward their wives and girlfriends. TROs are legal documents sworn under oath, and thus they were believed to be accurate representations of the domain of behaviors labeled as "wife abuse." Rhodes added to this list acts of abuse that had been described in published case reports (Martin, 1981; Walker, 1979). Additionally, items suggested by directors of battered women's shelters were included.

The items were first sorted by the first author and another researcher who judged independently which of the items needed to be deleted because of their being judged as being "too bizarre" (defined as depicting actions that were unlikely to happen, difficult to visualize, or requiring the use of a strange object). There was 96% interrater agreement on these ratings.

Because many researchers have argued that there are different types of abuse (Barling *et al.*, 1987; Hornung *et al.*, 1981; Straus, 1979), the items were sorted two additional times to determine how the items would be grouped into categories. *First*, five research group members sorted the list of items into three categories (physical, psychological, and verbal), after which certain items were revised or eliminated depending on whether or not they had attained an 80% agreement level. A final sorting was performed by four professionals in the area of domestic violence. The professionals were instructed to determine, label, and define a maximum of five categories of abuse, sort the items into these categories, and indicate the 10 items that best represented each of their categories. Results of this process yielded four categories of abuse: physical, sexual, psychological, and verbal. Fifteen items per category were chosen for the measure. The items selected first were those that had attained the highest levels of interrater agreement as to the category to which they belonged, and those chosen by the professionals as the most representative items of each category. The final step in developing this measure was the effort to make the measure gender-neutral.

The purpose of the present study was to develop further this recently constructed instrument by making it capable of assessing precisely the type, frequency, and severity of the full range of acts denoted by the term "wife abuse." "Wife abuse" was defined as the acts a husband directs toward his wife which are intended, or perceived as being intended, to physically or psychologically harm his wife, or coerce her without regard for her rights. "Wife" was defined as a woman involved in an intimate relationships with a man, while "husband" was considered to represent her male counterpart (e.g., boyfriend, cohabiting lover, spouse, ex-husband). For this study, the instrument was modified, and named as the Measure of Wife Abuse (MWA). Modifications included making the reference period a six-month rather than a one-year period, and including a phrase so that women whose relationships had ended previously would be addressed by the instructions.

The specific goals of the study were to determine the factor structure of the MWA items and to assess its reliability and validity by statistically analyzing the questionnaire responses of a sample of abused women. *First*, confirmatory multiple group factor analyses (Gorsuch, 1983) determined the factor structure of the empirically derived group of items that describe the type, rate, and severity of wife abuse. *Second*, the internal reliability of these items was assessed by computing the alpha coefficients of the scales. Finally, the concurrent validity of the MWA was examined by assessing its relationship to the CTS.

## METHOD

### Subjects

The subject pool consisted of 164 women who had been abused by their husbands in a relationship of at least six months duration. Most of the women were receiving services from an outpatient clinic or a battered women's shelter, while a small number had responded to radio and newspaper announcements regarding the study. A woman was considered to be appropriate for inclusion in the subject sample if she had been physically abused by her husband on at least three occasions. The demographic information about the subjects and their husbands is detailed in Table I.

## MEASURES

### Demographics Measure

This measure was designed to obtain general demographic information (e.g., age, race, education, and occupation) concerning the women who participated in the study and their husbands. Level of formal education completed and occupational titles of the women and their husbands were categorized according to the Four Factor Index of Social Status (Hollingshead, 1975). Questions regarding the nature of the women's relationships were also included.

### Measure of Wife Abuse (MWA)

This is the measure derived from a previously constructed spouse abuse measure (Lambert and Fantuzzo, 1988). The MWA is a 60-item device designed to assess the type of abuse directed by a man toward his wife. The MWA examines the frequency of abuse, based on a respondent's report of the number of times acts of abuse occurred in the couple's

Table I. Demographic Information

Demographic Variable	Wives	Husbands
Age		
M	34.37	36.58
SD	10.13	10.24
Range	18-68	19-68
Ethnic status		
(1) Hispanic	23.3%	27.8%
(2) Black	4.3%	7.4%
(3) Native American	5.5%	5.6%
(4) Asian	2.5%	2.5%
(5) White	62.0%	53.7%
(6) Other	2.5%	3.1%
Education <sup>a</sup>		
(1) Less than 7th grade	0.0%	3.1%
(2) Junior high school	3.7%	6.2%
(3) Partial high school	12.9%	16.8%
(4) High school graduation	19.0%	26.7%
(5) Partial college, specialized training after high school	42.3%	26.1%
(6) College graduation	11.7%	11.8%
(7) Graduate training	10.4%	9.3%
Employment status		
Employed	74.7%	84.9%
Unemployed	25.3%	15.1%
Occupation <sup>b</sup>		
(0) N/A	25.5%	14.6%
(1) Farm laborers, menial service wks.	0.6%	3.2%
(2) Unskilled wks.	4.3%	13.3%
(3) Machine operators, semiskilled wks.	7.5%	13.3%
(4) Smaller business owners, skilled wks.	4.3%	25.3%
(5) Clerical and sales wks.	21.7%	4.4%
(6) Technicians, semiprofessionals	16.1%	7.0%
(7) Smaller business owners, farm owners, managers, minor professionals	12.4%	8.2%
(8) Administrators, owner medium-sized businesses	6.8%	7.6%
(9) Higher executives, proprietors of large businesses, major professionals	0.6%	3.2%

Note. N/A = Not applicable; wks. = workers.

<sup>a,b</sup>The education and occupation categories used were those of the Hollingshead Four-Factor Index of Social Status (Hollingshead, 1975).

relationship within a 6-month period. This measure also assesses the emotional consequences experienced by the victim as a measure of the severity of abuse (i.e., how frequently the woman felt hurt or upset by the action).

The questionnaire was to be analyzed based on the women's responses to all 60 items, and also based on their responses to 52 selected items. Eight items were to be deleted from one factor analysis in order to examine whether their removal would increase the precision of the MWA. Those items were ones for which, during the card sort procedure, either no raters agreed that it belonged in an abuse category, or it only attained a 50% agreement level. The items deleted from the physical abuse category were "slapped you," "choked you," "stabbed you with a knife," and "burned your hair." From the sexual abuse group of items, the excluded items were "squeezed your pelvis," "ripped off your clothes," and "knead you in the genital area." No items were removed from the psychological abuse category, and only one item ("screamed at you") was removed from the verbal abuse group of items. The 60-item measure administered in the current study is found in the Appendix.

### **Conflict Tactics Scales (CTS)**

The CTS (Form N) was selected as the measure of wife abuse with which the MWA was compared, as a test of the latter instrument's concurrent validity. The CTS contains 18 items that describe violent and non-violent actions that are employed by a family member in resolving family conflict. For wife abuse assessment, the woman is asked to indicate the number of times in the previous year that her husband performed each action as a method of resolving conflict in the couple's relationship.

### **PROCEDURES**

Subjects were recruited for participation in the study by several methods. Women who were receiving services from a clinic or a battered women's shelter were invited to participate in the study by clinic or shelter staff members. Former clients from one clinic were contacted by the clinic and invited to participate. Additionally, radio and newspaper announcements were made, informing the general public about the study and soliciting volunteers. All subjects received the same information: (a) a particular clinic or shelter was involved in a study on wife abuse, (b) a woman could participate if she met the criteria for subject selection, and (c) each woman's participation would be totally voluntary and would remain strictly confidential.

The women who were residing in shelters, or who were being treated at clinics, were encouraged by agency personnel to complete their questionnaires on the premises. However, they were allowed to take them home and return them at a later time. The women who were contacted by telephone, or who responded to a radio or newspaper announcement, were mailed a packet containing the questionnaires and a stamped, self-addressed envelope in which to return the questionnaires.

In order to respect the policies and preferences of each agency director or administration, the payment of subjects was handled in different ways. It was intended that each subject would be told about a \$5.00 payment that was to be given after her participation in the study. However, if a director or staff preferred that money not be transferred to their clients, then subjects were asked to participate without being informed about the \$5.00 payment. Subjects informed about the \$5.00 received the money after they returned the questionnaire packets.

A total of 421 questionnaires were distributed to abused women by the staff members of three shelters and seven clinics in the Southern California area; 165 questionnaires were returned adequately completed. One questionnaire had been completed by a woman who did not fit the criteria for subject selection (i.e., was not abused on three occasions). Thus, 164 of the returned and completed questionnaires were considered to be appropriate for inclusion in the data analyses.

## RESULTS

### Data Analyses

In order to assess whether the four a priori abuse categories of the MWA were supported by the data, a confirmatory multiple group factor analysis (Gorsuch, 1983, 1988) was performed. The Severity of Abuse model for the 52-item MWA was examined, using the severity ratings of the MWA.<sup>3</sup> Reliability of the MWA was assessed by calculating alpha coefficients for each of the subscales of the test as well as for the entire sample of items. This test of internal consistency is performed by finding the average correlation among items within a test.

Concurrent validity of the MWA was examined using the CTS as the criterion measure. Pearson product-moment correlations were computed for scores on the MWA Physical Abuse scale and the CTS Violence scale

<sup>3</sup>Factor analyses were performed for the Frequency, Frequency-by-Severity, and Severity models of both the 52-item and the 60-item versions of the MWA. Reported here are results that are of most interest, the factor analysis of the Severity model for the shortened MWA. Readers may contact the first author for information regarding the additional analyses.



and for the scores of the MWA Verbal Abuse scale and the CTS Verbal Aggression scale. The total test scores of both the MWA and the CTS were correlated as an additional measure of concurrent validity.

### Factor Analysis

The estimate of the communalities used was the absolute value of the highest correlation among variables in the correlation matrix ( $r = .50$ ). The  $N$  for these analyses was somewhat lowered from the original 164 subjects because cases with more than 20% missing data were deleted.

Results of the analysis of the MWA items revealed that the majority of the individual MWA items attained the criterion correlation of .30 or greater with their respective, expected factors. The percentages of item-factor correlations meeting that criterion were 90% for the Severity of Abuse model. If a more lenient criterion for judging the saliency of the correlations was used (passing as respectable correlation values above .20), then 96% of the items correlated satisfactorily with their hypothesized scales. The factor structure of the MWA in the Severity model is found in Table II.

The differences in the correlations computed for each item and the four factors were compared using as a criterion the value obtained by doubling the standard error of a zero correlation coefficient for this sample size ( $\sigma_r = .08$ ; Gorsuch, 1983). Thus, each item obtaining a correlation with its hypothesized factor of .30, that was at least .13 greater than any other correlation for that item, was considered to have a significant "exclusive" factor loading on its own factor. In the factor analysis of the MWA, 75% of the items had item-factor correlations with their hypothesized factors that were significantly greater than their correlations with the other factors. The percentage was slightly higher (77%) if correlations of .20 were included in these calculations. Thus, most of the items did meet these two criteria, while some MWA items cross-correlated with factors other than their hypothesized factors. The hypothesis that items would tend to load on their hypothesized factors at a level significantly greater than their loadings on other factors was confirmed.

Two items failed to correlate with any factor. Those items were, "Your partner forced you to have sex with animals" and "Your partner attempted suicide." Generally, these items had low endorsement rates. These items were not eliminated from the measure.

Finally, the four factors of the MWA were intercorrelated at a significant level ( $p < .01$ ; see Table III). This indicates that the factors collaboratively measure the same construct, "abuse," but that the factors are less distinct than was originally thought.

Table II. Factor Structure of MWA for Severity Model

Item Groups	Factor			
	PH-A	S-A	PS-A	V-A
Physical abuse items				
24. Kicked	.65	.26	.31	.42
45. Shook	.65	.23	.37	.38
38. Threw you	.62	.24	.42	.40
49. Pushed	.62	.24	.37	.39
22. Punched	.59	.23	.41	.35
4. Threw objects	.54	.26	.39	.36
36. Hit with belt	.49	.46	.31	.21
13. Bit	.47	.34	.18	.31
60. Whipped	.46	.32	.33	.17
18. Scratched	.39	.12	.18	.19
54. Shot with gun	.27	.00	-.06	.01
Sexual abuse items				
11. Objects in vagina	.23	.64	.25	.26
20. Tried to rape	.36	.60	.36	.23
46. Sex with partners	.27	.60	.35	.14
37. Raped	.44	.58	.31	.26
55. Forced sex acts	.36	.57	.34	.36
14. Cut pubic hair	.23	.55	.20	.17
43. Prostituted	.23	.55	.20	.17
48. Sex object	.32	.52	.31	.33
9. Squeezed breasts	.24	.48	.18	.20
42. Porno pictures	.06	.44	.15	.17
12. Mutilated genitals	.00	.26	.12	.13
47. Sex with animals	.00	.09	.00	.00
Psychological abuse items				
26. Stole possessions	.31	.27	.59	.33
27. Took car keys	.28	.28	.58	.29
21. Took wallet	.28	.29	.55	.24
29. Disabled car	.25	.10	.51	.21
3. Imprisoned	.34	.32	.50	.27
19. Locked in	.32	.22	.50	.18
39. Harassed over phone	.28	.20	.49	.32
58. Stole food or money	.20	.37	.48	.24
16. Harassed at work	.24	.29	.47	.12
40. Hung around	.45	.25	.46	.20
50. Followed	.29	.27	.44	.27
8. Locked out	.34	.08	.37	.29
57. Electricity off	.09	.15	.34	.09
25. Kidnapped children	.04	-.07	.31	.06
34. Attempted suicide	.01	.16	.19	.03

(Continued)

Table II. *Continued*

Item Groups	Factor			
	PH-A	S-A	PS-A	V-A
Verbal abuse items				
28. Told no one want	.35	.20	.31	.67
44. Told not good	.33	.30	.31	.66
41. Told horrible wife	.24	.20	.24	.62
59. Told ugly	.24	.24	.15	.62
52. Told stupid	.29	.17	.20	.59
10. Told crazy	.26	.13	.19	.59
32. Called bitch	.43	.13	.22	.56
30. Told lazy	.19	.14	.09	.56
6. Called whore	.47	.18	.29	.52
35. Called cunt	.31	.24	.18	.46
23. Told kill you	.38	.22	.38	.45
51. Told kill family	.18	.36	.33	.35
33. Told take children	.10	.14	.20	.31
17. Told kill children	.22	.32	.23	.22

*Note.* The table contains variable-factor correlations. PH-A = Physical Abuse factor; S-A = Sexual Abuse factor; PS-A = Psychological Abuse factor; V-A = Verbal Abuse factor.  $N = 157$ .

As a check on the integrity of the CTS for its use in testing the concurrent validity of the MWA, a multiple-group confirmatory factor analysis was also performed on the subjects' CTS responses. By this procedure, the usual CTS factor structure was replicated. Two items ("Threatened to hit or throw something at the other one" and "Threw or smashed or hit or kicked something") were problematic in that they correlated equally with the Verbal Aggression and Violence scales. The other CTS items obtained item-factor correlations sufficiently greater on their typical scales than on other scales.

### Reliability

The alpha coefficient of reliability was computed to assess the internal consistency reliability of each of the MWA subscales and for the instrument as a whole. The items comprising the subscales and the MWA are indicated in the factor structure table (Table II). Table IV contains the alpha coefficients. The alpha coefficients reached the hypothesized level of .50; they range from .73 to .94. The reliability coefficient of the MWA in its entirety was high. Thus, the hypothesis that there would be an adequate level of internal consistency of the MWA subscales and Total MWA scale was supported.

Table III. MWA Factor Intercorrelations

Factor	Factor			
	PH-A	S-A	PS-A	V-A
PH-A	1.00	—	—	—
S-A	.47 <sup>a</sup>	1.00	—	—
PS-A	.55 <sup>a</sup>	.47 <sup>a</sup>	1.00	—
V-A	.56 <sup>a</sup>	.41 <sup>a</sup>	.46 <sup>a</sup>	1.00

Note. PH-A = Physical Abuse factor; S-A = Sexual Abuse factor; PS-A = Psychological Abuse factor; V-A = Verbal Abuse factor.

<sup>a</sup>All correlations coefficients were significant ( $p < .01$ ).  $N = 157$ .

Table IV. Coefficient of Reliability (Alpha) of MWA Scales<sup>a</sup>

Scale	Alpha Coefficient
Physical Abuse	.81
Sexual Abuse	.73
Psychological Abuse	.94
Verbal Abuse	.83
Total MWA	.93

<sup>a</sup> $N = 164$ .

The alpha coefficients of the CTS were also figured using this study's sample to compare them to the MWA's reliability coefficients. For the Reasoning, Verbal Aggression, Violence, and Total CTS scales, the reliability coefficients were .46, .73, .89, and .83, respectively. In the present study, the reliability of the MWA Verbal Abuse scale was higher than the reliability of the CTS Verbal Aggression scale, and the Total MWA scale reliability was higher than the Total CTS scale reliability. The MWA Verbal Abuse and Physical Abuse alpha coefficients proved to be comparable to those of the CTS which were based on the representative sample of Straus' study (1979).

### Validity

The final hypothesis, that the correlation of MWA scales with CTS scales would demonstrate the MWA's concurrent validity, was supported. Table V shows that none of the correlations involving the CTS Reasoning subscale were significant. However, most correlation coefficients calculated for the MWA subscales and the CTS subscales reached levels of significance. As was expected, the correlation coefficients calculated for the MWA Verbal Abuse scale and the CTS Verbal Aggression scale, and for

Table V. Correlation of MWA and CTS Scales

CTS Scales	MWA Scales				
	PH-A	S-A	PS-A	V-A	MWA-Tot
Reas	-.09	-.05	.05	-.11	-.03
Verb Agg	.29 <sup>a</sup>	.25 <sup>a</sup>	.23 <sup>a</sup>	.38 <sup>a</sup>	.39 <sup>a</sup>
Viol	.63 <sup>a</sup>	.42 <sup>a</sup>	.22 <sup>b</sup>	.36 <sup>a</sup>	.47 <sup>a</sup>
CTS-Tot	.47 <sup>a</sup>	.35 <sup>a</sup>	.23	.29 <sup>a</sup>	.44 <sup>a</sup>

*Note.* Because the CTS Severity scores are constants, these correlations were derived from the MWA severity scores and the CTS frequency scores. PH-A = Physical Abuse scale; S-A = Sexual Abuse scale; PS-A = Psychological Abuse scale; V-A = Verbal Abuse scale; MWA-Tot = Total MWA scale; Reas = Reasoning scale; Verb Agg = Verbal Aggression scale; Viol = Violence scale; CTS-Tot = Total CTS scale.  $N = 132$ .

<sup>a</sup> $p < .01$ ;  $df = 132$ .

<sup>b</sup> $p < .05$ ;  $df = 132$ .

the MWA Physical Abuse scale and the CTS Violence scale, both reached correlational values very near or greater than .40, and the .01 level of significance. The product-moment correlations between total test scores of the two instruments were also significant ( $r = .44$ ,  $p < .01$ ,  $df = 132$ ).

## DISCUSSION

The factor analysis of Measure of Wife Abuse (MWA) responses gathered from a sample of abused women supported the instrument's hypothesized factor structure. The MWA categories represent more types of wife abuse than those represented by previously developed measures. Until now, wife abuse instruments have tended to be brief, or they focused on one or two categories of abuse. The MWA has been found to consist of four factors: Physical, Verbal, Psychological, and Sexual. The latter two are capable of assessing abuse beyond the scope of the CTS, the most frequently used measure for assessing wife abuse.

The significance of this study's empirical support for the MWA categories is that clinicians and researchers may now assess types of abuse that have been omitted or ignored by other measures. The use of the MWA may result in abused women being more readily identified in clinical settings, and in more precise research findings because of the MWA's sensitivity to types of abuse that not all measures have been capable of measuring. One implication of using the MWA as a research tool is that new studies of wife abuse may reflect higher incidence rates, due to the MWA's inclusion of a comprehensive list of acts of abuse.

The assessment of the two types of abuse that are included on the MWA but not the CTS, sexual and psychological abuse, is very important. Acts of psychological abuse are damaging. Clinical observations have indicated that where there is physical abuse, there is also nonphysical (psychological and verbal) abuse. Based on the high incidence of physical abuse between spouses (Straus and Gelles, 1986; Straus et al., 1980), this would suggest that psychological abuse occurs frequently in marital relationships, making the inclusion of this form of abuse on a wife abuse measure imperative. The empirical support for the MWA Psychological Abuse scale underscores the importance of assessing this form of abuse. Moreover, clinical observations have also revealed that when nonphysical abuse occurs within an atmosphere of physical abuse, the effects of nonphysical abuse may be more intense (Ganley, 1981; Walker, 1979). The MWA could be used to test this hypothesis.

The assessment of husbands' sexual abuse of their wives is also a valuable endeavor. Marital rape is prevalent among women physically abused in other ways by their husbands (Frieze, 1983; Shields and Hanneke, 1983). Even among the general population, marital rape is estimated to have a high incidence. Russell (1982) found in her random sample of 930 women, that one out of seven women reported rape by a husband or ex-husband. Previously devised measures used for wife abuse assessment have tended to neglect this fairly common form of abuse. Further, research indicates that certain characteristics are associated with sexual abuse of women by their husbands. Sexual abuse has been found to be related to severe nonsexual physical abuse in marital relationships. And in comparison to nonsexual physical abuse, sexual abuse is related to more negative emotional reactions on the part of a victim and a greater chance of a victim's making an effort to stop the abuse or end the relationship (Frieze, 1983; Shields and Hanneke, 1983). The MWA Sexual Abuse scale may be used in answering questions regarding characteristics associated with sexual abuse, as well as in assessing the relationships between sexual abuse and other forms of abuse.

Aside from the factorial composition of the instrument, the Total MWA scale and the MWA subscales have proven reliable. Results also demonstrate that the MWA possesses concurrent validity when correlated with what has been considered the best available measure for wife abuse assessment, the CTS. Although the validity coefficients were moderate ( $r = .63$  was the highest correlation), this is probably related to the CTS being a measure of conflict resolution, and the MWA being a measure of abuse. Two of the MWA subscales are known to have concurrent validity: Physical Abuse and Verbal Abuse. Thus, the results are informative of the factor structure, reliability, and validity of the MWA. The current findings support the MWA's potential as an accurate psychometric tool for assessing wife abuse.

As mentioned previously, the concurrent validity of the Psychological and Sexual Abuse scales needs to be assessed. The nonphysical abuse scale of the ISA could possibly be used as a criterion measure for the MWA Psychological Abuse scale. However, many of the ISA nonphysical abuse scale items explicitly or implicitly denote acts of verbal abuse, a construct that was demonstrated to be distinct from psychological abuse in the current study, and for which there is a separate MWA scale. Use of the PADC in this task is an option, although it too contains many verbal abuse items, and its validity and reliability have not been demonstrated. Even though the PMWI dominance-isolation scale contains some items indicating verbal abuse (e.g., "Told could not manage," and "Criticized way took care of house"), this scale may be the best measure to use in assessing the concurrent validity of the MWA Psychological Abuse scale. The PMWI is still under development, however, and is not yet available for use. There is no wife abuse assessment tool focusing on sexual abuse that could be used in determining the concurrent validity of the Sexual Abuse scale. However, a measure of sexual satisfaction that assesses the severity of problems in a couple's sexual relations would suffice as a criterion measure.

The discriminant validity of the measure also needs to be examined. If the MWA is found to differentiate between women who are abused and those who are not, researchers would be able to use the MWA to assign subjects to different groups in their studies of wife abuse and the MWA could be used by clinicians in diagnosing abuse among their clients. It remains to be shown whether or not the MWA is sensitive to changes in levels of abuse. This question is relevant to the usefulness of the measure in assessing the effectiveness of clinical treatment programs designed for victims and batterers.

Finally, shortening the instrument somewhat may facilitate its administration. In future research, items that consistently do not correlate with their factors should be considered for deletion from the MWA.

In summary, research has been obstructed by the lack of instruments that accurately operationalize "wife abuse." The development of the MWA was informed by the strengths and weaknesses of previous measures, primarily the CTS. The drawbacks of the latter measure were avoided in the MWA's development. The present investigation demonstrated the MWA's ability to assess the full range of behaviors indicated by the construct "wife abuse." The study also provided evidence for the MWA's adequate levels of internal consistency and concurrent validity. While the MWA is in need of some internal fine-tuning, its strength as a comprehensive and accurate measuring device has been shown. Further research will be informative of the validity of the two unique scales; and eventual research involving a larger, random sample will provide norms for use with individuals in the general population of North American couples.

APPENDIX

Measure of Wife Abuse

Please, write in the number of times your partner did these actions to you during the *past six months*, or during the *last six months* of the time you and your partner were together. Also, please circle one answer for how hurt or upset you were by each action. If your partner did not do these actions, please write a zero in the blank space.

Number of times this happened in  
the last *SIX* months:

1. Your partner screamed at you . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

2. Your partner squeezed your pelvis . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

3. Your partner imprisoned you in your house . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

4. Your partner threw objects at you . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

5. Your partner kneed you in the genital area . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me



6. Your partner called you a whore . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt or Upset Me	This Rarely Hurt or Upset Me	This Sometimes Hurt or Upset Me	This Often Hurt or Upset Me
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7. Your partner slapped you . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt or Upset Me	This Rarely Hurt or Upset Me	This Sometimes Hurt or Upset Me	This Often Hurt or Upset Me
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8. Your partner locked you out of your home . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt or Upset Me	This Rarely Hurt or Upset Me	This Sometimes Hurt or Upset Me	This Often Hurt or Upset Me
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9. Your partner squeezed your breasts . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt or Upset Me	This Rarely Hurt or Upset Me	This Sometimes Hurt or Upset Me	This Often Hurt or Upset Me
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10. Your partner told you that you were crazy . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt or Upset Me	This Rarely Hurt or Upset Me	This Sometimes Hurt or Upset Me	This Often Hurt or Upset Me
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11. Your partner put foreign objects in your vagina . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt or Upset Me	This Rarely Hurt or Upset Me	This Sometimes Hurt or Upset Me	This Often Hurt or Upset Me
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12. Your partner mutilated your genitals . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt or Upset Me	This Rarely Hurt or Upset Me	This Sometimes Hurt or Upset Me	This Often Hurt or Upset Me
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13. Your partner bit you . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

14. Your partner held you down and cut your pubic hair . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

15. Your partner burned your hair . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

16. Your partner harassed you at work . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

17. Your partner told you they would kill your children . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

18. Your partner scratched you with their fingernails . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

19. Your partner locked you in the bedroom . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

20. Your partner tried to rape you . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt or Upset Me	This Rarely Hurt or Upset Me	This Sometimes Hurt or Upset Me	This Often Hurt or Upset Me
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21. Your partner took your wallet leaving you stranded . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt or Upset Me	This Rarely Hurt or Upset Me	This Sometimes Hurt or Upset Me	This Often Hurt or Upset Me
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22. Your partner punched you . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt or Upset Me	This Rarely Hurt or Upset Me	This Sometimes Hurt or Upset Me	This Often Hurt or Upset Me
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23. Your partner told you they were going to kill you . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt or Upset Me	This Rarely Hurt or Upset Me	This Sometimes Hurt or Upset Me	This Often Hurt or Upset Me
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24. Your partner kicked you . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt or Upset Me	This Rarely Hurt or Upset Me	This Sometimes Hurt or Upset Me	This Often Hurt or Upset Me
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25. Your partner kidnapped your children . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt or Upset Me	This Rarely Hurt or Upset Me	This Sometimes Hurt or Upset Me	This Often Hurt or Upset Me
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26. Your partner stole your possessions . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt or Upset Me	This Rarely Hurt or Upset Me	This Sometimes Hurt or Upset Me	This Often Hurt or Upset Me
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27. Your partner took your car keys . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

28. Your partner told you that no one would ever want you . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

29. Your partner disabled your car . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

30. Your partner told you that you were lazy . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

31. Your partner stabbed you with a knife . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

32. Your partner called you a bitch . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

33. Your partner told you they were going to take away your children \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

34. Your partner attempted suicide . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

35. Your partner called you a cunt . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

36. Your partner hit you with a belt . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

37. Your partner raped you . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

38. Your partner threw you onto the furniture . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

39. Your partner harassed you over the telephone . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

40. Your partner hung around outside your home . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

41. Your partner told you that you were a horrible wife . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

42. Your partner took porno pictures of you . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

43. Your partner prostituted you . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

44. Your partner told you that you weren't good enough . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

45. Your partner shook you . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

46. Your partner forced you to have sex with other partners . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

47. Your partner forced you to have sex with animals . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

48. Your partner treated you as a sex object . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

49. Your partner pushed you . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

50. Your partner followed you . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

51. Your partner told you they were going to kill your parents or family \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

52. Your partner told you that you were stupid . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

53. Your partner ripped your clothing off . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

54. Your partner shot you with a gun . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

55. Your partner forced you to do unwanted sex acts . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

56. Your partner choked you . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

57. Your partner turned off the electricity . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

58. Your partner stole food or money from you . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

59. Your partner told you that you were ugly . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

60. Your partner whipped you . . . . . \_\_\_\_\_  
How much did this hurt or upset you? (please circle below)

This Never Hurt                      This Rarely Hurt                      This Sometimes                      This Often Hurt  
or Upset Me                      or Upset Me                      Hurt or Upset Me                      or Upset Me

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