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Male-Perpetrated Domestic Violence: Testing a Series of Multifactorial Family Models

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2004
NCJ 199712

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This project was supported by grant 98–WT–VX–0031 from the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. Findings and conclusions of the research reported here are those of the authors and do not reflect the official position or policies of the U.S. Department of Justice.

Background, Rationale, Purpose, and Conceptual Framework

There is no shortage of statistics to document that violence is a serious problem in our society and that much of this violence occurs in the home. The likelihood of experiencing a traumatic event in general and the prevalence of postevent psychological disturbance are not trivial. One possible result of trauma exposure is the condition known as posttraumatic stress disorder (PTSD). According to the *Diagnostic and Statistical Manual of Mental Disorders*, PTSD is an anxiety disorder observed in persons who have been exposed to an extreme stressor that evokes feelings of "intense fear, helplessness, or horror" (American Psychiatric Association, 1994). Symptoms include reexperiencing the traumatic event through frightening dreams and intrusive recollections, avoidance of circumstances that might trigger a reexperiencing episode, emotional numbing and retreat from intimate relationships, and increased arousal. The condition frequently coexists or is comorbid with alcohol abuse. PTSD has been documented in victims with various traumatic experiences, including veterans of military combat.

This research project, funded by the National Institute of Justice (NIJ), sought to demonstrate the connection between two important social and health problems—domestic violence and trauma-related psychological disturbance—and that trauma and its consequences (PTSD and alcohol abuse) serve partially to explain aggressive behaviors in families. The goal of the project was to gain a better understanding of risk factors associated with male-perpetrated domestic violence and accompanying partner mental distress and child behavior problems using family data from the National Vietnam Veterans Readjustment Study (NVVRS) (Kulka et al., 1990a, 1990b).

The NVVRS was congressionally mandated and conducted in the mid- to late 1980s. Its primary purpose was to document rates of PTSD and other adjustment difficulties among veterans who fought in the Vietnam War. The NVVRS had more than 4,000 participants and involved a number of components, one of which was an extensive assessment of family life among community-residing male veteran-female partner dyads. Using this subset of the larger database, the NIJ-funded project tested a series of models to gain information about the antecedents, correlates, and consequences of violence against women.

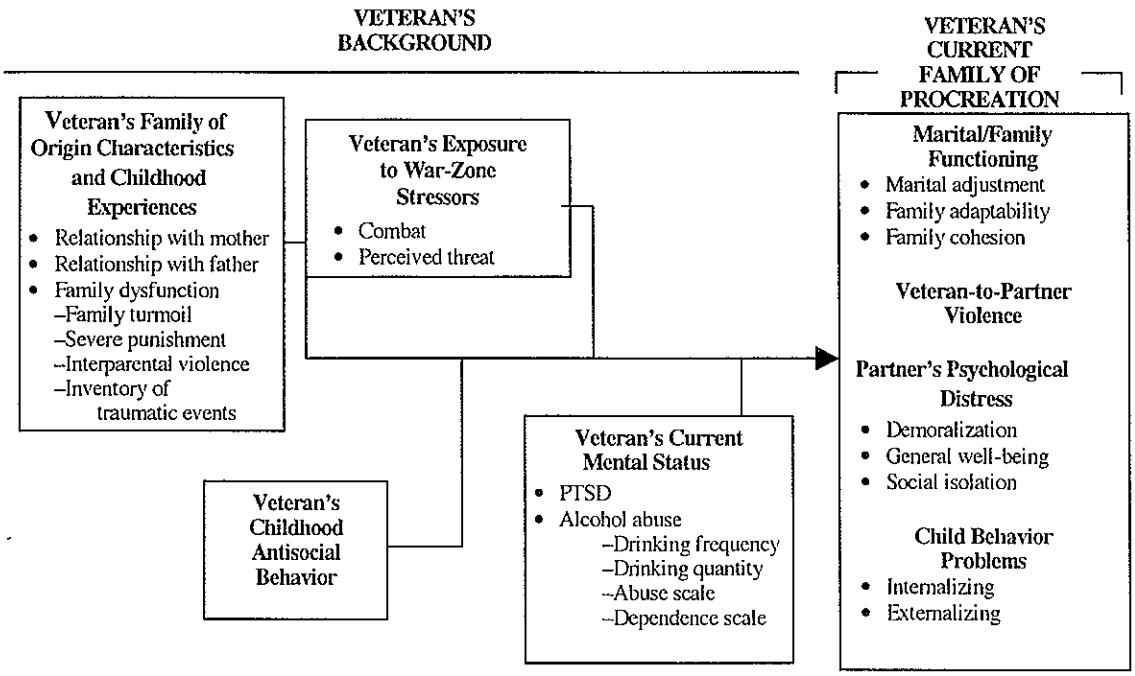
Exhibit 1 presents the conceptual framework for the project. Emphasis was placed on four categories of variables related to the veteran's background:

- The veteran's accounts of his own family of origin characteristics and childhood experiences.
- The veteran's conduct and behavioral problems prior to age 15 (childhood antisocial behavior).
- The veteran's exposure to war-zone stressors in Vietnam.
- The veteran's mental status as represented by PTSD symptomatology and associated alcohol abuse.

The project incorporated four clusters of variables describing the veteran's current family of procreation:

- Marital and family functioning.
- Veteran-to-partner violence.
- The partner's psychological distress.
- Child behavior problems.

Exhibit 1. Conceptual Framework



Component Studies and Hypotheses

The research project was organized into a sequence of four studies, each of which addressed a specific objective and subsumed hypotheses concerning the patterns of relationships among critical variables.

Variables Characterizing Veteran's Family of Procreation

Study 1 sought to determine the pattern of relationships among variables representing marital and family functioning, veteran-to-partner violence, partner's psychological distress, and child behavior problems. This initial study laid a foundation for the full project by documenting associations among the key variables that provide a contemporary portrayal of the veteran's family of procreation. For this segment, a working hypothesis was that the veteran's perspective on the quality of marital and family functioning and his violent behaviors toward his partner have direct effects on the partner's psychological distress and on child behavior problems and indirect effects on these outcomes.

Veteran's Early Background and Trauma History

Study 2 aimed to establish the degree to which the veteran's family-of-origin characteristics, childhood experiences (including severe punishment and other forms of childhood trauma) and antisocial behavior, and exposure to stressors in the Vietnam war zone and subsequent PTSD symptomatology related to veteran-to-partner family violence. Researchers predicted main effects for the background and trauma variables emanating from the family of origin, childhood antisocial behavior, and war-zone stressor categories to the violence variable. They also predicted that PTSD would serve at least as a partial mediator of these relationships.

Veteran's Current Mental Status

Study 3 examined how the veteran's current mental status is associated with marital and family functioning, violence, and his partner's current psychological distress. This phase of the research program highlighted the role of stress disorder symptomatology and alcohol abuse in accounting for family violence. Hypotheses included the following:

- A relationship between the veteran's mental status (PTSD and alcohol abuse) and his partner's psychological distress.
- A direct effect between the emotional numbing aspect of PTSD and marital and family functioning.
- A direct effect between the hyperarousal feature of PTSD and violence.
- A disinhibition hypothesis that the presence of the veteran's alcohol abuse exacerbates domestic turmoil and aggression.

Developmental and Intergenerational Perspective on Violence

Study 4 aimed to model a network of relationships explaining the potential transmission of violence across generations, commencing with the veteran's accounts of violence within the family of origin and terminating with reports of child behavior problems (delinquency, aggression, and other externalizing tendencies) within the family of procreation. The evaluation of this model, with mediational influences capturing important stages and events in the life of the veteran and with child behavioral problems as the outcome, was intended to emphasize the relative influence of leading risk factors and suggest mechanisms by which they operate.

Methodology

Sample Description

The NVVRS and the data it produced have much to recommend them. A large multidisciplinary team of researchers and consultants assured a wealth of expertise from diverse perspectives, including psychology, psychiatry, sociology, nursing, epidemiology, and biostatistics. The national area probability sampling approach afforded comprehensive coverage of the full Vietnam veteran population. Response rates were quite good (82 percent), and the data obtained from each participant were extensive. Face-to-face, structured interviews, with some

supplementary self-report paper-and-pencil measures, were administered to participants throughout the United States. Interviews of veterans averaged more than 5 hours; separate spouse-partner interviews averaged more than 1 hour. For the family subsample, the intent was to include families of all veterans who scored high on measures of combat exposure, PTSD, or general psychological distress. Some families were included specifically to represent veterans who did not meet these criteria, thereby enhancing dispersion or score variability in the family subsample while maintaining a focus on high-risk family units.

For the current project, there were 376 male veteran-female partner dyads; 261 dyads had one or more children between the ages of 6 and 16 residing in the home. Data were collected from partners on selected background characteristics of the partner and couple, the partner's perspective on the veteran's mental health and functioning, the partner's own psychological and emotional well-being, interaction problems and violence in the family, and behavior and adjustment problems for all 6- to 16-year-old children in the household.

The original NVVRS researchers were particularly attuned to including sufficient numbers of minority veterans in their sample. As a result of their oversampling strategies, approximately 25 percent of the male Vietnam veteran participants identified themselves as black and 24 percent identified themselves as Hispanic. One can conclude, therefore, that the primary study from which this proposal drew its data was well grounded in its concerns for inclusiveness based on minority status, at least with regard to the two largest minority groups in the United States. In turn, the current project benefited. The racial or ethnic identity for male veterans whose partners provided data for the family interview was distributed as follows: black, 24 percent; Hispanic, 29 percent; and white/other, 47 percent. The partners of these veterans had a fairly comparable distribution: black, 23 percent; Hispanic, 22 percent; and white/other, 55 percent.

The composition of the sample relied on the initial descriptive profiles for the male veteran-female partner units developed by Jordan and colleagues (1992). Almost 33 percent of the veterans in these families scored high on PTSD, and 51 percent scored in the medium to high range on the measure of general psychological distress. With regard to marital problems, Jordan and colleagues (1992) reported that 61 percent of the PTSD-positive veteran families and 44 percent of the total sample had partner-generated marital problem scores in the medium to high range. Thirty-four percent of women with PTSD-positive, male veteran partners reported at least one violent incident in the past year (1–2 incidents, 6.8 percent; 3–5, 10.6 percent; 6–12, 7.3 percent; 13 or more, 9.3 percent). For the full sample, 21 percent reported one or more incidents in the past year, including the complement of tactics on Straus's Conflict Tactics Scales (Straus, 1979) and additional items reflecting extreme threats of violent acts. Another important risk factor for domestic violence, and one that was investigated in this project, is alcohol abuse. For this sample, the lifetime rate of alcohol abuse for veterans was 42 percent, and the current rate was 15 percent.

For studies 1 and 4, in which ratings of child behavior problems were involved, sample sizes were 260 and 254, respectively; for studies 2 and 3, in which all couples were eligible (both those without and those with children in the home), sample sizes were 367 and 372, respectively.

Analytic Approach

Structural equation modeling was the primary analytic strategy. This approach involves solving a series of simultaneous equations that represent associations among variables. Structural equation modeling has two components: the measurement component and the structural component. The measurement component, also known as confirmatory factor analysis, defines latent variables or factors in terms of their observed or manifest indicators. In this project, the latent variable labeled *partner's psychological distress* had three observed or manifest indicators:

- Scores on the demoralization scale from the Psychiatric Epidemiology Research Interview (PERI) (Dohrenwend, 1982).
- A general well-being scale (reverse scored).
- An index of the partner's social isolation.

Latent variables are considered reliable because measurement error is specified and therefore estimated in the analysis. Thus, when latent variables are employed in the subsequent structural component, which tests hypotheses about the relationships among variables, their regression or path coefficients are unbiased (see Bollen, 1989; Hoyle, 1994; Joreskog and Sorbom, 1993). Furthermore, the full-information estimation procedures of structural equation modeling yield parameter estimates that are efficient. Their standard errors are as small as they can be, thereby providing more stable values and a more accurate representation of the pattern of relationships among the variables. This methodology gives researchers more flexibility and powerful tools to enhance measurement precision and to understand complex associations among constructs.

Latent Variables and Their Indicators

Exhibit 2 identifies the sets of latent variables for the project and presents a brief description of how each of their indicators was measured. When possible (e.g., the measures of PTSD and veteran-to-partner violence), existing, well-regarded scales were used. In other instances, conventional psychometric procedures were used to develop content-valid, reliable measures from the existing NVVRS survey data.

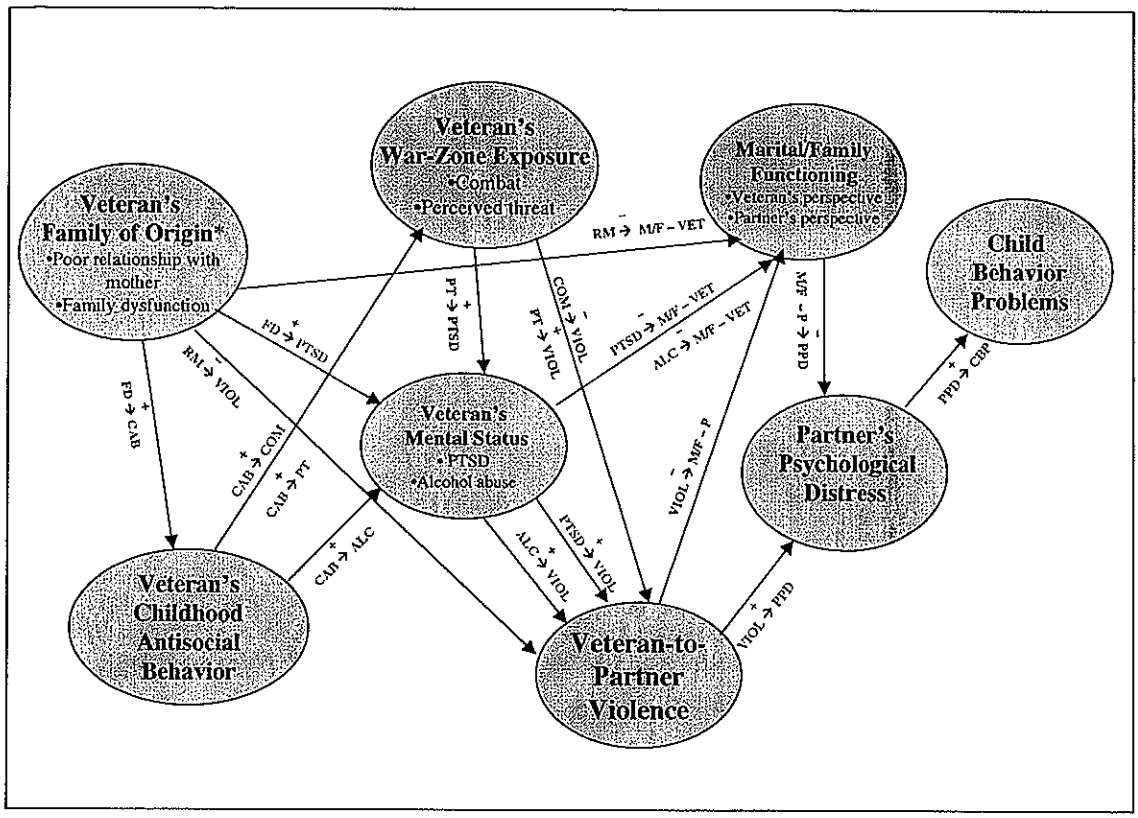
Findings

Exhibit 3 is a simplified and integrated representation of the findings across all four studies in this project. The results offered support for the guiding trauma-focused perspective, that exposure to highly stressful life events in a man's childhood or early adulthood and their psychological consequences may explain later partner battering and concomitant partner psychological distress and child behavior problems. As a general statement, there appeared to be a "chaining" of variables depicting pathways by which a man's adverse childhood experiences are linked to difficulties in his subsequent marriage and family life. In our studies, the veteran's own family background characteristics and childhood experiences contributed to early acting-out behaviors; these experiences were influential in terms of his subsequent exposure to high levels of combat (study 2, especially). Of course, there is the link between trauma exposure (combat

Exhibit 2. Variables

Variable	Description of Measure
Veteran's Family-of-Origin Characteristics and Childhood Experiences	
1. Relationship with mother	6-item measure of closeness of primary mother figure (e.g., time spent together, ability to confide in parent, quality of relationship)
2. Relationship with father	6-item measure of closeness of primary father figure
3. Family dysfunction	
(a) Family turmoil	9-item measure of veteran's disruptive home environment (e.g., serious illness, problem drinking, or substance abuse among family members)
(b) Severe punishment	2-item index of veteran's physical abuse as a child
(c) Interparental violence	Single-item inquiry about parents hitting one another
(d) Inventory of traumatic events	5-item measure of veteran's traumagenic or early life-threatening experiences
Veteran's Childhood Antisocial Behavior	
4. Childhood antisocial behavior	17-item measure of veteran's early behavioral problems (e.g., excessive fighting, school truancy, substance abuse), per Diagnostic Interview Schedule (Robins et al., 1981)
Veteran's Exposure to War-Zone Stressors	
5. Combat	36-item measure of self-reported exposure to circumstances or events considered stereotypical warfare experiences (e.g., firing a gun, seeing wounded or dead bodies)
6. Perceived threat	9-item measure of appraisals of how harmful war-zone events were to personal safety (e.g., fear of bodily injury, judgment of danger)
Veteran's Current Mental Status	
7. PTSD	35-item Mississippi Scale for Combat-Related PTSD (Keane, Caddell, and Taylor, 1988); assesses the core reexperiencing, avoidance, numbing, and hyperarousal symptoms of PTSD, plus associated features of depression, guilt, and suicidality
8. Alcohol abuse	
(a) Drinking frequency	3-item index of how often veteran consumed beer, wine, or liquor
(b) Drinking quantity	3-item index of how much beer, wine, or liquor was consumed on a typical drinking occasion
(c) Abuse scale	10-item measure reflecting problem drinking behaviors (e.g., job troubles due to alcohol, family objections to drinking, incidents of drunk driving), per Diagnostic Interview Schedule (Robins et al., 1981)
(d) Dependence scale	13-item measure of very serious drinking behavior (e.g., binges, early morning drinking, blackouts), per Diagnostic Interview Schedule (Robins et al., 1981)
Marital/Family Functioning (measured from both the veteran and partner perspective)	
9. Marital adjustment	15-item measure assessing general satisfaction with the marital relationship (e.g., marital happiness, companionship, and compatibility)
10. Family adaptability	11-item measure of flexibility of family roles, responsibilities, and operating principles, per Family Adaptability and Cohesion Evaluation Scales (FACES) II (Olson, Bell, and Portner, 1978)
11. Family cohesion	13-item measure of closeness and affiliation among family members; taken from FACES II (Olson, Bell, and Portner, 1978)
Veteran-to-Partner Violence	
12. Veteran-to-partner violence	8-item physical violence subscale per Conflict Tactics Scales (Straus, 1979)
Partner's Psychological Distress	
13. Demoralization	27-item measure of depression, dread, anxiety, hopelessness, and poor self-esteem, per PERI (Dohrenwend, 1982)
14. General well-being	2-item index assessing sense of personal well-being (reverse-scored)
15. Social isolation	4-item measure of social isolation (e.g., lack of close friends, relatives, and confidants)
Child Behavior Problems	
16. Internalizing	internalizing score on the Child Behavior Checklist (Achenbach, 1978, 1991)
17. Externalizing	externalizing score on the Child Behavior Checklist (Achenbach, 1978, 1991)

Exhibit 3. Simplified Representation of Findings



Notes: *The latent variable labeled *relationship with father* was not retained in the final models produced in this project because it was not uniquely related to other variables. Although not depicted in this simplified representation, study 3 of the project demonstrated that the two latent variables within the veteran's mental status category (PTSD and alcohol abuse) were jointly implicated in the prediction of violence; that is, they operated synergistically to increase the incidence of veteran-to-partner violence. Important associations are noted by the codes (e.g., FD > CAB) on each major pathway line, with the associated sign or direction of the association recorded as positive (+) or negative (–).

**ALC = alcohol abuse; CAB = childhood antisocial behavior; CBP = child behavior problems; COM = combat; FD = family dysfunction; M/F–P = marital/family functioning, partner's perspective; M/F–VET = marital/family functioning, veteran's perspective; PPD = partner's psychological distress; PT = perceived threat; PTSD = posttraumatic stress disorder; RM = relationship with mother; VIOL = violence.

and threat in the war zone) and postwar PTSD and alcohol abuse. The synergistic effects of these two latter variables on violence and partner psychological distress are especially tragic (study 3), and the chain extends to negative child behavior in general (study 1) and aggressive, delinquent, and other externalizing behaviors in particular (study 4).

Implications for Practitioners

The pattern of associations among the veteran's family-of-origin dysfunction, childhood antisocial behavior, combat exposure, and perceived threat in the war zone were particularly noteworthy, especially in light of a revictimization interpretation. This network of relationships suggests that early distress and troublesome experiences in the family of origin may lead to the propensity for risky, destructive, and perhaps illegal activities, which then place the individual in

jeopardy for exposure to additional serious life stressors in late adolescence and early adulthood. In the context of this study, these later stressors are war-zone-related combat and the accompanying fear of bodily harm or death, and they have been discussed previously as a selection bias (see King and King, 1991), drawing the more vulnerable members of society into harm's way. Moreover, King and colleagues (1996) noted that male soldiers in Vietnam who reported earlier childhood behavior problems were more likely to have encountered exposure to combat than those who did not have a history of such antisocial behavior, a likely reflection of the selection bias within the military that places those with more limited skills and abilities into combat-related positions. These findings are consistent with other trauma contexts, including rape (e.g., Kilpatrick et al., 1998), wherein the individual's early exposure seems to signify increased risk for later victimization.

Extrapolating these results to persons in distressed childhood environments within chaotic communities may point to a need for enhanced anti-risk-taking training for youth, especially those with documented exposure to traumatic events. Such training might emphasize personal safety education to include the avoidance of potentially dangerous environments, compensatory behaviors to quell sensation-seeking, and alternatives to violent responses to threatening stimuli. The goal would be to break the cycle of vulnerability.

The associations among early adulthood trauma (combat exposure and perceived threat), PTSD symptomatology, and veteran-to-partner violence are also interesting (see exhibit 3). First, there are the expected positive relationships between PTSD and violence and between perceived threat and violence: Those who exhibit more symptomatology or who manifested more fear in the war zone tended to be more violent toward their partners. Yet the direct path between combat exposure and veteran-to-partner violence carries a negative sign, such that those exposed to high levels of combat perpetrated less violence on their partners. This finding may appear counterintuitive. Indeed, consideration of the negligible bivariate association between combat and violence suggests a suppressor effect (Cohen and Cohen, 1983). On further reflection, however, it may impart a message of hope. That is, by controlling for, taking into account, or removing the psychopathological consequences of combat (threat and PTSD), at least some who experience traumatic events may be less inclined to perpetrate violence on their partners.

PTSD is a critical gatekeeper variable through which various factors in the veteran's background make their impact on the family. Indeed, PTSD symptomatology appears to have a pervasive influence on other variables. In addition to positive paths to alcohol abuse, veteran-to-partner violence, and then to partner's psychological distress, its association with the veteran's perspective on marital and family functioning was strong and negative: the greater the level of PTSD symptoms, the less positively the veteran viewed his family situation. PTSD appeared to function as predicted, serving as a pivotal intermediary variable leading to violent behaviors and then to partner and child distress.

Even more intriguing were the findings involving PTSD when it was disaggregated into its component symptom categories and the focus became the emotional numbing and hyperarousal features of the condition (study 3). Examining PTSD in this manner offered insight into the mechanisms by which it may influence different aspects of the marriage and family. As hypothesized, emotional numbing was particularly salient in its association with the veteran's

perspective on marital and family functioning, suggesting that this aspect of stress symptomatology inhibits positive interactions, interpersonal satisfaction, and feelings of warmth and intimacy with the veteran's partner and children. The chain of associations extends through the partner's perspective on marital and family functioning, then to the partner's psychological distress, and subsequently to child behavior problems (exhibit 3).

Also, as hypothesized, hyperarousal was the feature of PTSD (when the condition was disaggregated) that appeared most critical to reports of violence in the family. This conclusion is qualified on the basis of a significant interaction effect between hyperarousal and alcohol abuse. Thus, as proposed, alcohol abuse seemed to be a key exacerbating factor, and the effect of hyperarousal was stronger in the presence of higher levels of alcohol consumption. PTSD symptomatology, in and of itself, is harmful and places the partner at risk, but when coupled with alcohol, male PTSD victims become more likely to batter their partners. Interventions in domestic violence cases should recognize that the veteran's symptoms of PTSD and comorbid substance abuse might be appropriate targets for treatment.

Two final observations deserve mention. First, in the models tested in this project, the partner's (mother's) psychological distress was strongly associated with the child's behavior problems. In fact, this was the sole path that linked all of the other variables to the offspring's behavior. This finding points to the importance of the mother's well-being, or lack thereof, in accounting for the well-being, or lack thereof, of her child. Additionally, the veteran's relationship with his mother emerged as a possible influence on two important variables in his family of procreation: a relatively weak relationship with veteran-to-partner violence and a somewhat stronger relationship with the veteran's perspective on his own marital and family functioning. This latter association suggested that a higher quality relationship with his mother made it more likely that a veteran would be less violent with his wife. Therefore, it appears that the mother plays a substantial role in safeguarding the mental health of her child in the midst of highly stressful life events and negative family experiences, and perhaps the effect carries forward into the next generation. This interpretation reinforces advocacy for shelters and other programs that provide support services to battered women and their children.

If generalized very cautiously, these findings may not be limited to war veterans and their families. The resulting paradigm could be applicable to families in economically depressed neighborhoods in our Nation's larger cities, where, for example, men may be exposed to intensely stressful events in adolescence or early adulthood. If so, these findings have implications for ongoing community and domestic violence. Also, other occupational groups exposed to alternating periods of routine boredom and high stress, like law enforcement officers, may mirror this sample to some degree. Interestingly, these implications may be doubly meaningful because a significant portion of police, security, emergency, and other public safety occupational groups are military veterans. Findings might very well inform targeted employee assistance programs.

The researchers recommend a strong alliance between the criminal justice community and the mental health services community. Such an alliance should recognize the importance of trauma exposure and subsequent PTSD symptomatology and associated alcohol abuse in accounting for the perpetration of violence against women. The results clearly suggest that current batterer

treatment programs can be designed to consider the findings of this study. In this regard, experts in PTSD and comorbid substance abuse may be able to offer training and consultation services that are explicitly targeted at the recognition of classic signs and symptoms among perpetrators and appropriate avenues for effective intervention and treatment.

Implications for Future Research

The research reported here concerns families of survivors of one type of traumatic experience: exposure to the stressors of a war zone. Future research might test components of this study's conceptual framework with other trauma survivors. Moreover, the model prescribes PTSD and comorbid alcohol abuse as primary mediators between veteran characteristics and experiences and outcomes within the family context. Other psychological consequences of exposure to trauma, such as depression, are worthy of future inquiry. Finally, and perhaps most important, the design of this study was retrospective and cross-sectional, leading to necessary ambiguities regarding the direction of causality among variables (King and King, 1991). Future research should apply aspects of this conceptual framework to more rigorous longitudinal designs.

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