The Experience and Expression of Anger in Maritally Violent and Maritally Discordant-Nonviolent Men

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We examined the experience and expression of anger in community samples of 31 maritally violent (MV), 23 maritally dissatisfied-nonviolent (DNV), and 34 maritally satisfied-nonviolent (SNV) men. Two methods were used to assess anger. First, participants completed the State-Trait Anger Expression Inventory (STAXI), which assesses respondents' level of anger experience (State Anger, Trait Anger) and usage of various anger expression styles (Anger In, Anger Out, and Anger Control). Second, participants verbally reported their emotions during a laboratory anger-induction paradigm (Articulated Thoughts in Simulated Situations; ATSS). Results indicated that, relative to DNV and SNV men, MV men scored significantly higher on the STAXI Trait Anger and Anger Out scales, and lower on STAXI Anger Control.

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Can maritally violent men be reliably differentiated from nonviolent men in their experience and expression of anger? Clinically, it is easy to imagine the husband whose anger escalates rapidly, who possesses few or no anger coping skills, and who may strike his wife in a "fit of rage" (Purdy & Nickle, 1981; Sonkin, Martin & Walker, 1985; Walker, 1979). In addition, the anger leads-to-aggression hypothesis makes intuitive sense (cf. Tavris, 1989), and numerous interventions for maritally violent men have been developed with a clear anger management focus (for a review, see Holtzworth-Munroe & Stuart, 1994a). Empirically, however, the link between anger and marital aggression has been less clear. As indicated in several recent reviews, identification of anger as a unique characteristic of maritally violent men seems to depend on the method of assessment (Eckhardt, Barbour, & Stuart, 1997; Holtzworth-Munroe, Bates, Smutzler, & Sandin, 1997; Tolman & Bennett, 1990). Results of marital interaction studies (Jacobson et al., 1994; Margolin, John, & Gleberman, 1988) have generally indicated that maritally violent men exhibit significantly higher levels of expressed anger than maritally dissatisfied nonviolent men. Conversely, results of investigations utilizing self-report measures of anger have been equivocal (e.g., Boyle & Vivian, 1996; Hastings & Hamberger, 1988; Maiuro, Cahn, Vitaliano, Wagner, & Zegree, 1988). However, numerous methodological and assessment inadequacies render the bulk of findings from this research difficult to interpret (for a detailed review, see Eckhardt et al., 1997). The purpose of the present investigation was to employ multiple assessment methods of anger experience and expression using samples of maritally violent and maritally discordant-nonviolent men.

In previous research investigating anger and maritally violent men, researchers have utilized one of two possible assessment strategies to measure anger: (a) endorsement approaches using an anger or hostility questionnaire, or (b) observational approaches, wherein researchers code for the presence of anger expression among husband-wife dyads during discussion of a problematic issue in the laboratory. While the former approach has the advantage of being amenable to reports on the subjective nuances of an individual's anger experience (the label given to arousal states, cognitive correlates of anger arousal, intensity of angry feelings), it can only indirectly assess anger expression variables (i.e., asking respondents to indicate how often they engage in certain behaviors) and is subject to self-presentation and recall biases inherent in generalized and retrospective reporting (Davison, Robins, & Johnson, 1983). The observational method, in contrast, is most suitable.
for the assessment of anger expression, including vocal tone/inflection, verbal content, facial expression, and other behavioral concomitants of anger. However, it may not be the optimal method for assessing key aspects of the anger construct that are internal to the individual. Given that current causal (Berkwitz, 1993) and descriptive (Averill, 1982; Kassinove & Sukhodolsky, 1995; Spielberger et al., 1985) theories of anger emphasize the multidimensional nature of this construct, it follows that the optimal anger assessment strategy will use multiple measurement formats in order to capture the phenomenological, cognitive, physiological, and behavioral dimensions of anger (Eckhardt & Deffenbacher, 1995).

The present investigation was undertaken to address the measurement issues raised above. Our goal was to assess the experience and expression of anger using (a) a conceptually clear endorsement measure (State Trait Anger Expression Inventory), and (b) a method assessing participants' expression of anger-related emotion words during laboratory anger arousal in maritally violent (MV) men and comparison samples of maritally discordant-nonviolent men (DNV) and maritally satisfied-nonviolent men (SNV). This latter method, the Articulated Thoughts in Simulated Situations (ATSS) paradigm, was developed by Davison and colleagues (Davison, Feldman, & Osborn, 1984; Davison, Robins, & Johnson, 1983) as an alternative to questionnaire assessment that allows for open-ended, "on-line" verbal reports of thoughts and feelings that occur during emotional arousal. In the ATSS procedure, participants listen to emotion-eliciting audiotaped scenarios and are asked to imagine that the situations are actually occurring and, when prompted by a tone, to articulate their thoughts and feelings during a 30-second pause. Another short (10 to 20 second) segment is then played, followed by the participants' articulations, and so on. These articulations are later transcribed and coded along a number of dimensions by trained raters. The validity of the ATSS procedure has been demonstrated in several populations, including socially anxious participants (Bates, Campbell, & Burgess, 1990), participants rated high in fear of negative evaluation (Davison et al., 1984), maritally violent men (Eckhardt, Barbour, & Davison, in press; Eckhardt & Kassinove, in press), and participants identified as having the Type A behavior pattern (Haaga et al., 1994; Williams, Davison, Nezami, & DeQuattro, 1992; for a review of extant ATSS research, see Davison, Navarre, & Vogel, 1995; and Davison, Vogel, & Coffman, 1997).

In the present study, we hypothesized that MV men would score significantly higher on the Trait Anger and Anger Out scales of the State Trait Anger Expression Inventory (STAXI; Spielberger, 1988) than both DNV and SNV men. Additionally, we expected that MV men would score significantly lower than both comparison groups of nonviolent men on the STAXI Anger Control scale. During the ATSS procedure, we hypothesized that MV men would articulate significantly more anger statements than DNV men. We also predicted that MV men would articulate significantly more aggressive behavioral intentions (statements of physical aggression, verbal aggression, and belligerence) than men in both comparison groups. Finally, we expected a significant relationship between anger-related variables (STAXI Trait Anger and ATSS) and frequency of ATSS aggressive verbalizations in MV participants.

Method

Participants

The participants were 88 married men who responded to local newspaper and radio advertisements. The men were contacted by phone by trained interviewers who administered a variety of screening measures to determine group membership. All participants were paid $40.

As detailed elsewhere (Eckhardt et al., in press), the 31 participants in the MV group were required to report at least four incidents of physical aggression against their wives within the past year on the Modified Conflict Tactics Scale (MCTS; Pan, Neidig, & O'Leary, 1994), which assesses the frequency of psychological aggression (12 items; e.g., threatened to leave relationship) and physical aggression (11 items; e.g., pushed, grabbed, or shoved spouse; beat up spouse) used to manage marital conflicts. The MCTS includes commonly reported aggressive behaviors not assessed in the original Conflict Tactics Scale (Straus, 1979), such as driving recklessly to frighten spouse, restraining spouse's hands or arms, and forced sex, and has been shown to possess excellent construct validity (Pan et al., 1994). Inclusionary criteria for the 23 men in the DNV group were (a) a score of 95 or above on the Short Marital Adjustment Test (SMAT; Locke & Wallace, 1959), a 15-item screening measure which assesses both general marital happiness as well as the degree to which couples agree on a variety of more specific marital issues (e.g., finances, sex, recreation), and (b) no reported incidents of physical aggression against their wives at any point in the marriage on the MCTS. The 34 men classified as SNV were required to report at least one act of severe violence (items 19-23) and physical aggression used against their wives at any point in the marriage on the MCTS. Finally, a brief demographic questionnaire was administered to assess age, race/ethnicity, educational attainment, length of the marriage, number of children, socioeconomic status (SES; Stevens & Cho, 1985), combined husband-wife annual income,

1 The criterion of four incidents of violence per year was selected in an effort to examine anger in a sample of men who were moderately to severely maritally violent. During the screening phase of the project, 41 men who reported between one to three incidents of MCTS violence were excluded from the MV group.

2 Analysis of the MV group's MCTS-assessed marital aggression indicated that 67.7% (n = 21) engaged in exclusively "mild" acts of physical aggression (items 13-18) and 32.3% (n = 10) reported at least one act of severe violence (items 19-23).
participation in therapy or marital counseling, and frequency of alcohol and drug usage per week. All participants were required to be between the ages of 19 and 49 and married for at least 1 year.¹

The three groups of men did not differ significantly on any demographic characteristic. In order to provide an additional, psychometrically sound measure of marital satisfaction, participants completed the Dyadic Adjustment Scale (DAS; Spanier, 1976). A univariate analysis of variance (ANOVA) indicated a significant between-group difference on the DAS, $F(2, 83) = 46.79$, $p < .001$. Tukey’s HSD tests showed that MV and DNV groups were well matched a significant between-group difference on the DAS scores (MV: $M = 86.9$, $SD = 20.2$; DNV: $M = 85.7$, $SD = 14.9$). Both MV and DNV groups scored significantly lower than the SNV group ($M = 121.90$, $SD = 12.22$).

**Materials**

*STAXI.* To investigate group differences in the experience and expression of anger, the 44-item factor-derived STAXI (Spielberger, 1988) was administered. The 10-item State Anger Scale assesses the intensity of angry feelings at the time of administration on a 4-point scale, with higher scores indicating more anger. The 10-item Trait Anger Scale is partitioned into two 4-item subscales that assess the frequency with which angry feelings are experienced: the tendency to experience anger in the absence of provocation (Trait Anger/Temperament), and the tendency to experience anger in response to provoking situations (Trait Anger/Reaction). The STAXI also measures the frequency of various anger expression styles, on 4-point scales, including the 8-item Anger-In scale (which assesses the tendency to withhold expression of angry feelings), the 8-item Anger-Out scale (which measures the degree to which anger is behaviorally expressed), and the 8-item Anger Control scale (which assesses the degree to which angry feelings are controlled and reduced). STAXI scales possess satisfactory psychometric properties, with adequate internal consistency estimates and factor structure invariance across criterion groups (Fuqua et al., 1991; Spielberger, Reheiser, & Sydeman, 1995; Van der Ploeg, 1988). Additionally, criterion and construct validity studies have indicated that Trait Anger Scale scores correlate with other measures of anger (Clark, 1994), with severity of medical conditions such as angina (Smith, 1984), and with a variety of clinically related outcomes (Deffenbacher, 1992, 1993; Deffenbacher, Demm, & Brandon, 1986; Deffenbacher et al., 1996; Deffenbacher & Sabadell, 1992; Lynch & Deffenbacher, 1995). Discriminant validity has been demonstrated between scores on the Trait Anger Scale and a measure of well-being (Comunian, 1994).

¹ Husband reports were used to determine group assignment. This was done in part because recent research has indicated that husbands’ reports of wife-directed violence are not strikingly dissimilar from the reports of their wives (e.g., Jacobson et al., 1994, footnote 2).

**Procedure**

As detailed elsewhere (Eckhardt et al., in press), all men initially signed a consent form indicating that the study was investigating negative emotions in marriage and that the actual experience of negative emotions during the experiment was highly likely. Following completion of an assessment packet which included the STAXI, participants were introduced to the ATSS procedure via tape-recorded instructions, which stated that they would be asked to listen to several taped scenarios, to imagine that they were actually involved in each, and, when prompted by a tone, to talk out loud about their thoughts and feelings into a microphone connected to a tape recorder. When participants indicated understanding of the procedure following a nonarousing practice scenario, the ATSS scenarios were played via a Sony Digital Audio Tape (DAT) player and Pioneer large-cup headphones. The experimenter left the room until the end of the ATSS procedure.

The ATSS procedure included three stimulus scenarios, each divided into eight 20 to 30 second segments. Each segment was separated by a 30-second thought articulation pause. The characters depicted on the tapes were portrayed by actors from a local theater company, who were each paid $15. Based upon pilot data collected by Eckhardt and Kassinove (in press), we utilized three stimulus scenarios, two of which were designed to induce anger. In the nonarousing control scenario, the participant was asked to imagine that he and his wife are invited to another couple’s house, where they all play a game. While the couple is somewhat competitive and annoying, the source of this annoyance has nothing to do with the participant's wife. In the overhear-conversation scenario, the participant imagined that he was overhearing a conversation between his wife and her friend, who negatively evaluate the participant and express uncertainty about remaining in the marriage. In the jealousy scenario, the participant imagined that he has arrived home early to find his wife talking and laughing with a male acquaintance. The participant decides to listen to their conversation, which consists of subtly flirtatious dialogue.

The three stimulus tapes were presented to participants successively on a single tape. Because it was believed that participants might initially be uncomfortable, the control tape was presented first to allow them to become accustomed to the procedure. The presentation order of the two anger-arousing tapes was counterbalanced. Following the ATSS procedure, the State Anger Scale was administered to assess post-ATSS anger.

**Debriefing.** Participants were encouraged to fully discuss any emotions they were experiencing as a result of participating in the study. After answering any questions about the study, relaxation exercises were conducted when participants reported experiencing strong negative emotions. In addition, referral to mental health agencies was provided to all MV and DNV particip-

¹ Transcripts of the ATSS stimulus tapes can be obtained from the second author.
pants. Following the relaxation exercise, participants were thanked and compensated for their participation.¹

**A7SS coding procedures.** The taped articulations of each participant were transcribed by two undergraduate assistants who were blind to the study's hypotheses and participants' group membership. An additional pair of trained raters received 40 hours instruction regarding the coding of the transcriptions according to a coding manual and were trained using practice participants until they reached a minimum 70% agreement.² Both raters were blind to the study's hypotheses and participant group membership. Pearson product-moment coefficients were calculated to determine interrater agreement on ATSS variables (in parentheses, adjacent to each ATSS variable defined below). The raters recorded the frequency of occurrence for each of the following ATSS variables.

**Angry verbalizations.** The presence of angry verbalizations included specific articulations of anger-related emotion words ranging in intensity from mild to severe. Angry verbalizations were categorized according to intensity, with (a) annoyance statements (r = .97), including responses that referred to milder feelings (e.g., emotion words such as "irritated" and "bothered"). Articulations referring to greater levels of anger were classified as (b) anger/rage statements (r = .99) and included such emotion words as "mad," "pissed-off," and "furious."

**Other negative emotions.** The frequency of articulations involving expressions of negative emotion words other than anger-related affect (e.g., anxiety, depression) were included in this category (r = .97).

**Aggressive verbalizations.** Aggressive verbalizations included the frequency with which a participant expressed the desire to inflict harm on a character depicted on the tape, either verbally or physically. Articulations were coded as (a) verbally aggressive statements (r = .97), when a participant put down, insulted, or demeaned a taped character. Responses in which a participant expressed a desire to become physically aggressive (e.g., behaviors such as hitting or shoving) with a taped character were coded as (b) physically aggressive statements (r = .99). A third category of aggressive verbalization, (c) belligerence statements (r = .90), was assessed by recording the frequency with which the participant attempted to start an altercation by provoking, threatening, or challenging a taped character ("Bring it on, if you think you are so tough!").³

**Results**

**STAXI**

A series of ANOVAs were conducted to assess group differences among STAXI scale and subscale means (see Table 1). When specific hypotheses were indicated, we utilized planned contrasts to evaluate group differences. Post hoc Tukey HSD tests were employed for unplanned comparisons. Effect sizes are reported in the form of eta following significant omnibus F-tests. On the Trait Anger Scale, there was a significant effect of group, **F(2, 83) = 9.40, p < .0002, eta = .43**, such that MV men scored significantly higher than DNV men, **t(83) = 2.08, p < .04, and SNV men, t(83) = 4.34, p < .001.** Additional post-hoc analyses indicated no significant difference between the DNV and SNV groups on Trait Anger. On the Trait-Anger/Temperament subscale, the ANOVA indicated a significant group effect, **F(2, 85) = 6.23, p < .003, eta = .32.** HSD tests showed that MV men scored significantly higher than both DNV and SNV men. No significant difference was found between the DNV and SNV groups. Finally, the ANOVA indicated a significant difference among the groups on the Trait-Anger/Reaction subscale, **F(2, 85) = 3.12, p < .05, eta = .26.** HSD tests revealed that both the MV and DNV participants scored higher than SNV men. MV men did not differ significantly from DNV men.

On the Anger In scale, the ANOVA indicated a significant group effect, **F(2, 83) = 4.62, p < .01, eta = .32.** Post-hoc analyses revealed that DNV men scored significantly higher than SNV men. There were no other significant between-group differences.

The ANOVA indicated significant group differences on the STAXI Anger Out scale, **F(2, 84) =10.01, p < .0001, eta = .44.** Planned contrasts indicated that MV men scored significantly higher on the Anger Out scale than DNV men.

¹ These interrater reliability data were obtained on the basis of total scenario scores rather than per individual segment, much the same way that one would calculate convergence correlations between the total scores of two tests rather than each individual item. We would note that since there were very strict criteria about the defining boundaries of each category (i.e., precise emotion words and phrases), it is not surprising that our margin of coding error was quite low.
men, \( t(84) = 2.86, p < .005 \), and SNV men, \( t(84) = 4.38, p < .001 \). HSD tests revealed no significant difference between the DNV and SNV groups.

The ANOVA also indicated a significant effect of group on STAXI Anger Control, \( F(2, 85) = 8.24, p < .001 \), \( \eta = .40 \). Planned contrasts revealed that MV men scored significantly lower on the Anger Control Scale than DNV men, \( t(85) = -3.44, p < .001 \), and SNV men, \( t(85) = -3.52, p < .001 \). The two nonviolent groups were not significantly different from each other.

Validity of ATSS Anger Induction

In order to assess whether the three groups of men were angered by the ATSS procedure, three dependent samples \( t \) tests were conducted on STAXI State Anger scores gathered prior to and immediately after the ATSS procedure. Results indicated that men in all three participant groups reported significant increases in State Anger following the ATSS procedure, MV: \( t(30) = 3.82, p < .001 \); DNV: \( t(22) = 3.55, p < .002 \); SNV: \( t(32) = 3.23, p < .003 \). The three groups did not significantly differ in post-ATSS State Anger, \( F(2, 84) = 2.26, p = .11 \). Thus, all three groups reported that the ATSS tapes were anger inducing.

Group Differences on ATSS Variables

Table 2 presents means and standard deviations for all ATSS variables. As post-hoc analyses revealed that there were no significant within-group differences between ATSS jealousy scenario and overheard-conversation scenario scores for any ATSS variable, the total scores of these two anger-arousing scenarios were averaged into a single anger scenario score. To examine general group differences, we conducted 3 x 2 (group-by-scenario) mixed ANOVAs for each ATSS variable with effect sizes (\( \eta \)) reported for all significant effects.

Annoyance. On the annoyance variable, the ANOVA indicated no significant effects for the group main effect, \( F(2, 79) = 1.73, ns \), scenario main effect, \( F(1, 79) = .11, ns \), or the group-by-scenario interaction, \( F(2, 79) = 1.41, ns \).

Anger/rage. The ANOVA indicated a significant scenario main effect on articulations of anger/rage, \( F(1, 78) = 21.64, p < .001 \), \( \eta = .46 \), such that more statements of anger/rage were articulated during the anger scenario than the control scenario. Nonsignificant effects were found for the group main effect, \( F(2, 78) = 1.59, ns \), and the group-by-scenario interaction, \( F(2, 78) = 1.35, ns \).

Other negative emotions. The ANOVA indicated a significant scenario main effect on articulations of other negative emotions, \( F(1, 77) = 23.44, p < .001 \), \( \eta = .48 \), such that more negative-emotion statements were articulated during the anger scenario than the control scenario. Nonsignificant effects were found for the group variable, \( F(2, 77) = 1.46, ns \), and the group-by-scenario interaction, \( F(2, 77) = 1.22, ns \).

Verbal aggression. On the verbal aggression variable, the ANOVA indicated a significant group main effect, \( F(2, 78) = 7.41, p < .001 \), \( \eta = .40 \), a significant scenario main effect, \( F(1, 78) = 9.22, p < .003 \), \( \eta = .32 \), and a significant group-by-scenario interaction, \( F(2, 78) = 3.97, p < .02 \), \( \eta = .30 \). To explore this interaction, within-group changes from the control scenario to the anger scenario were evaluated using dependent \( t \) tests. In addi-
tion, we evaluated between-group differences within each scenario using univariate ANOVAs and HSD tests to control for Type I errors resulting from multiple pairwise comparisons. Although MV and SNV husbands articulated a significantly greater number of verbal aggression statements during the anger scenario versus the control scenario, MV: \( t(28) = 2.72, p < .02 \); SNV: \( t(30) = 2.21, p < .04 \). DNV men articulated a similar number of verbal aggression statements across the two scenarios, \( t(20) = .80, ns \). During the control scenario, there were no significant group differences, \( F(2, 77) = 1.63, ns \). During the anger scenario, however, the univariate ANOVA indicated a significant group effect, \( F(2, 77) = 7.22, p < .002 \), with MV husbands articulating more verbal-aggression statements than DNV and SNV men. DNV men did not differ significantly from SNV men.

**Physical aggression.** For the physical aggression variable, the ANOVA indicated a significant effect of scenario, \( F(1, 77) = 8.23, p < .005 \), \( \eta = .31 \), such that participants articulated a significantly more physically aggressive verbalizations in the anger scenario than in the control scenario. Non-significant effects were found for the group variable, \( F(2, 77) = 1.94, ns \), and the group-by-scenario interaction, \( F(2, 77) = 2.29, ns \).

**Belligerence.** For the belligerence variable, the ANOVA revealed a significant group effect, \( F(2, 79) = 7.63, p < .001 \), \( \eta = .40 \), scenario effect, \( F(1, 79) = 11.15, p < .001 \), \( \eta = .35 \), and a group-by-scenario interaction, \( F(2, 79) = 7.11, p < .001 \), \( \eta = .39 \). MV men articulated significantly more statements of belligerence during the anger scenario than the control scenario, \( t(28) = 3.27, p < .003 \). There were no significant differences across the two scenarios for DNV men, \( t(21) = .80, ns \), or SNV men, \( t(430) = 1.12, ns \). During the control scenario, there were no significant between-group differences, \( F(2, 79) = .80, ns \). The univariate ANOVA indicated a significant between-group difference in statements of belligerence articulated during the anger scenario, \( F(2, 79) = 8.15, p < .001 \). HSD tests revealed that MV men articulated significantly more belligerence statements than DNV and SNV men. There were no significant differences between DNV and SNV men.

**Correlations Between Self-reported and Articulated Anger and Aggression in Maritally Violent Men**

As can be seen in Table 3, Pearson product-moment correlations were computed between ATSS variables and STAXI scales within the MV group to examine relationships between anger experience and expression.

**ATSS and STAXI.** No significant relationships were found between STAXI Trait Anger and ATSS Anger/Rage, \( r(29) = -.01, ns \), or STAXI Trait Anger and ATSS Annoyance, \( r(29) = .14, ns \). Additionally, no significant relationships were found between STAXI Trait-Anger/Temperament and Trait-Anger/Reaction subscales and ATSS Anger verbalizations (statements of anger/rage and annoyance). There were no significant relationships between STAXI Anger Out and ATSS Aggressive Verbalizations (physically aggressive, verbally aggressive, and belligerent statements).
**ATSS anger and aggression.** Within ATSS variables, no significant relationships were found between angry and aggressive verbalizations. **ATSS, MCS, and STAXI.** The present set of correlations examined the degree of relationship between a measure of laboratory aggression (ATSS), a questionnaire measure of relationship aggression (MCTS), and a questionnaire measure of anger (STAXI) within the MV sample. No significant relationships were found between STAXI Trait Anger and MCTS variables. A significant relationship was revealed between MCTS Psychological Aggression and (a) ATSS Verbal Aggression and (b) ATSS Belligerence. No significant correlations were found between MCTS Mild Physical Aggression and any ATSS Aggressive verbalization. MCTS Severe Physical Aggression scores were significantly correlated with ATSS statements of physical aggression, verbal aggression, and belligerence.

**Discussion**

The purpose of the present study was to investigate the experience and expression of anger in maritally violent men using multiple assessment methods and relevant comparison groups. In general, maritally violent men were characterized by (a) significantly higher levels of STAXI-assessed anger experience and expression, and (b) more frequent articulations of aggressive verbalizations during ATSS anger arousal than both comparison groups. Findings related to specific hypotheses are reviewed below.

Our prediction that MV men would report significantly higher levels of anger than DNV and SNV men on the STAXI Trait Anger Scale was supported, suggesting that men who are violent within their marriages experience more frequent feelings of anger than those who are nonviolent. This finding is in accordance with data from other investigations using other endorsement measures of anger (Maiuro, Cahn, & Vitaliano, 1986; Maiuro et al., 1988) as well as the TAS (Beasley & Stoltenberg, 1992; Boyle & Vivian, 1996). Interestingly, MV men scored significantly higher than DNV men on the Trait Anger/Temperament subscale, but not the Trait Anger/Reaction subscale, indicating that MV men may not simply experience more anger in response to some frustrating event or specific provocation, but instead may experience a moderate level of anger on a regular basis.

As hypothesized, MV men scored significantly higher on the STAXI Anger Out scale than both DNV and SNV men. Not surprisingly, MV men are more likely to express their anger in an outwardly aggressive manner. Our prediction that MV men would score significantly lower than both nonviolent groups of men on the STAXI Anger Control scale was also supported, suggesting that MV men do not actively engage in strategies aimed at controlling and decreasing their angry feelings. As demonstrated in numerous investigations, MV men have been found to be characterized by social skill deficits and cognitive deficiencies (for a review, see Holtzworth-Munroe, 1992, and Holtzworth-Munroe et al., 1997), which may contribute to an inability to generate competent alternatives to violence when they feel angry. For example, Eckhardt and colleagues (Eckhardt et al., in press; Eckhardt & Kassinove, in press) found that MV men were significantly less likely than nonviolent comparison men to spontaneously articulate anger-controlling statements during ATSS anger arousal. If MV men do indeed lack the skills necessary to control and reduce their angry feelings, angry affect may continue to escalate beyond the point where “normal” expression of anger is possible, which may eventuate in aggressive outcomes. This idea, which actually runs counter to our initial hypothesis that MV men would express more statements of anger during anger arousal, was further substantiated in the present study.

We predicted that MV men would articulate significantly more angry verbalizations (statements of annoyance and anger/rage) during ATSS anger arousal than both DNV and SNV men. Despite evidence indicating that MV men indeed experienced anger during the ATSS procedure (i.e., the significant increase in State Anger scores from pre-ATSS to post-ATSS), no significant between-group differences were found in the number of expressed annoyance and anger/rage statements. Thus, the present data run counter to findings of numerous marital interaction researchers (e.g., Burman, Margolin, & John, 1993; Jacobson et al., 1994) who observed higher levels of anger expression in MV men. However, at least two possibilities exist to explain our nonsignificant findings. First, our coding system was designed to assess only articulations of specific anger-related emotion words, which excluded the recording of other meaningful dimensions of anger expression, such as vocal tone and facial expression, which are captured by marital interaction coding systems (e.g., Gottman & Krokoff, 1989). Second, because MV men have been found to possess deficits in spouse-specific assertiveness (Dutton & Strachan, 1987; Morrison, Van Hasselt, & Bellack, 1987; O'Leary & Curley, 1986), it is possible that they lack the skills to assertively express their angry feelings. Thus, rather than articulating assertive statements of anger and annoyance (“I feel so angry at you right now!”), MV men resort to more aggressive forms of anger expression (Boyle & Vivian, 1996). In the present study, group differences on the STAXI Anger Out scale and ATSS Aggressive verbalizations support this notion.

We predicted that, relative to DNV and SNV men, MV men would articulate significantly more aggressive verbalizations during the ATSS procedure. This hypothesis was partially supported. During the anger scenario, MV men articulated significantly more statements of verbal aggression and belligerence than both comparison groups. Thus, as angry feelings escalate, MV men may not possess the requisite skills to directly and assertively communicate their level of anger experience, and may instead proceed toward more aggressive communication patterns. MV men have been shown to direct personally demeaning insults (verbal aggression) and taunting challenges (belligerence) toward their wives, initiating a communication sequence whereby these statements are then reciprocated by their partner, to which the husband responds with continued aggressive displays (Burman et al., 1993; Cordova, Jacobson,
Gottman, Rushe, & Cox, 1993; Jacobson et al., 1994; Margolin et al., 1988). However, in the present study there were no significant between-group differences in the frequency of articulated physically aggressive statements. This finding may suggest that, when angry, MV men are more likely to communicate with their wives in a provocative and verbally aggressive manner (i.e., a verbal put-down or threat) rather than to directly express their intention to engage in physical aggression.

Finally, we predicted that significant relationships would exist between STAXI-assessed and ATSS Anger and Aggression in MV men. While several relationships emerged, they were not of large magnitude and, given the number of correlations computed, may be subject to the perils of the Type I error. However, the lack of significant correlations is itself interesting. For example, no correlation was found between STAXI Trait Anger and ATSS Anger/Rage articulations. Perhaps this lack of correlation reflects the nature of the differences between the two assessment formats. On the paper-and-pencil anger measure, MV men reported their tendencies toward anger experience in the absence of anger arousal. When placed in an anger-arousing situation, however, MV men did not directly express their level of anger using anger-related emotion words, but instead verbalized statements of aggression. Thus, while the verbal production method (ATSS) adequately assessed the range of anger-related behaviors, our coding system did not capture the more subjective, phenomenological aspects of anger assessed by endorsement methods such as the STAXI. The lack of significant relationships in the present study between the methods of assessment is not surprising given that, in previous research, data obtained via ATSS and questionnaire measures are not consistently correlated. Incongruent findings that "ought to" be consistent because the constructs being assessed are similar does not necessarily reflect a problem with the ATSS paradigm, and instead illustrates that different assessment methods can provide diverse information about the same construct (Davison et al., in press).

Additional exploratory analyses assessed convergent relationships between ATSS aggression articulations and level of husband-to-wife aggression on the MCTS. MCTS Psychological Aggression and Severe Physical Aggression were significantly correlated with ATSS aggressive verbalizations, suggesting that the stimulus scenarios were provoking and ecologically valid. However, it should be noted that, given the nascent state of this research, it is difficult to clearly ascertain the criterion validity of ATSS data. Are the statements made by MV men during ATSS anger arousal similar to what they say and do during marital interactions outside the laboratory? As additional normative data are collected, we will be better able to indicate the clinical and predictive significance of these findings.

Our findings have to be considered within the context of possible confounds and limitations. First, as with many marital violence investigations, a selection bias may exist such that lower SES men who may not have access to a phone or newspaper were excluded from the MV sample. While our groups were well-matched on a variety of sociodemographic indicators, it is possible that the most severely violent individuals, who may have the greatest socioeconomic stress (Holtzworth-Munroe et al., 1997), did not participate. Additionally, MV men were classified on the basis of their own reports of their own levels of marital aggression. While the prevailing belief is that husbands underreport their own violence, recent data have indicated substantially more agreement between husband and wife reports than expected (Jacobson et al., 1994). While this is less of an issue for the MV group (who had to report a fairly high level of violence to be included), it is possible that some men included in our nonviolent comparison groups actually engaged in violence within the marriage. However, if this were the case, it would have had the effect of obscuring any significant group differences across all anger-related variables. The important group differences that emerged suggest, therefore, that our group membership was not contaminated, or that the effects overrode any contaminant.

In summary, our data indicate that relative to nonviolent husbands, MV men (a) experience higher levels of questionnaire-assessed anger experience and expression, and (b) tend to express these angry feelings in a verbally aggressive, belligerent manner. It is recommended that future researchers continue to assess anger using multiple methods, such as the verbal production and questionnaire assessment used herein, and rely less on one type of assessment format. In addition, it is wise to investigate any emergent patterns of anger experience and expression across different subtypes of maritally violent men, such as those described by Holtzworth-Munroe and Stuart (1994b). Differing treatment goals may be appropriate if there are reliable differences in anger in maritally violent subtypes. It is clear that the use of diverse experimental designs and multiple anger assessment methods is needed to address the important questions that remain regarding the role played by anger in marital violence.

References


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