

Journal of Family Issues

<http://jfi.sagepub.com>

The Revised Conflict Tactics Scales (CTS2): Development and Preliminary Psychometric Data

MURRAY A. STRAUS, SHERRY L. HAMBY, SUE BONEY-MCCOY and DAVID B. SUGARMAN

Journal of Family Issues 1996; 17; 283

DOI: 10.1177/019251396017003001

The online version of this article can be found at:
<http://jfi.sagepub.com/cgi/content/abstract/17/3/283>

Published by:



<http://www.sagepublications.com>

Additional services and information for *Journal of Family Issues* can be found at:

Email Alerts: <http://jfi.sagepub.com/cgi/alerts>

Subscriptions: <http://jfi.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.com/journalsPermissions.nav>

Citations <http://jfi.sagepub.com/cgi/content/refs/17/3/283>

This article describes a revised *Conflict Tactics Scales* (the CTS2) to measure psychological and physical attacks on a partner in a marital, cohabiting, or dating relationship; and also use of negotiation. The CTS2 has (a) additional items to enhance content validity and reliability; (b) revised wording to increase clarity and specificity; (c) better differentiation between minor and severe levels of each scale; (d) new scales to measure sexual coercion and physical injury; and (e) a new format to simplify administration and reduce response sets. Reliability ranges from .79 to .95. There is preliminary evidence of construct validity.

The Revised Conflict Tactics Scales (CTS2)

Development and Preliminary Psychometric Data

MURRAY A. STRAUS

SHERRY L. HAMBY

University of New Hampshire

SUE BONEY-MCCOY

Eastern Connecticut State University

DAVID B. SUGARMAN

Rhode Island College

The *Conflict Tactics Scales*, or CTS (Straus, 1979, 1990a), measures both the extent to which partners in a dating, cohabiting, or marital relationship engage in psychological and physical attacks on each other and also their use of reasoning or negotiation to deal with conflicts. The most frequent application of the CTS has been to obtain data on physical assaults on a partner.

Authors' Note: Revision of a paper presented at the Theory and Methodology Workshop during the annual meeting of the National Council on Family Relations in Portland, Oregon, November 15, 1995. It is a pleasure to express appreciation to Susan Ross for the initial work on the injury scale; to the members of the Family Research Laboratory Seminar; and to the discussants of the conference presentation, Lance C. Egley, Patrick C. McKenry, and Constance L. Shehan. This article is a publication of the Measurement Research Program of the Family Research Laboratory, University of New Hampshire, Durham, New Hampshire 03824. A list of publications will be sent on request. The research has been funded by National Institute of Mental Health Grant T32MH15161 and the University of New Hampshire.

JOURNAL OF FAMILY ISSUES, Vol. 17 No. 3, May 1996 283-316
© 1996 Sage Publications, Inc.

The CTS has been used in many studies since 1972 involving more than 70,000 participants from diverse cultural backgrounds, including African Americans (Cazenave & Straus, 1979; DuRant, Cadenhead, Pendergrast, Slavens, & Linder, 1994; Hampton, Gelles, & Harrop, 1989) and Hispanic Americans (Kaufman Kantor, Jasinski, & Aldarondo, 1994). The CTS has also been used successfully in at least 20 countries, including Hong Kong (Tang, 1994), India and Japan (Kumagai & Straus, 1983), Israel (Eisikovits, Guttmann, Sela-Amit, & Edleson, 1993), Spain (Hinshaw & Forbes, 1993), and Sweden (Gelles and Edfeldt, 1986). The CTS is increasingly being used as a diagnostic aid in family therapy (Aldarondo & Straus, 1994; O'Leary & Murphy, 1992). Approximately 400 papers have been based on data obtained by use of the CTS (see bibliography in Straus, 1995), including studies that have established its validity, reliability, and factor structure (reviewed in Straus, 1990a). In 1994, articles reporting findings based on use of the CTS were published at a rate of about 10 per month.

An instrument that is this widely used needs to be examined carefully, and there has been a number of suggested revisions. This article describes the steps taken to revise and enlarge the CTS and reports preliminary psychometric data on the revised version.

COMPARISON OF ORIGINAL AND REVISED CTS

From this point on, for economy and accuracy, CTS1 will refer to the original CTS, and CTS2 to the revised CTS. Statements that apply to both versions will use CTS.

THEORETICAL BASIS AND MODE OF OPERATIONALIZATION

Despite the important differences between CTS1 and CTS2, the theoretical basis and mode of operationalization are fundamentally the same. The theoretical basis of the CTS is conflict theory (Adams, 1965; Coser, 1956; Dahrendorf, 1959; Scanzoni, 1972; Simmel, 1955; Straus, 1979). This theory assumes that conflict is an inevitable part of all human association, whereas violence as a tactic to deal with conflict is not.

Measures concrete acts and events. The CTS measures the extent to which specific tactics, including acts of physical violence, have been used. The CTS is not intended to measure attitudes about conflict or violence nor the causes or consequences of using different tactics. The focus on

specific acts or events is a strength of the CTS. Some scholars, however, view the focus on specific acts as a limitation (Dobash & Dobash, 1979; Kurz, 1993). They fault the CTS for measuring acts out of context.

The criticism that the CTS does not take into account the context and meaning of the acts is analogous to criticizing a reading ability test for not identifying the reasons a child reads poorly (such as limited exposure to books at home or test anxiety) and for not measuring the harmful effects of reading difficulty (such as low self-esteem or dropping out of school). These types of issues are critical, but they must be investigated by including measures of those explanatory, context, or consequence variables along with the reading test.

Similarly, the CTS is intended to be used in conjunction with measures of whatever cause, context, and consequence variables are relevant for the study or the clinical situation. This includes variables that are simple to measure but basic for understanding the connotations and meaning of the CTS scores, such as gender, age, height, and weight; and equally fundamental but more difficult to measure variables, such as the balance of power, feelings of fear and intimidation, and injury. Indeed, injury is such an important consequence that the revised CTS includes a scale to measure physical injury. It is important to note, however, that this is a separate scale, not part of the physical assault scale (see Straus, 1990a, 1990b, for why it is extremely important to separately measure physical assaults and injuries). Moreover, in their own research, some key critics of the CTS have contradicted their own criticism by following the CTS approach of asking about a list of assaultive acts to obtain the measure of physical violence and using a separate measure of injury (see for example, Dobash, Dobash, Cavanagh, & Lewis, 1994; Statistics Canada, 1993). The Canadian Violence Against Women Survey, for example, investigated alternatives to the CTS for more than a year, including extensive consultation with experts and battered women's advocates, focus groups, public hearings, and field testing (H. Johnson, 1994). In the end, the Canadian study measured physical assaults with the nine items in the CTS1 but with one minor and one major modification. The minor modification was to add the phrase "that could hurt" to three CTS1 items, such as "thrown something at you" (Statistics Canada, 1993, p. 5). The major modification was to delete the questions asking about assaults by the female respondents on their partners.

Symmetry of measurement. Conflict theory is the basis for another important characteristic of the CTS—symmetry in measurement. The CTS measures the behavior of both the respondent and the respondent's

partner. This is not the same as symmetry in behavior. That is an empirical issue that the symmetry of the CTS makes it possible to investigate. We believe that most research and clinical uses of the CTS would benefit from data on the behavior of both partners in a relationship. This applies even when it might seem that only information on the behavior of one of the partners is needed, such as when the CTS is used to measure progress in a treatment program for male batterers. Research has shown that the cessation of violence by one partner is highly dependent on whether the other partner also stops hitting (Feld & Straus, 1989; Gelles & Straus, 1988). Thus, when monitoring a treatment program, it is crucial to know the extent to which the partner has also ceased acts of psychological and physical aggression.

AUGMENTED SCALES

A recurring dilemma in test construction is the balance between a test that is brief enough to be applicable in situations that permit only limited testing time (Nelson & Berwick, 1989) and long enough to achieve an adequate sampling of the universe of content (content validity) and enough observations (i.e., enough items) to achieve an adequate level of reliability. CTS1 may have erred on the side of brevity. The reasoning scale had only three items, and the psychological aggression scale had only six items. Although the physical assault scale had nine items, some researchers evidently felt this was not adequate because they added other violent acts. The CTS2, therefore, has additional items in each of the three original scales. The increased number of items enables more facets of each construct to be included in each scale and thus increases the likelihood that the scale will be valid. Additional items also tend to increase the reliability of a scale.

NEW SCALES

The CTS2 includes scales to measure an additional type of partner abuse (sexual coercion) and a consequence (physical injury from assaults by a partner). These were chosen from among many possible additional scales because of their intrinsic importance and because, like the CTS1 scales, they refer to concrete acts or events. Consequently, the questions can be asked within the same framework and using the same response categories (how often did this happen in the past year or some other time period) as used for the negotiation, psychological aggression, and physical assault scale items.

IMPROVED ITEMS

The awkward "his/her" or "him/her" was replaced by "my partner." All items were reviewed, some were revised to clarify the wording, and some were replaced by new items. The appendix identifies the revised and new items. An example of a revision is the item "Threw something at him/her." This does not indicate whether it was a pillow or a brick. The introduction to the CTS1 asks about times when they and their partner disagree, get annoyed with the other person, or just have spats or fights because they are in a bad mood or tired or for some other reason. This was intended to provide a context to prompt responding about something that could hurt. But rather than depend on the context, the CTS2 makes it explicit by specifying "Threw something at my partner that could hurt."

IMPROVED OPERATIONALIZATION OF MINOR AND SEVERE LEVELS

The CTS1 classified items in the physical assault scale into minor and severe. That conceptually based classification has been supported by factor analyses and, more recently, from a growing recognition that the etiology and treatment of occasional minor violence may be quite different than the etiology of repeated severe assaults (Gelles, 1991; Holtzworth-Munroe & Stuart, 1994; M. P. Johnson, 1995; Straus, 1990b). The CTS2 provides a better operationalization of the distinction between minor and severe acts. The severe violence part of the physical assault scale has been strengthened by adding two new items and eliminating an overlapping item. In addition, the distinction between minor and severe has been applied to the psychological aggression scale as well as to the new sexual coercion and injury scales.

SIMPLIFIED FORMAT

The CTS1 was originally developed for use as an interview schedule rather than as a self-administered questionnaire. It had two columns of response categories, one for the number of times the respondent carried out each act in the CTS and the other for the partner's acts. This matrix format works well when the CTS is administered by an interviewer or as a self-administered test with highly educated participants, such as college students. However, it is confusing for some of the general population. The CTS2 replaces the matrix format with a format developed by Neidig (1990) for research with military families. Each item is asked first for what the participant has done and then repeated on the next line for what the

partner has done. This format also shortens the time needed to complete the CTS because, for most items, the second question in the pair can simply be "My partner did this to me."

INTERSPERSED ORDER OF ITEMS

The CTS1 presented items in hierarchical order of social acceptability, starting with the socially desirable negotiation scale items ("Discussed an issue calmly") and ending with the most severe of the physical assault items ("Used a knife or gun"). This sequence was based on the findings from qualitative research done when designing the CTS1. This revealed some of the implicit cultural rules for being physically violent, such as having previously tried everything yet the partner continues the objectional behavior and refuses to even talk about it. The hierarchical order gives participants an opportunity to show that they have indeed tried everything. It creates what Shehan (1995, p. 2) calls a "context of legitimization" for disclosing acts of physical violence. What, then, led us to the interspersed order?

One reason is that, despite the plausibility of providing a context of legitimization, some users of the CTS have asked only the physical violence questions yet obtained meaningful results. In addition, psychometric research, such as Dahlstrom, Brooks, & Peterson (1990), has shown that an interspersed item order reduces response sets, such as blindly marking all items as "never" and may also minimize demand characteristics by making it less obvious which items are scored on each subscale. They also found that an interspersed order resulted in higher prevalence rates. Overall, interspersed items require participants to think about each item more than would be the case if they were in groups of similar items. In pretesting with students who used separate answer sheets, we noticed that, with the hierarchical order, some zipped down the page circling all zeros; we did not notice this with the interspersed item order.

The hierarchical order can also produce a negative reaction for some respondents. We observed this when pretesting the parent-child version of the CTS2 (Straus, Hamby, Finkelhor, & Runyan, 1996). Some nonviolent parents, having declared that they had not done the first of the violent acts and would never do anything like that, were a little irritated to be asked about 11 other violent acts. This did not occur with the interspersed order.

A definitive answer to the issue of question order will depend on findings from an experiment in which random halves of the respondents are given the hierarchical and interspersed item version of the CTS. In the

TABLE 1
Comparison of CTS1 and CTS2

<i>CTS2</i>		<i>CTS1, Form R</i>	
<i>Scale Name</i>	<i>Items</i>	<i>Scale Name</i>	<i>Items</i>
Revised scales		Original scales	
Physical assault	12	Violence	9
Psychological aggression	8	Verbal aggression	6
Negotiation	6	Reasoning	3
Total	26	Total	18
		"cried" item (not scored)	1
New scales		—	
Injury	6	—	
Sexual coercion	7	—	
Grand total	39	Grand total	19

meantime, we recommend using the interspersed order of items given in the appendix.

SCALE LENGTH, NAMES, AND DEFINITIONS

Table 1 summarizes the differences between the revised and original CTS in scale names and the number of items per scale. Each scale also has subscales. The negotiation scale can be divided into cognitive and emotional subscales, and the other scales can be divided into minor and severe subscales (see Appendix for identification of items).

Negotiation. We define negotiation as actions taken to settle a disagreement through discussion. The items in the cognitive subscale are examples of such discussions. Research on marital conflict and communication has shown that the emotional tone of discussions (e.g., whether positive or negative) is strongly linked to marital stability (Gottman & Krokoff, 1989; Noller & Fitzpatrick, 1990). The emotion subscale is meant to measure the extent to which positive affect is communicated by asking about expression of feelings of care and respect for the partner.

Psychological aggression. The change in scale name from verbal aggression to psychological aggression was made because some of the acts, such as "Stomped out of the room," are nonverbal aggressive acts. See Vissing, Straus, Gelles, & Harrop (1991) for a definition and conceptual analysis.

Physical assault. The name of the violence scale was changed to physical assault because it better describes the acts that fit the definition of physical violence on which the CTS is based (Gelles & Straus, 1979; Straus, 1979). It avoids confusion with the use of violence as a much broader concept. When the term *violence* is used in this article, it is a shorter synonym for physical assault by a partner.

Sexual coercion. Sexual coercion is defined as behavior that is intended to compel the partner to engage in unwanted sexual activity. The sexual coercion scale is intended to cover a range of coercive acts, from verbal insistence to physical force.

Injury. This scale measures partner-inflicted physical injury, as indicated by bone or tissue damage, a need for medical attention, or pain continuing for a day or more.

METHODS

THE REVISION PROCESS

For the negotiation, psychological aggression, and physical assault scales, the process of revising items and adding new items included a review of existing items and possible new items on the basis of our experience in research, in shelters, and in clinical work; and a review of critiques, additions, and related measures or modifications of the CTS (such as J. C. Campbell, 1995; Dobash & Dobash, 1979; Grotevant & Carlson, 1989; Margolin, 1991; Marshall, 1992; Neidig, 1990; Saunders, 1992; Statistics Canada, 1993; Tolman, 1989).

We considered many items and narrowed them down by applying the following criteria: (a) The item should refer to specific acts or events, although there were limits to this goal. Thus the term *swore* can refer to several expressions. Nevertheless, to swear represents a more specific act than to be humiliated, which can be manifest in an almost unlimited number of ways; (b) we attempted to include only acts that apply to all couples. For example, although torturing a pet can be an important form of psychological abuse, it was eliminated because this can only happen if a couple has a pet; (c) we eliminated items that were similar or overlapped with each other; (d) we selected items that could be understood by persons with 6th-grade reading skill; and (e) we chose items that represented a range of severity.

The negotiation scale, which replaces the CTS1 reasoning scale, is entirely new. This could be done without loss of continuity because the reasoning scale was inadequate in both the number and content of the items and was rarely used. The CTS2 negotiation scale doubles the number of items to six, three of which refer to cognitive aspects of negotiation and three to emotional aspects.

The psychological aggression scale retains four of the six original items, two of them in slightly modified form. Consequently, the major change in the psychological aggression scale was the adding of four items.

For the physical assault scale, we retained all nine original acts, but some items were modified. The CTS1 had two items on use of knives and guns ("Threatened him/her with a knife or gun" and "Used a knife or fired a gun"). We dropped the first of these because this behavior was sufficiently covered by the second item and because to threaten could be interpreted in more than one way.

NEW SCALES

Research on partner violence requires measures of many more variables than is practical to make a part of the CTS. We decided that two additional scales is the maximum that could be added and still retain the advantage of a brief instrument.

Sexual coercion scale. Construction of the sexual coercion scale began by crossing three levels of coercion (insistence, threats of force, actual force) with three types of sexual acts (vaginal, anal, and oral). This 3 x 3 design resulted in a pool of 9 items. The original item pool also included four other sexual acts for which only the insistence level of coercion was asked. Thus a pool of 13 items was available for pretesting and item selection. The final version of the scale has 7 items.

Injury scale. The injury scale was developed on the basis of items first used in the longitudinal phase of the 1985 National Family Violence Survey. The items ask how often each of four types of injury occurred as a result of physical attacks by a partner, how often it was necessary to see a doctor for such injuries, and how often a doctor was actually seen.

PRETEST

After revising and adding items to the existing scale, and creating the items for the two new scales, we conducted a pretest to obtain reactions

to the items and suggestions for revisions. A pool of 47 items for the negotiation, psychological aggression, physical assault, and injury scales was given to 60 undergraduates. An additional 37 students were given these 47 items together with the items for the sexual coercion scale. Although the students participating in this pretest were asked to answer each item, our main interest was in the comments, revisions, and suggestions they were asked to write on the questionnaire. This feedback prompted the revising of many items and eliminating of others and resulted in the 60-item pool that was used to obtain the data for this article.

SEQUENCE OF ITEMS

The 60 items were interspersed using a random-number program. We then modified this order by moving two of the negotiation scale items to the beginning and two of the very severe violence items to later in the sequence. These departures from a random order retained some of the context of legitimization and avoided asking difficult questions at the start.

SAMPLE FOR PRELIMINARY PSYCHOMETRIC ANALYSIS

The findings reported in this study are based on data obtained from students about their relationship to a partner in a dating, cohabiting, or marital relationship. Preliminary research on a student sample was a useful strategy in developing the CTS1. The factor structure of the student data, for example, is very similar to the factor structure later found for national and clinical samples (Straus, 1979, 1990a).

The findings to be reported are also valuable because students are a large and important population who are often victims or perpetrators of partner violence. Numerous studies show that the 12-month prevalence rate of dating violence is 25%-30% (Stets & Straus, 1990b; Sugarman & Hotaling, 1989), which is almost double the 16% rate for married couples. There are currently approximately 14 million college students. It is important to have an instrument that is applicable to this substantial population that is at high risk of partner violence.

The data were obtained by distributing 541 questionnaires in undergraduate sociology and criminal justice classes in two colleges in the spring of 1995. Participants were told that they could omit any question they did not wish to answer and that they could omit the entire questionnaire by putting the blank questionnaire in the box at the front of the room when other students started handing in their questionnaires. Fifteen students chose not to answer the questionnaire.

TABLE 2
Characteristics of Participants (Expressed in Percentages) (N = 317)

	<i>Characteristic</i>
Sex	
Male	36
Female	64
Year in college	
Freshman	20
Sophomore	18
Junior	25
Senior	37
Age (years)	
Mean	21.7
Standard deviation	5.1
Relationship status	
Dating	90
Engaged	4
Married	6
Cohabiting	
Yes	13
No	87
Relationship described	
Current	63
Past	37
Sexually active in the relationship described	
Yes	88
No	12
Father's education	
High school or less	20
Some college	25
College degree	26
Graduate school	29
Mother's education	
High school or less	31
Some college	32
College degree	23
Graduate school	14

Participants who were not 18 or older, or who did not have a heterosexual dating, cohabiting, or marital relationship of at least 1 month duration during the previous year, were not included in the analysis. In addition, cases were deleted if there were missing data for even one of the many variables needed for the CTS and several other scales (listwise deletion). We decided on listwise deletion to have the same set or subset

of participants in all analyses. A total of 317 participants met these criteria. Table 2 gives the participants' demographic characteristics. It shows that women and students in their junior and senior years are overrepresented, although there are enough males to permit statistical comparisons by gender. As expected, this is primarily a sample of young dating couples. The participants were asked to describe their current relationship or, if no current relationship, the most recent relationship. About two thirds responded to the CTS about a current relationship. Participants tended to come from well-educated families. Over half of their fathers and over a third of their mothers had completed a 4-year college degree.

DATA FOR THE PRELIMINARY PSYCHOMETRIC ANALYSES

To understand the data used for this study, it is necessary to distinguish between the items in three versions of the CTS: (a) The original CTS1 (see Appendix); (b) the items used to obtain the data for this article (see Table 3); and (c) the final CTS2 (see Appendix). As explained below, some items were revised after the data for this article were gathered. The extent of these revisions varies from scale to scale. Consequently, the data used here vary from scale to scale in the degree to which it is based on the items in the final CTS2.

The simplest cases are the negotiation and psychological aggression scales because the statistics presented for these two scales are based on the items exactly as in the final CTS2.

For the physical assault scale, two items were revised slightly subsequent to obtaining the data reported here. Thus the statistics for the physical assault scale in this study might be different if data based on the revised wording had been used. However, past experience with the CTS indicates that it is very robust. This is based on the results of studies, such as Pan, Neidig, & O'Leary (1994), that used modifications of the CTS1 and still produced findings that are essentially the same as the original. Consequently, it is unlikely that these two changes in wording would result in findings that lead to conclusions about the CTS2 differing from those based on the statistics in this article.

For the sexual coercion and the injury scales, many revisions of the items occurred after the data for this study were gathered. The nature of these revisions is best understood by comparing the sexual coercion and injury scale items in Table 3 with the items for those scales in the final CTS2. Because many items were revised, the results reported in Tables 3, 4, and 5 for the sexual coercion and injury scales are highly tentative.

ITEM ANALYSIS AND RELIABILITY

SELECTION OF ITEMS

As indicated earlier, it was necessary to balance the competing objectives of a scale that is short enough to be practical to use in typical research and clinical settings with the objectives of a scale that is long enough to provide an adequate level of reliability. We also took into account the fact that the main application of the CTS has been to obtain data on physical assaults, followed by data on psychological aggression. In recognition of these differences in use of the CTS scales, we decided to select 12 items for the physical assault scale, 8 items for the psychological aggression scale, and 6 items for the negotiation scale. Both statistical and conceptual criteria were used to select the items.

Statistical criteria. We first examined the frequency distributions to identify and eliminate items with a bimodal distribution. We then examined internal consistency. Items were retained if they enhanced internal consistency reliability, as indicated by a reduced alpha when the item was deleted and by the size of the correlation of each item with the sum of the other items (corrected item-total correlation).

For the psychological aggression scale, an additional statistical criterion was considered. Chi-square analyses indicated that, not surprisingly, all psychological aggression items significantly discriminated between the presence and absence of violence. Only some items, however, discriminated between the presence of minor physical assaults and the presence of severe assaults. Items for the severe psychological aggression subscale were chosen from among those that predicted severe assaults, and items for the minor psychological aggression subscale were chosen from among those that only made the basic violence-no violence distinction (see Hamby, Straus, & Sugarman, 1996).

Conceptual criteria. The conceptual criteria used to select items included whether there was a similar item among those already selected, the level of reading skill required to understand the item, and our judgment concerning the importance of each item as an indicator of the latent dimension measured by the scale. In addition, items for each of the four abusive-behavior scales were chosen to represent both minor and severe levels. In the case of the negotiation scale, half the items were selected from among those measuring cognitive aspects and half from items

measuring emotional aspects of negotiating a conflict. (See appendix for items in the minor and severe or cognitive and emotional subscales.)

For the physical assault scale, to achieve a better balance between measurement of minor and severe assaults than the CTS1, we decided that the scale should consist of five minor and seven severe assault items (compared with three minor and six severe in the CTS1).

The items in the sexual abuse and injury scale were classified into minor and severe categories on a conceptual basis by consensus of the authors.

ALPHA RELIABILITY COEFFICIENTS

Table 3 shows that all of the CTS2 scales had good internal consistency. The coefficients are as high or higher than reliabilities previously reported for the CTS1 (see Straus, 1990a).

The psychological aggression scale is the least internally consistent of the three scales. This is partly because some items were selected to increase the diversity of content of the scale rather than to increase the internal consistency reliability. The item pool, for example, included three name-calling items ("Called my partner dumb or stupid," "Called my partner fat or ugly," and "Accused my partner of being a lousy lover"). We kept only the second and third of the three. If we had retained all three, the alpha coefficient would have been higher because alpha is largely a function of the correlation of the items with each other. However, that would have given disproportionate weight to name calling. In addition, keeping all three, while also sticking to the limit of eight items (to keep the CTS2 to a practical length), would have meant losing representation in the scale of other modes of psychological aggression. Finally, we chose among these three items by cross-tabulating each by the level of physical assault (none, minor only, severe). The two items we kept differentiated between minor and severe violence, whereas the dropped item only differentiated between the presence or absence of violence.

PREVALENCE AND CHRONICITY

Prevalence. The prevalence rate is the percentage of the sample who reported one or more instances of the acts in each scale. This is not a meaningful statistic for the negotiation and psychological aggression scales because almost everyone reported at least one instance (see Table 4). However, moving down Part A of Table 4 to the physical assault section,

TABLE 3
Internal Consistency Reliability for Approximations^a to CTS2
Scales and Descriptive Statistics for Self-Report of Perpetration

Item	Item-Total <i>r</i> ^b
Negotiation (alpha = .86)	
Explained side of argument	.74
Suggested compromise to an argument	.70
Showed partner cared	.69
Said could work out problem	.63
Agreed to try partner's solution	.62
Respected partner's feelings	.58
Psychological aggression (alpha = .79)	
Insulted or swore at partner	.66
Shouted at partner	.65
Stomped out of room	.61
Threatened to hit or throw something at partner	.52
Destroyed something of partners	.47
Did something to spite partner	.46
Called partner fat or ugly	.42
Accused partner of being a lousy lover	.35
Physical assault (alpha = .86)	
Kicked, bit, or punched partner	.70
Slapped partner	.70
Beat up partner	.65
Hit partner with something	.62
Choked partner	.61
Slammed partner against wall	.60
Grabbed partner	.56
Threw something at partner that could hurt	.52
Used knife or gun on partner	.52
Pushed or shoved partner	.51
Twisted partner's arm or hair	.47
Burned or scalded partner on purpose	.39
Sexual coercion (alpha = .87)	
Used force to make partner have sex	.74
Used threats to make partner have anal sex	.73
Used force to make partner have anal sex	.70
Insisted on anal sex (no force)	.69
Used threats to make partner have sex	.58
Insisted on sex (no force)	.54
Insisted on sex without a condom (no force)	.34
Injury (alpha = .95)	
Partner was cut or bleeding	.92
Partner went to doctor for injury	.92
Partner needed to see doctor but didn't	.86
Partner felt pain the next day	.79
Partner had sprain or bruise could see	.77
Partner's private parts were bleeding	.74

- a. *Approximation* is used to indicate that some items used to compute these statistics are different than in the final CTS2 in the Appendix. See text of the article for explanation.
- b. These are "corrected" correlations, i.e. they exclude from the total the item whose correlation is shown. All correlations are statistically significant at $p < .001$.

TABLE 4
Prevalence and Chronicity Statistics for
Approximations^a to CTS2 Scales, by Gender of Participant

<i>Scale</i>	<i>Gender of Participant^b</i>	
	<i>Men</i>	<i>Women</i>
A. Tactic "expressed," "enacted," "perpetrated," "inflicted"		
Negotiation		
Prevalence (percentage)	100	98
Chronicity (mean)	61.6	69.7
(<i>SD</i>)	38.5	38.8
Psychological aggression		
Prevalence (percentage)	74	83
Chronicity (mean)	15.1	16.0
(<i>SD</i>)	17.4	18.8
Physical assault		
Prevalence (percentage)	47	35
Chronicity (mean)	12.9	9.4
(<i>SD</i>)	21.6	15.4
Sexual coercion		
Prevalence (percentage)	37	18
Chronicity (mean)	19.9	12.6
(<i>SD</i>)	31.4	15.8
Injury		
Prevalence (percentage)	15	9
Chronicity (mean)	25.1	3.6
(<i>SD</i>)	37.8	6.8
B. Tactic "experienced," "received," "victimized," "sustained"		
Negotiation		
Prevalence (percentage)	100	99
Chronicity (mean)	57.4	67.1
(<i>SD</i>)	35.5	39.7
Psychological aggression		
Prevalence (percentage)	76	78
Chronicity (mean)	17.2	15.1
(<i>SD</i>)	21.1	18.5
Physical assault		
Prevalence (percentage)	49	31
Chronicity (mean)	15.9	9.3
(<i>SD</i>)	25.8	18.0
Sexual coercion		
Prevalence (percentage)	38	30
Chronicity (mean)	18.5	11.8
(<i>SD</i>)	30.2	14.4

TABLE 4 Continued

Scale	Gender of Participant ^b	
	Men	Women
Injury		
Prevalence (percentage)	16	14
Chronicity (mean)	24.7	6.2
(<i>SD</i>)	41.7	11.6

a. *Approximation* is used to indicate that some items used to compute these statistics are different than in the final CTS2 in the Appendix. See text of the article for explanation.

b. The *n* for men is 113 and for women is 204. However, except for the negotiation scale, in which the prevalence is 100%, the *n* for the chronicity estimates are lower. To find the *n* for chronicity, multiply the column *n* by the prevalence proportion. Thus the *n* for the chronicity of psychological aggression by male partners as reported by men is $.74 \times 113 = 84$ cases.

the prevalence row shows that 47% of the men and 35% of the women reported at least one instance in which they had physically assaulted their partner in the preceding 12 months. In Part B of Table 4, the physical assault prevalence row indicates that 49% of the men and 31% of the women reported having been a victim of physical assault by their partner. The high rates of physical assault by women as well as men in Table 4 will be surprising to some readers, but they are consistent with findings from over 30 previous studies (Straus, 1993; Straus & Gelles, 1990a; Sugarman & Hotaling, 1989).

Chronicity. Chronicity, as used in this article, indicates how often the set of acts measured by each scale occurred, among those who engaged in one or more instances of these acts. This operationalization of chronicity is used to deal with the extremely skewed distribution of physical assaults among couples. The 1995 National Family Violence Survey (Straus & Gelles, 1990a) found that 16% of couples experienced one or more physical assaults during the preceding year. This was a startlingly high rate. Nevertheless, it is also an extremely skewed distribution. As a result of the preponderance of nonviolent couples, estimates of the average number of assaults are close to zero. To produce a meaningful estimate of the average number of assaults in the previous 12 months, the mean must be based on just couples who experienced one or more violent events in the previous year. Thus the chronicity statistics for physical assaults in Table 4 are the mean number of times the acts or events in each index occurred among those who experienced at least one violent act.

TABLE 5
Correlations Among Approximations^a to
CTS2 Scales for Self-Report of Perpetration^b

CTS2 Scale	Gender	Negotiation	Psychological Aggression	Physical Assault	Sexual Coercion	Injury
Negotiation	Men	—	.22	-.05	.03	.01
	Women	—	.40	.21	.10	.16
Psychological Aggression	Men	—	—	.71	.66	.63
	Women	—	—	.67	.25	.41
Physical Assault	Men	—	—	—	.90	.91
	Women	—	—	—	.26	.42
Sexual Coercion	Men	—	—	—	—	.87
	Women	—	—	—	—	.29
Injury	Men	—	—	—	—	—
	Women	—	—	—	—	—

a. Approximation is used to indicate that some items used to compute these statistics are different than in the final CTS2 in the Appendix. See text of the article for explanation.

b. The ns are 113 for men and 204 for women. With these ns, correlations of .25 or higher are significant at the .01 level for men and of .18 or higher for women (two-tailed tests). Correlations between .20 and .24 are significant at the .05 level for men, and between .14 and .17 or higher are significant for women.

Because of space limitations and to keep the focus of this article on describing the development of the CTS2, we must put off to a future study comment on the prevalence or chronicity statistics in Table 4.

CONSTRUCT AND DISCRIMINANT VALIDITY

CONSTRUCT VALIDITY

To demonstrate construct validity, a test must be correlated with other variables with which it should theoretically be associated (D. T. Campbell & Fiske, 1959). Establishing construct validity takes many such correlations, and the following are steps in that direction.

Correlates of sexual coercion. If it can be assumed that men are more likely than women to use coercion to obtain sex, the psychological aggression and physical assault scales should be more highly correlated with the sexual coercion scale for men than for women. Examination of the relevant pairs of correlations in Table 5 shows that the correlations for

men are substantially higher in every case. This is confirmed by z tests for differences between correlations, both of which are significant (psychological aggression and sexual coercion: $r = .66$ for men and .25 for women, $z = 4.53, p < .01$; physical assault and sexual coercion: $r = .90$ for men and .26 for women, $z = 10.17, p < .01$).

Relation of assault to injury. Previous research shows that physical assaults by men result in a serious injury more often than do assaults by women (Stets & Straus, 1990a). Consequently, if the physical assault and injury scales are valid measures of these constructs, there should be a higher correlation between them for men than for women. We did find the predicted higher correlations between physical assault and injury for men than for women ($r = .87$ for men and .29 for women, $z = 9.10$). Finally, the correlation between the sexual coercion scale and the injury scale is .87 for men and .29 for women ($z = 8.72$).

Psychological aggression and physical assault. The conflict-escalation theory of couple violence argues that verbal aggression against a partner, rather than being cathartic and tension reducing, tends to increase the risk of physical assault (Berkowitz, 1993). Empirical research has supported the escalation rather than the catharsis theory by finding a strong association between psychological aggression and the probability of physical assaults (Murphy & O'Leary, 1989; Straus, 1974). Assuming the escalation theory is correct, if the CTS2 measures of psychological aggression and physical assault are valid, they should be highly correlated. Table 5 shows the theoretically expected high correlations, and these correlations contribute to evidence of construct validity.

Relationships with social integration. Scores on a social integration (SI) scale (Ross & Straus, 1995) were available for this sample. The SI scale is based on the control theory of crime (Gottfredson & Hirschi, 1990; Hirschi, 1969). The basic idea of control theory is that persons who lack integration into conventional society are more likely to engage in crime. Given the substantial evidence supporting the control theory of crime, and given the fact that physical assaults on a partner are criminal acts, a valid measure of physical assaults should be associated with low social integration. Ross and Straus found a correlation of -.29 between the SI scale and the CTS2 physical assault scale, and this correlation adds an additional bit of evidence for the construct validity of the CTS2.

DISCRIMINANT VALIDITY

D. T. Campbell and Fiske's (1959) analysis of validity makes clear that there must also be evidence that the test is not correlated with irrelevant variables. If there are correlations between scales of a multiscale instrument for which there is no theoretical basis to expect a correlation, it suggests that a method effect might be the main source of variance in the test scores. If the two scales are not correlated, it can be taken as evidence of discriminant validity.

To investigate discriminant validity, we identified two pairs of scales that, in principle, should not be correlated: negotiation and sexual coercion and negotiation and injury. Table 5 shows only nonsignificant or low correlations for these pairs. Because there is little ground for expecting a correlation, these findings can be interpreted as contributing to evidence of discriminant validity for the negotiation, sexual coercion, and injury scales.

ADMINISTRATION AND SCORING OF CTS2

APPLICABLE POPULATIONS

Education and ethnic group. In revising the CTS, we kept the vocabulary and sentence structure simple to make it applicable to a broad section of the population. The Flesch grade level measure (Flesch, 1949) found that the CTS2 requires only 6th-grade reading ability. In addition, the CTS2 is likely to be usable with many cultural groups because CTS1 has been used with several U.S. ethnic groups and in other nations (see references cited at the beginning of this article) and the CTS2 is very similar to the CTS1.

ONE OR BOTH PARTNERS

CTS2 items are asked in the form of pairs of questions (what the participant did and what the partner did). Consequently, it obtains data on the behavior of both partners, even when only one of the partners is tested. Whenever possible, however, both partners should be tested. Although most studies have found a substantial correlation between the violence reports of partners (examples of recent studies include Babcock, Waltz,

Jacobson, & Gottman, 1993; Ballard, Cummings, & Larkin, 1993; Cantos, Neidig, & O'Leary, 1994), one partner may not disclose as fully as the other. In addition, men who engage in severe assaults tend to underreport their violence relative to their partner (see for example, Browning & Dutton, 1986; Szinovacz, 1983; but there are also exceptions, such as Cascardi, Langhinrichsen, & Vivian, 1992). Couple data permit using the higher of the two scores. In clinical work, discrepancies can be a useful focus of discussion with clients.

The desirability of couple data does not mean that data from one partner are invalid. A number of studies have shown that the correlates of violence identified on the basis of data provided by husbands parallel the findings from data provided by wives (Arias & Beach, 1987; Straus, Gelles, & Steinmetz, 1980; Szinovacz, 1983; Sugarman, Aldarondo, & Boney-McCoy, in press). These findings are important because there are many circumstances when obtaining couple data is not practical. In work with men in batterer treatment programs, the female partner is often not available for testing. Similarly, shelters typically refuse to permit questioning of residents about their own violence.

When the CTS is used in random sample surveys, seeking out both partners is extremely expensive and may also pose greater risks for participants than interviewing just one of the partners. It is more difficult to maintain confidentiality if both must be contacted to participate. When both are interviewed, the partner may demand to know what the other has said, and partners with paranoid tendencies will not believe the other no matter what she or he says.

OTHER USES

The CTS1 has been used to measure psychological and physical abuse of a child by parents (Straus & Hamby, 1995). Another revision of the CTS has been developed for that purpose (the Parent-Child Conflict Tactics Scales [PCCTS], Straus, Hamby, Finkelhor, & Runyan, 1996).

There are also other ways to use the CTS2. One of these is to obtain data on violence between the parents of adolescents or adults by asking them to respond about the behavior of their parents toward each other. This was actually the first use of the CTS (Straus, 1974). The instructions need to be changed from "No matter how well a couple gets along" to "No matter how well one's parents get along," and the questions need to be changed from "I" and "My partner" to "My mother" and "My father." The

item on accusing a partner of being a lousy lover and the sexual coercion scale would be dropped.

Sibling-to-sibling and adolescent relationships with same-sex peers can be investigated by the same types of modifications as were suggested in the previous paragraph.

The CTS items have also been used as coding categories for analysis of documents such data as police records (Claes & Rosenthal, 1990), orders of protection (Gondolf, McWilliams, Hart, & Stuehling, 1994), and psychiatric intake interviews (Gondolf, Mulvey, & Lidz, 1990).

LENGTH AND TESTING TIME

Number of items versus number of questions. The 39 items in the CTS2 are designed to be asked about both the participant and the partner. Thus there are two questions for each item, making a total of 78 questions. The times given below assume that both the participant and partner questions are asked.

Testing time. The CTS2 is almost twice as long as the CTS1 (39 compared with 19 items or 78 compared with 38 questions). Despite that, the administration time for the CTS2 (10-15 min) is still brief enough to be practical in clinical settings or for inclusion in epidemiological surveys.

Short forms. If a shorter test is needed, the scales that are most crucial for the purpose at hand can be selected. For example, the equivalent of the CTS1 can be used by administering the CTS2 versions of just the three original scales. These three scales take 7-10 min.

REFERENT TIME PERIOD AND REFERENT SITUATION

Referent time period. The standard instructions for the CTS ask what happened in the previous year. However, this can be modified to ask about other referent periods, such as since a relationship started, since a previous stage of a treatment program, or the previous month or 6 months.

Referent event or situation. An alternate to a time period referent is a specific conflict or situation. It may be easier to recall what happened in relation to a specific conflict or situation than a time period. If so, it could produce more accurate information but at the cost of losing information about other situations and thus annual prevalence rates for violence. In

clinical applications, however, period prevalence rates are not usually of interest. A specific conflict referent might provide information that could be discussed with the client to help develop appropriate modes of dealing with those situations. There are also some situations wherein the CTS can be administered with both types of referent. The referent for the initial testing might be for a time period such as the previous 12 months. When a particularly difficult situation or type of conflict has been identified in the course of working with the couple, a subsequent testing might use the next occurrence of that situation as the referent.

PERMISSION FOR RESEARCH USE OF THE CTS2

Permission to reproduce the CTS2 will be granted without charge to persons who agree to carry out and report psychometric analyses (such as reliability and factor analyses), or who agree to provide us with data to use for psychometric analysis. If data are provided, their use will be limited to psychometric analyses and the right to use the data for substantive analyses will rest exclusively with the person or persons providing the data.

SCORING

Scoring the CTS2 follows the principles described and explained in the manual for the CTS1 (Straus, 1995) and in Straus and Gelles (1990b). Consequently, this section covers only the most basic aspects of scoring.

The CTS is scored by adding the midpoints for the response categories chosen by the participant. The midpoints are the same as the response category numbers for Categories 0, 1, and 2. For Category 3 (3-5 times) the midpoint is 4, for Category 4 (6-10 times) it is 8, for Category 5 (11-20 times) it is 15, and for Category 6 (More than 20 times in the past year) we recommend using 25 as the midpoint.

Treatment of response Category 7. Response Category 7 ("Not in the past year, but it did happen before") is used in two ways: (a) When scores for the previous year are desired (the usual use of the CTS), Category 7 is scored as 0; and (b) Category 7 can also be used to obtain a relationship prevalence measure of physical assault—that is, did an assault ever occur? Respondents who answer 1 through 7 are scored as 1 (yes).

Prevalence and chronicity. As explained earlier, when the CTS is used for research with any type of sample except cases known to be violent

(such as men in a batterer treatment program), we recommend that two variables be created for the physical assault, sexual coercion, and physical injury scales: a prevalence variable and a chronicity variable. The prevalence variable is a 0-1 dichotomy, with a score of 1 assigned if one or more of the acts in the scale occurred. The chronicity variable is the number of times the acts in the scale occurred, among those who engaged in at least one of the acts in the scale. Uses of the CTS with a person or group known to be violent does not require separate prevalence and chronicity variables because prevalence is already known.

THE CTS RESPONSE CATEGORIES

Users of the CTS1 have sometimes replaced the 0 to 20-plus response categories with categories such as never, sometimes, often, and frequently. The 0 to 20-plus categories are preferable because of person-to-person and situation-to-situation differences in the numerical referent of words such as sometimes, often, and frequently; and because numerical categories permit estimates of the frequency of physical assaults and injuries.

DISCUSSION

The CTS is a widely used instrument with strong evidence of validity and reliability (summarized in Straus, 1990a). Precisely because it is so widely used, it needs to be carefully scrutinized and revised to enhance its validity and reliability. But, ironically, the well-established nature of the CTS1 creates a dilemma. The dilemma is the need to choose between an instrument of established validity and reliability with national norms and an extensive body of literature—and a new instrument that, in principle, is superior but for which there is as yet only preliminary evidence of validity and reliability. Despite the preliminary nature of the evidence, there are numerous reasons why it will usually be better to use the CTS2, including the following:

- an increased number of items to enhance content validity and reliability;
- revised wording to increase clarity and specificity;
- better differentiation between minor and severe levels of psychological and physical aggression;
- replacement of the weakest of the original scales (reasoning) by a new scale to measure cognitive and emotional aspects of negotiating a conflict;

- simplified format to facilitate use as a self-administered questionnaire;
- interspersal of items from each scale to reduce response sets and demand characteristics;
- additional scales to measure two important aspects of abuse of a partner: sexual coercion and physical injury.

The internal consistency reliability of the CTS2 scales ranges from .79 to .95. There is also preliminary evidence of construct validity and discriminant validity. In addition, because, conceptually and methodologically, the CTS2 is fundamentally the same as the CTS1, the extensive evidence supporting the validity of the CTS1 (Straus, 1990a) may also apply to the CTS2.

The preliminary psychometric findings are promising. They are based, however, on college student couples. Although this is an important part of the population, it is also a limited population. Findings based on students may not apply more generally. Student couples, for example, are much more often violent than older couples (see the review in Stets & Straus, 1990b; Sugarman & Hotaling, 1989) and there may be other differences. We are now in the process of administering the CTS2 to women in a support group sample. Our future research will include psychometric analyses based on samples of the general population and relevant clinical populations, such as couples in family therapy, men in treatment programs for violence, and women receiving assistance from a battered women's program.

APPENDIX**The Revised Conflict Tactics Scale (CTS2, Form A)**

This appendix has three parts. Part 1 consists of tables that group the CTS2 items by scale, show which are new or modified items, and identify the subscale for each item. Part 2 is the CTS1. Part 3 is the CTS2.

Part 1

<i>Negotiation Scale Items^a</i>			
<i>Question Number</i>	<i>Subscale</i>	<i>Item</i>	
1	Emotional	I showed my partner I cared even though we disagreed	
13	Emotional	Showed respect for my partner's feelings about an issue	
39	Emotional	Said I was sure we could work out a problem	
3	Cognitive	Explained my side of a disagreement to my partner	
59	Cognitive	Suggested a compromise to a disagreement	
77	Cognitive	Agreed to try a solution to a disagreement my partner suggested	

<i>Psychological Aggression Scale Items</i>			
<i>Question Number</i>	<i>Relation to CTS1^b</i>	<i>Subscale</i>	<i>Item</i>
5	Old	Minor	Insulted or swore at my partner
35	New	Minor	Shouted or yelled at my partner
49	Old	Minor	Stomped out of the room or house or yard during a disagreement
67	Mod	Minor	Said something to spite my partner
25	New	Severe	Called my partner fat or ugly
29	New	Severe	Destroyed something belonging to my partner
65	New	Severe	Accused my partner of being a lousy lover
69	Old	Severe	Threatened to hit or throw something at my partner

<i>Physical Assault Scale Items</i>			
<i>Question Number</i>	<i>Relation to CTS1^b</i>	<i>Subscale</i>	<i>Item</i>
7	Mod	Minor	Threw something at my partner that could hurt
9	New	Minor	Twisted my partner's arm or hair
17	Mod	Minor	Pushed or shoved my partner
45	Mod	Minor	Grabbed my partner
53	Old	Minor	Slapped my partner
21	Old	Severe	Used a knife or gun on my partner
27	Mod	Severe	Punched or hit my partner with something that could hurt
33	Old	Severe	Choked my partner
37	New	Severe	Slammed my partner against a wall
43	Old	Severe	Beat up my partner
61	New	Severe	Burned or scalded my partner on purpose
73	Mod	Severe	Kicked my partner

APPENDIX: Part 1 Continued

<i>Sexual Coercion Scale Items^c</i>		
<i>Question Number</i>	<i>Subscale</i>	<i>Item</i>
15	Minor	Made my partner have sex without a condom
51	Minor	Insisted on sex when my partner did not want to (but did not use physical force)
63	Minor	Insisted my partner have oral or anal sex (but did not use physical force)
19	Severe	Used force (like hitting, holding down, or using a weapon) to make my partner have oral or anal sex
47	Severe	Used force (like hitting, holding down, or using a weapon) to make my partner have sex
57	Severe	Used threats to make my partner have oral or anal sex
75	Severe	Used threats to make my partner have sex

<i>Injury Scale Items^c</i>		
<i>Question Number</i>	<i>Subscale</i>	<i>Item</i>
11	Minor	Had a sprain, bruise, or small cut because of a fight with my partner
71	Minor	Felt physical pain that still hurt the next day because of a fight with my partner
23	Severe	Passed out from being hit on the head by my partner in a fight
31	Severe	Went to a doctor because of a fight with my partner
41	Severe	Needed to see a doctor because of a fight with my partner, but I didn't
55	Severe	Had a broken bone from a fight with my partner

a. All items are new to the CTS2 and replace the former reasoning items.

b. Compares CTS2 item with items in CTS1. Modified from CTS1.

c. All items are new to the CTS2.

(continued)

APPENDIX: Part 2*Original Conflict Tactics Scales (CTS1, Form R, 1985)***Reasoning**

- A. Discussed an issue calmly
- B. Got information to back up your side of things
- C. Brought in, or tried to bring in, someone to help settle things

Verbal aggression

- D. Insulted or swore at him/her
- E. Sulked or refused to talk about an issue
- F. Stomped out of the room or house or yard
- G. Cried (this item is not scored)
- H. Did or said something to spite him/her
- I. Threatened to hit or throw something at him/her
- J. Threw or smashed or hit or kicked something

Minor violence

- K. Threw something at him/her
- L. Pushed, grabbed, or shoved him/her
- M. Slapped him/her

Severe Violence

- N. Kicked, bit, or hit him/her with a fist
- O. Hit or tried to hit him/her with something
- P. Beat him/her up
- Q. Choked him/her
- R. Threatened him/her with a knife or gun
- S. Used a knife or fired a gun

APPENDIX: Part 3
The CTS2 follows in the form to be administered.**RELATIONSHIP BEHAVIORS**

No matter how well a couple gets along, there are times when they disagree, get annoyed with the other person, want different things from each other, or just have spats or fights because they are in a bad mood, are tired, or for some other reason. Couples also have many different ways of trying to settle their differences. This is a list of things that might happen when you have differences. Please circle how many times you did each of these things in the past year, and how many times your partner did them in the past year. If you or your partner did not do one of these things in the past year, but it happened before that, circle "7."

How often did this happen?

- 1 = Once in the past year
- 2 = Twice in the past year
- 3 = 3-5 times in the past year
- 4 = 6-10 times in the past year

- 5 = 11-20 times in the past year
- 6 = More than 20 times in the past year
- 7 = Not in the past year, but it did happen before
- 0 = This has never happened

APPENDIX: Part 3 Continued

1. I showed my partner I cared even though we disagreed.	1 2 3 4 5 6	7 0
2. My partner showed care for me even though we disagreed.	1 2 3 4 5 6	7 0
3. I explained my side of a disagreement to my partner.	1 2 3 4 5 6	7 0
4. My partner explained his or her side of a disagreement to me.	1 2 3 4 5 6	7 0
5. I insulted or swore at my partner.	1 2 3 4 5 6	7 0
6. My partner did this to me.	1 2 3 4 5 6	7 0
7. I threw something at my partner that could hurt.	1 2 3 4 5 6	7 0
8. My partner did this to me.	1 2 3 4 5 6	7 0
9. I twisted my partner's arm or hair.	1 2 3 4 5 6	7 0
10. My partner did this to me.	1 2 3 4 5 6	7 0
11. I had a sprain, bruise, or small cut because of a fight with my partner.	1 2 3 4 5 6	7 0
12. My partner had a sprain, bruise, or small cut because of a fight with me.	1 2 3 4 5 6	7 0
13. I showed respect for my partner's feelings about an issue.	1 2 3 4 5 6	7 0
14. My partner showed respect for my feelings about an issue.	1 2 3 4 5 6	7 0
15. I made my partner have sex without a condom.	1 2 3 4 5 6	7 0
16. My partner did this to me.	1 2 3 4 5 6	7 0
17. I pushed or shoved my partner.	1 2 3 4 5 6	7 0
18. My partner did this to me.	1 2 3 4 5 6	7 0
19. I used force (like hitting, holding down, or using a weapon) to make my partner have oral or anal sex.	1 2 3 4 5 6	7 0
20. My partner did this to me.	1 2 3 4 5 6	7 0
21. I used a knife or gun on my partner.	1 2 3 4 5 6	7 0
22. My partner did this to me.	1 2 3 4 5 6	7 0
23. I passed out from being hit on the head by my partner in a fight.	1 2 3 4 5 6	7 0
24. My partner passed out from being hit on the head in a fight with me.	1 2 3 4 5 6	7 0
25. I called my partner fat or ugly.	1 2 3 4 5 6	7 0
26. My partner called me fat or ugly.	1 2 3 4 5 6	7 0
27. I punched or hit my partner with something that could hurt.	1 2 3 4 5 6	7 0
28. My partner did this to me.	1 2 3 4 5 6	7 0
29. I destroyed something belonging to my partner.	1 2 3 4 5 6	7 0
30. My partner did this to me.	1 2 3 4 5 6	7 0
31. I went to a doctor because of a fight with my partner.	1 2 3 4 5 6	7 0
32. My partner went to a doctor because of a fight with me.	1 2 3 4 5 6	7 0
33. I choked my partner.	1 2 3 4 5 6	7 0
34. My partner did this to me.	1 2 3 4 5 6	7 0
35. I shouted or yelled at my partner.	1 2 3 4 5 6	7 0
36. My partner did this to me.	1 2 3 4 5 6	7 0
37. I slammed my partner against a wall.	1 2 3 4 5 6	7 0
38. My partner did this to me.	1 2 3 4 5 6	7 0
39. I said I was sure we could work out a problem.	1 2 3 4 5 6	7 0
40. My partner was sure we could work it out.	1 2 3 4 5 6	7 0
41. I needed to see a doctor because of a fight with my partner, but I didn't.	1 2 3 4 5 6	7 0
42. My partner needed to see a doctor because of a fight with me, but didn't.	1 2 3 4 5 6	7 0
43. I beat up my partner.	1 2 3 4 5 6	7 0
44. My partner did this to me.	1 2 3 4 5 6	7 0

(continued)

APPENDIX: Part 3 Continued

45. I grabbed my partner.	1 2 3 4 5 6 7 0
46. My partner did this to me.	1 2 3 4 5 6 7 0
47. I used force (like hitting, holding down, or using a weapon) to make my partner have sex.	1 2 3 4 5 6 7 0
48. My partner did this to me.	1 2 3 4 5 6 7 0
49. I stomped out of the room or house or yard during a disagreement.	1 2 3 4 5 6 7 0
50. My partner did this to me.	1 2 3 4 5 6 7 0
51. I insisted on sex when my partner did not want to (but did not use physical force).	1 2 3 4 5 6 7 0
52. My partner did this to me.	1 2 3 4 5 6 7 0
53. I slapped my partner.	1 2 3 4 5 6 7 0
54. My partner did this to me.	1 2 3 4 5 6 7 0
55. I had a broken bone from a fight with my partner.	1 2 3 4 5 6 7 0
56. My partner had a broken bone from a fight with me.	1 2 3 4 5 6 7 0
57. I used threats to make my partner have oral or anal sex.	1 2 3 4 5 6 7 0
58. My partner did this to me.	1 2 3 4 5 6 7 0
59. I suggested a compromise to a disagreement.	1 2 3 4 5 6 7 0
60. My partner did this to me.	1 2 3 4 5 6 7 0
61. I burned or scalded my partner on purpose.	1 2 3 4 5 6 7 0
62. My partner did this to me.	1 2 3 4 5 6 7 0
63. I insisted my partner have oral or anal sex (but did not use physical force).	1 2 3 4 5 6 7 0
64. My partner did this to me.	1 2 3 4 5 6 7 0
65. I accused my partner of being a lousy lover.	1 2 3 4 5 6 7 0
66. My partner accused me of this.	1 2 3 4 5 6 7 0
67. I did something to spite my partner.	1 2 3 4 5 6 7 0
68. My partner did this to me.	1 2 3 4 5 6 7 0
69. I threatened to hit or throw something at my partner.	1 2 3 4 5 6 7 0
70. My partner did this to me.	1 2 3 4 5 6 7 0
71. I felt physical pain that still hurt the next day because of a fight with my partner.	1 2 3 4 5 6 7 0
72. My partner still felt physical pain the next day because of a fight we had.	1 2 3 4 5 6 7 0
73. I kicked my partner.	1 2 3 4 5 6 7 0
74. My partner did this to me.	1 2 3 4 5 6 7 0
75. I used threats to make my partner have sex.	1 2 3 4 5 6 7 0
76. My partner did this to me.	1 2 3 4 5 6 7 0
77. I agreed to try a solution to a disagreement my partner suggested.	1 2 3 4 5 6 7 0
78. My partner agreed to try a solution I suggested.	1 2 3 4 5 6 7 0

NOTE: Copyright © 1995 Straus, Hamby, Boney-McCoy, & Sugarman. Reprinted with permission. Do not administer this instrument without written permission of the authors.

REFERENCES

- Adams, B. N. (1965). Coercion and consensus theories: Some unresolved issues. *American Journal of Sociology*, 71, 714-716.
- Aldarondo, E., & Straus, M. A. (1994). Screening for physical violence in couple therapy: Methodological, practical, and ethical considerations. *Family Process*, 33, 425-439.
- Arias, I., & Beach, S.R.H. (1987). Validity of self-reports of marital violence. *Journal of Family Violence*, 2, 139-149.
- Babcock, J. C., Waltz, J., Jacobson, N. S., & Gottman, J. M. (1993). Power and violence: The relation between communication patterns, power discrepancies, and domestic violence. *Journal of Consulting and Clinical Psychology*, 61, 40-50.
- Ballard, M. E., Cummings, E. M., & Larkin, K. (1993). Emotional and cardiovascular responses to adults' angry behavior and to challenging tasks in children of hypertensive and normotensive parents. *Child Development*, 64, 500-515.
- Berkowitz, L. (1993). *Aggression: Its causes, consequences, and control*. New York: McGraw-Hill.
- Browning, J., & Dutton, D. (1986). Assessment of wife assault with the Conflict Tactics Scale: Using couple data to quantify the differential reporting effect. *Journal of Marriage and the Family*, 48, 375-379.
- Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, 56, 81-105.
- Campbell, J. C. (1995). The danger assessment instrument: Risk factors of homicide of and by battered women. In J. Campbell (Ed.), *Assessing dangerousness: Potential for further violence of sexual offenders, batterers, and child abusers* (pp. 96-113). Thousand Oaks, CA: Sage.
- Cantos, A. L., Neidig, P. H., & O'Leary K. D. (1994). Injuries of women and men in a treatment program for domestic violence. *Journal of Family Violence*, 9, 113-124.
- Cascardi, M., Langhinrichsen, J., & Vivian, D. (1992). Marital aggression: Impact, injury, and health correlates for husbands and wives. *Archives of Internal Medicine*, 152, 1178-1185.
- Cazenave, N. A., & Straus, M. A. (1979). Race, class, network embeddedness and family violence: A search for potent support systems. *Journal of Comparative Family Studies*, 10, 281-299.
- Claes, J. A., & Rosenthal, D. M. (1990). Men who batter women: A study in power. *Journal of Family Violence*, 5, 215-224.
- Coser, L. (1956). *The functions of social conflict*. New York: Free Press.
- Dahlstrom, W. G., Brooks, J. D., & Peterson, C. D. (1990). The Beck Depression Inventory: Item order and the impact of response sets. *Journal of Personality Assessment*, 55, 224-233.
- Dahrendorf, R. (1959). *Class and class conflict in industrial society*. London: Routledge and Kegan Paul.
- Dobash, R. E., & Dobash, R. P. (1979). *Violence against wives: A case against patriarchy*. New York: Free Press.
- Dobash, R. E., Dobash, R. P., Cavanaugh, K., & Lewis, R. (1994, November). *Questionnaires distributed to supplement evaluating programs for violent men: Comparing CJ sanctions*. Paper presented at the annual meeting of the American Society of Criminology, Miami, FL.

- DuRant, R. H., Cadenhead, C., Pendergrast, R. A., Slavens, G., & Linder, C. W. (1994). Factors associated with the use of violence among urban Black Adolescents. *American Journal of Public Health, 84*, 612-617.
- Eisikovits, Z. C., Guttmann, E., Sela-Amit, M., & Edleson, J. L. (1993). Woman battering in Israel: The relative contributions of interpersonal factors. *American Journal of Orthopsychiatry, 63*, 313-317.
- Feld, S. L., & Straus, M. A. (1989). Escalation and desistance of wife-assault in marriage. *Criminology, 27*, 141-161.
- Flesch, R. (1949). *The art of readable writing*. New York: Harper.
- Gelles, R. J. (1991). Physical violence, child abuse, and child homicide: A continuum of violence, or distinct behaviors? *Human Nature, 2*, 59-72.
- Gelles, R. J., & Edfeldt, A. W. (1986). Violence towards children in the United States and Sweden. *Child Abuse and Neglect, 10*, 501-510.
- Gelles, R. J., & Straus, M. A. (1979). Determinants of violence in the family: Toward a theoretical integration. In W. R. Burr, R. Hill, F. I. Nye, & I. L. Reiss (Eds.), *Contemporary theories about the family* (Vol. 1, pp. 549-581). New York: Free Press.
- Gelles, R. J., & Straus, M. A. (1988). *Intimate violence*. New York: Simon & Schuster.
- Gondolf, E. W., McWilliams, J., Hart, B., & Stuehling, J. (1994). Court responses to petitions for civil protection orders. *Journal of Interpersonal Violence, 9*, 503-517.
- Gondolf, E. W., Mulvey, E. P., & Lidz, C. W. (1990). Characteristics of perpetrators of family and nonfamily assaults. *Hospital and Community Psychiatry, 42*, 191-193.
- Gottfredson, M. R., & Hirschi, T. (1990). *A general theory of crime*. Stanford, CA: Stanford University Press.
- Gottman, J. M., & Krokoff, L. J. (1989). Marital interaction and satisfaction: A longitudinal view. *Journal of Consulting and Clinical Psychology, 57*, 47-52.
- Grotevant, H. D., & Carlson, C. I. (1989). *Family assessment: A guide to methods and measures*. New York: Guilford.
- Hamby, S. L., Straus, M. A., & Sugarman, D. B. (1996). *Acts of psychological aggression against a partner and their relation to physical assault: An item analysis of the CTS2*. Manuscript in preparation.
- Hampton, R. L., Gelles, R. J., & Harrop, J. W. (1989). Is violence in black families increasing? A comparison of 1975 and 1985 national survey rates. *Journal of Marriage and the Family, 51*, 969-980.
- Hinshaw, L. M., & Forbes, G. B. (1993). Attitudes toward women and approaches to conflict resolution in college students in Spain and the United States. *Journal of Social Psychology, 133*, 865-867.
- Hirschi, T. (1969). *The causes of delinquency*. Berkeley, CA: University of California Press.
- Holtzworth-Munroe, A., & Stuart, G. L. (1994). Typologies of male batterers: Three subtypes and the differences among them. *Psychological Bulletin, 116*, 476-407.
- Johnson, H. (1994, November). *Seriousness, type, and frequency of violence against wives*. Paper presented at the annual meeting of the American Society of Criminology, Miami, FL.
- Johnson, M. P. (1995). Patriarchal terrorism and common couple violence: Two forms of violence against women. *Journal of Marriage and the Family, 57*, 283-294.
- Kaufman Kantor, G., Jasinski, J. L., & Aldarondo, E. (1994). Sociocultural status and incidence of marital violence in Hispanic families. *Violence and Victims, 9*, 207-222.
- Kumagai, F., & Straus, M. A. (1983). Conflict resolution tactics in Japan, India, and the USA. *Journal of Comparative Family Studies, 14*, 377-387.

- Kurz, D. (1993). Physical assaults by husbands: A major social problem. In R. Gelles & D. R. Loseke (Eds.), *Current controversies on family violence* (pp. 88-103). Newbury Park, CA: Sage.
- Margolin, L. (1991). Abuse and neglect in nonparental child care: A risk assessment. *Journal of Marriage and the Family*, 53, 694-704.
- Marshall, L. L. (1992). Development of the severity of violence against women scales. *Journal of Family Violence*, 7, 103-121.
- Murphy, C., & O'Leary, K. D. (1989). Psychological aggression predicts physical aggression in early marriage. *Journal of Consulting and Clinical Psychology*, 57, 579-582.
- Neidig, P. (1990). *A modification of the Conflict Tactics Scale*. Stony Brook, NY: Department of Psychology, State University of New York at Stony Brook.
- Nelson, E. C., & Berwick, D. M. (1989). The measurement of health status in clinical practice. *Medical Care*, 27, 77.
- Noller, P., & Fitzpatrick, M. A. (1990). Marital communication in the eighties. *Journal of Marriage and the Family*, 52, 832-843.
- O'Leary K. D., & Murphy, C. (1992). Clinical issues in the assessment of spouse abuse. In R. T. Ammerman & M. Hersen (Eds.), *Assessment of family violence* (pp. 26-46). New York, NY: John Wiley & Sons.
- Pan, H. S., Neidig, P. H., & O'Leary, K. D. (1994). Male-female and aggressor-victim differences in the factor structure of the Modified Conflict Tactics Scale. *Journal of Interpersonal Violence*, 9, 366-382.
- Ross, S. B., & Straus, M. A. (1995, July). *The social integration scale*. Paper presented at the 4th International Conference on Family Violence Research, Durham, NH.
- Saunders, D. G. (1992). Woman battering. In R. T. Ammerman & M. Hersen (Eds.), *Assessment of family violence: A clinical and legal sourcebook* (pp. 208-235). New York: John Wiley & Sons.
- Scanzoni, J. (1972). Marital conflict as a positive force. In J. Scanlon (Ed.), *Sexual bargaining*. Englewood Cliffs, NJ: Prentice Hall.
- Shehan, C. L. (1995, November). Discussion: Comment on Straus et al. (1995). Paper presented at the Theory and Methodology Workshop, National Council on Family Relations annual meeting, Portland, OR.
- Simmel, G. (1955). *Conflict and the web of group affiliations*. Glencoe, IL: Free Press.
- Statistics Canada. (1993, November 18). The violence against women survey. *Statistics Canada Daily*, 5.
- Stets, J. E., & Straus, M. A. (1990a). Gender differences in reporting marital violence and its medical and psychological consequences. In M. A. Straus & R. J. Gelles, *Physical violence in American families: Risk factors and adaptations to violence in 8,145 families* (pp. 151-165). New Brunswick, NJ: Transaction Publishing.
- Stets, J. E., & Straus, M. A. (1990b). The marriage license as a hitting license: A comparison of dating, cohabiting, and married couples. In M. A. Straus & R. J. Gelles, *Physical violence in American families: Risk factors and adaptations to violence in 8,145 families* (pp. 227-244). New Brunswick, NJ: Transaction Publishing.
- Straus, M. A. (1974). Leveling, civility, and violence in the family. *Journal of Marriage and the Family*, 36, 13-29.
- Straus, M. A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics Scales. *Journal of Marriage and the Family*, 41, 75-88.
- Straus, M. A. (1990a). The Conflict Tactics Scale and its critics: An evaluation and new data on validity and reliability. In M. A. Straus & R. J. Gelles, *Physical violence in American*

- families: Risk factors and adaptations to violence in 8,145 families (pp. 49-73). New Brunswick, NJ: Transaction Publishing.
- Straus, M. A. (1990b). Injury and frequency of assault and the "representative sample fallacy" in measuring wife beating and child abuse. In M. A. Straus & R. J. Gelles, *Physical violence in American families: Risk factors and adaptations to violence in 8,145 families* (pp. 75-91). New Brunswick, NJ: Transaction Publishing.
- Straus, M. A. (1993). Physical assaults by wives: A major social problem. In R. J. Gelles & D. Loseke (Eds.), *Current controversies in family violence* (pp. 67-87). Newbury Park, CA: Sage.
- Straus, M. A. (1995). *Manual for the Conflict Tactics Scales*. Durham, NH: Family Research Laboratory, University of New Hampshire.
- Straus, M. A., & Gelles, R. J. (1990a). How violent are American families? Estimates from the national family violence resurvey and other studies. In M. A. Straus & R. J. Gelles, *Physical violence in American families: Risk factors and adaptations to violence in 8,145 families* (pp. 95-112). New Brunswick, NJ: Transaction Publishing.
- Straus, M. A., & Gelles, R. J. (1990b). *Physical violence in American families: Risk factors and adaptations to violence in 8,145 families*. New Brunswick, NJ: Transaction Publishing.
- Straus, M. A., Gelles, R. J., & Steinmetz, S. K. (1980). *Behind closed doors: Violence in the American family*. NY: Doubleday/Anchor.
- Straus, M. A., & Hamby, S. L. (1995). *Measuring physical and psychological maltreatment of children with the Conflict Tactics Scales*. Durham, NH: University of New Hampshire.
- Straus, M. A., Hamby, S. L., Finkelhor, D., & Runyan, D. (1996). *The Parent-Child Conflict Tactic Scales (PCCTS): Development and psychometric data for a national sample of parents*. Manuscript in preparation.
- Sugarman, D. B., & Hotaling, G. T. (1989). Dating violence: Prevalence, context, and risk markers. In M. A. Pirog-Good & J. E. Stets (Eds.), *Violence in dating relationships: Emerging social issues* (pp. 3-32). New York: Praeger.
- Sugarman, D. B., Aldarondo, E., & Boney-McCoy, S. (in press). Risk marker analysis of husband-to-wife violence: A continuum of aggression. *Journal of Applied Social Psychology*.
- Szinovacz, M. E. (1983). Using couple data as a methodological tool: The case of marital violence. *Journal of Marriage and the Family*, 45, 633-644.
- Tang, C. (1994). Prevalance of spouse aggression in Hong Kong. *Journal of Family Violence*, 9, 347-355.
- Tolman, R. M. (1989). The development of a measure of psychological maltreatment of women by their male partners. *Violence and Victims*, 4, 159-177.
- Vissing, Y. M., Straus, M. A., Gelles, R. J., & Harrop, J. W. (1991). Verbal aggression by parents and psychosocial problems of children. *Child Abuse and Neglect*, 15, 223-238.