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### THE TRAUMA OF SEXUAL VICTIMIZATION: FEMINIST CONTRIBUTIONS TO THEORY, RESEARCH, AND PRACTICE

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Twenty years ago, rape was thought of as a rare event, incest as a culturally universal taboo. Public and professional awareness have undergone dramatic transformation in the course of just two decades (Briere, 1992). Today, the literature is replete with research examining the scope and trauma of sexual victimization. We have chosen to focus on feminist contributions to understanding the sexual victimization of women and girls. We have abstracted our own most recent books (Herman, 1992; Koss & Harvey, 1991) and a number of works that together highlight twenty years of feminist inquiry. Readers interested in male victims are referred to a recent review by Watkins and Bentovim (1992).

*The nature and scope of sexual victimization.* Researchers agree that government figures seriously underestimate the extent of sexual violence (Koss, 1990). Independent investigators have interviewed national and community samples of adult women in order to estimate the true prevalence of sexual violence (e.g., Kilpatrick et al., 1987; Koss et al., 1987; National Victims Center, 1992; Russell, 1982, 1983; Wyatt, 1985). These studies have defined rape in accordance with prevailing law, used trained interviewers, and posed a number of behaviorally specific questions to obtain detailed information about completed and attempted sexual assaults. Taken cumulatively, the data suggest that rape is a familiar experience in the lives of women and girls. Depending upon the sample, anywhere from one in three to one in eight women have experienced rape or attempted rape, many of them before age 18 and a significant proportion before age 11. While government figures suggest that women and girls are more likely to be raped by strangers than by men they know, community investigations arrive at the opposite conclusion. In Russell's study, for example, 62% of the rapes and attempted rapes had been perpetrated by current or former husbands, boyfriends, lovers, or male relatives. Viewing these data, feminist authors have interpreted rape and incest not as rare and isolated events, but as commonplace risks in a culture conducive to sexual violence.

*The social and cultural context of sexual victimization.* Research into the underlying causes of sexual violence has sought to identify victim vulnerabilities, offender characteristics, and social factors associ-

ated with sexual victimization and sexual aggression. Victim studies have to date yielded little in the way of reliable evidence that the causes of rape can be found in the attributes of victims. Among the many victim attributes posited, only sexual victimization in childhood has proved a reliable predictor of heightened risk in adulthood (Koss & Harvey, 1991; Russell, 1986).

Studies of the psychological attributes of perpetrators have also contributed surprisingly little to a general understanding of sexual assault. Most studies of convicted offenders do document serious psychopathology. However, these samples are extremely skewed and represent the small minority (roughly 1%) of offenders who actually get caught. By contrast, community studies of undetected offenders (i.e. men who acknowledge obtaining or attempting to obtain sexual intercourse by force) have repeatedly commented upon the apparent "normality" of these men. They are distinguished from their nonviolent peers not by psychological attributes but by social attitudes, and are notable, in particular, for their callous and adversarial attitudes towards women, and their endorsement of an ideology of male dominance. These attitudes represent an exaggeration of existing cultural norms, not a departure from them (Herman, 1988).

Studies of social attitudes have been more successful in identifying correlates of sexual violence. A variety of cultural myths about rape (e.g., "women secretly long to be taken by force," "nice girls don't get raped," "it is impossible to rape an unwilling woman") constitute what Burt (1980) and others have called "rape-supportive belief systems." Among victims, the widespread popularity of these beliefs impedes reporting and contributes to a persistent fear of rejection and blame. Acceptance of these beliefs no doubt underlies the failure of some sexual assault victims to understand their experience as rape (Koss & Harvey, 1991).

A rigid endorsement of rape-supportive belief systems is found both in offenders and in men at high risk for offending. These include a significant proportion of men in the normal population who express a preference for rape pornography over depictions of consensual sex and who acknowledge they would be likely to commit rape if assured of impunity. Russell (1988) has reviewed the data of the relationship between sexual assault and violent pornography. She concludes that exposure to violent pornography fosters the sexual victimization of women by promoting widespread acceptance of rape-supportive beliefs, eroticizing dehumanizing images of women, and reducing both external and internal inhibitors to rape.



*The psychological sequelae of rape.* Acute reactions to rape include heightened fear, increased avoidance, and symptomatic responses that for most victims begin to subside with or without treatment within three months. Among victims whose symptoms do not subside, these responses may resolve into chronic distress (Rothbaum et al., 1992).

Results of a recently conducted nationwide telephone survey indicate that 31% of all rape victims develop rape-related PTSD sometime in their lifetimes, that rape places women at elevated risk for alcohol and substance abuse problems post-rape, that many rape victims remain fearful of stigma, blame, and public disclosure years after their assault, and that rape is a risk factor for major depression (National Victims Center, 1992). In this study, rape victims were four times more likely than nonvictims to have contemplated suicide and thirteen times more likely to have actually made a suicide attempt.

Koss and Harvey (1991) have used an ecological view of psychological trauma to organize the results of clinical and nonclinical investigations into the immediate and long-term impacts of rape. The data indicate that while most victims experience an immediate and relatively predictable symptomatic response to rape (Burgess & Holmstrom, 1974), few seek care of any kind in the immediate aftermath of rape. Many victims experience considerable distress for many years following their assaults (Koss et al., 1987; Russell, 1982; Wyatt, 1985). Among these victims, person, event, and environmental factors interact to mediate individually diverse patterns of post-rape response and recovery (Harvey, 1991; Wyatt et al., 1990). The relationship between victim and offender is a particularly powerful contributor to post-rape adjustment. Sexual assaults perpetrated by caregivers, intimate partners, and "dates" appear to have far greater and more long-lasting impact than those perpetrated by strangers (Koss et al., 1987; Roth et al., 1990; Russell, 1984; Wyatt, 1985).

Koss and Burkhart (1989) suggest that major determinants of the long-term impact of sexual assault are found in the cognitive appraisals which a rape victim brings to the experience and the extent to which she is able to accomplish resolution through the process of cognitive reappraisal. Successful reappraisal is impeded by the interaction of two factors: the intentional interpersonal harm that rape entails and a social context that blames the victim. These factors combine to make the resolution of sexual assault by partner, caretaker, or acquaintance particularly difficult.

*Psychological effects of incest.* Community studies of incest survivors indicate that the long-range effects of childhood incest may be highly variable as well. For example, in Russell's (1983) study of adult incest survivors, while virtually all the women stated that they were upset by their experiences at the time of occurrence, half judged themselves to be entirely or mostly recovered at the time of their interview. The likelihood of good recovery appeared to be highly related to the nature of the traumatic experience. Sexual contacts that were not forceful, did not involve intrusive physical violation, occurred only once or infrequently, and/or involved relatives who were not part of

the child's household, were the least likely to result in lasting harm. On the other hand, violent, prolonged, or intrusive abuse, or abuse by a primary caretaker (particularly by father or stepfather) were very likely to produce a long-lasting traumatic syndrome (Herman et al., 1986).

Studies of incest survivors in the general population indicate persistent high levels of distress. Draijer's (in press) comprehensive study of women in the Netherlands found that survivors of incest had much higher levels of psychosomatic and psychiatric symptoms than their counterparts who had not been abused. Significantly elevated symptoms included nightmares, sleep disturbances, eating disorders, generalized anxiety, depression, dissociative disorders, self-destructive behavior including self-mutilation and suicide attempts, and sexual and relational problems. Very few of these women (under 10%) had sought psychiatric treatment. Similar studies conducted in the United States indicate that incest survivors report generally high levels of distress, with wide variability in symptoms, both among individuals and in one individual over time. There is no one symptom "profile" for incest survivors (Browne & Finkelhor, 1986).

Adult women with histories of incest are often found among psychiatric patients (Carmen et al., 1984; Herman et al., 1986). Clinical descriptions of these patients seem consistent with a formulation of PTSD that has become integrated into the victim's personality structure (Gelinas, 1983). A history of severe childhood sexual abuse has been etiologically linked to the development of multiple personality disorder (Putnam et al., 1986) and has been documented in a majority of patients diagnosed with borderline personality disorder (Herman et al., 1989). Characterological adaptation to a childhood environment of severely disrupted caretaking may set the stage for persistent impairments in self-esteem, self-protection, identity formation, and the capacity for intimate relationships (Herman, 1981).

Briere (1992) describes the studies from which these conclusions have been drawn as part of a "first wave" of research on the long-term impact of sexual abuse in childhood. "Second wave" investigations will require more tightly controlled longitudinal studies and the application of multivariate statistical analyses.

*Revictimization.* Childhood sexual abuse is a reliable predictor of heightened risk for adult victimization (Koss & Harvey, 1991). Incest survivors are highly vulnerable to rape, domestic battery, sexual harassment, and exploitation in pornography and prostitution (Russell, 1986). Herman (1981) attributes revictimization in part to failures of self-care and self-protection in the context of intimate relationships. This hypothesis is consistent with findings that revictimized women are less able to negotiate safe sex and barrier birth control practices than single assault victims (Wyatt, Guthrie & Notgrass, 1992). The widely noted relationship between dissociative disorders and childhood victimization may also explain the heightened vulnerability of the survivor (Kluft, 1990). In dangerous situations, the survivor may be more likely to freeze, dissociate, and comply automatically than to resist actively. Studies of

women who avoided attempted rape indicate that these responses are among the least effective means of self-protection (Bart, 1981).

*Treatment and recovery.* Treatment outcome research with rape victims has generally been limited to assessments of symptom relief following rather brief treatments introduced relatively early post-rape. These studies do not address the issues of long-term impact of sexual assault (Koss & Burkhart, 1989). Research on treatment of adult survivors of childhood sexual abuse faces daunting obstacles. Beutler and Hill (1992) have identified the conceptual and methodological difficulties that limit the validity and generalizability of the few available treatment outcome studies. Two approaches are promising. First, Roth and her students at Duke University have conducted in-depth interviews with patients to identify psychological themes that emerge during long-term treatment of rape and incest survivors (Roth & Lebowitz, 1988). Roth and Newman (1991) have derived from these themes a set of affect categories and cognitive schemata that require revision and integration during the recovery process. In this model, both affects and schemata are assessed over six operationally defined points toward resolution. The aim of this work is to describe the process of recovery in relatively standardized and measurable constructs that can be applied to the assessment of well-defined, trauma-specific treatments.

Work at the Cambridge Hospital Victims of Violence Program is proceeding along similar lines. Lebowitz et al. (in press) propose a staged and multidimensional view of the recovery process. Central to this model is Herman's (1992) thesis that recovery from psychological trauma unfolds in three broad stages of recovery, each of which is a focal point for particular treatment methods and goals. Harvey (1991) has concentrated on developing and operationalizing a multidimensional definition of recovery. These ideas provide the theoretical framework for psychological assessment and trauma-specific treatment. The aim is to develop models of treatment and recovery that apply to both acutely and chronically traumatized people at all stages of recovery, and permit assessment of complex, multimodal treatment approaches.

## SELECTED ABSTRACTS

BEUTLER, L.E. & HILL, C.E. (1992). **Process and outcome research in the treatment of adult victims of childhood sexual abuse: Methodological issues.** *Journal of Consulting and Clinical Psychology*, 60, 204-212. This article distinguishes between process and outcome research, describes areas within process and outcome research that would be applicable to studying adult survivors of sexual abuse, and identifies methodological issues in these research areas.

BRIERE, J. (1992). **Methodological issues in the study of sexual abuse effects.** *Journal of Consulting and Clinical Psychology*, 60, 196-203. Despite its relative infancy, child abuse research has provided a substantial literature on the psychological sequelae of sexual molestation. These findings have been helpful in informing social policy and guiding mental health practice. Because of

the recency of interest in this area, however, as well as the costs and time investment associated with more rigorous longitudinal research, many of these studies have used correlational designs and retrospective reports of abuse. The implications of this methodology are outlined, and remedies are suggested where possible.

BURT, M.R. (1980). **Cultural myths and supports for rape.** *Journal of Personality and Social Psychology*, 38, 217-230. This article describes the "rape myth" and tests hypotheses derived from social psychological and feminist theory that acceptance of rape myths can be predicted from attitudes such as sex role stereotyping, adversarial sexual beliefs, sexual conservatism, and acceptance of interpersonal violence. Personality characteristics, background characteristics, and personal exposure to rape, rape victims, and rapists are other factors used in predictions. Results from regression analysis of interview data indicate that the higher the sex role stereotyping, adversarial sexual beliefs, and acceptance of interpersonal violence, the greater a respondent's acceptance of rape myths. In addition, younger and better educated people reveal less stereotypic, adversarial, and proviolence attitudes and less rape myth acceptance. Discussion focuses on the implications of these results for understanding and changing this cultural orientation toward sexual assault.

DRAIJER, N. (in press). **The role of sexual and physical abuse in the etiology of women's mental disorders: The Dutch survey on sexual abuse of girls by family members.** *American Journal of Psychiatry*. This study assessed the prevalence and psychological impacts of intrafamilial sexual abuse before age 26 in a nationwide sample of 1054 Dutch women between 20 to 40 years of age at time of interview. Sixteen questions were used to inventory sexual experiences and an index of sexual abuse severity was constructed. Results indicated that 15.6% of the women had had involuntary sexual experiences with family members prior to age sixteen. As a group, these women evidenced more problems in adulthood and more psychological difficulties than their non-victimized cohorts. Abuse severity, sexual abuse accompanied by intrafamilial physical abuse, sexual abuse, and intrafamilial neglect contributed to the more severe effects. [MRH]

HARVEY, M.R. (1991). **An ecological view of psychological trauma.** Unpublished paper. An ecological viewpoint attributes individual differences in posttraumatic response and recovery to complex interactions among mutually influential person, event, and environmental factors which operate posttrauma to form individually unique and mutable contexts for recovery. Interventions introduced posttrauma rely for efficacy upon the degree to which they achieve ecological fit within these contexts. The paper offers a multi-dimensional definition of trauma resolution and recovery. The ecological model anticipates four conceptually distinct recovery outcomes, each of which is associated with specific research questions and clinical challenges. The existence of large numbers of persons who either do not use or do not benefit from clinical intervention posttrauma suggests the importance of community intervention. This unpublished paper is currently being prepared for publication as two separate papers. Until these are in press, copies of this paper can be obtained from the author. [MRH]

HERMAN, J.L. (1992). **Trauma and recovery.** New York: Basic Books. This book offers an overview of the field of traumatic stress studies, synthesizing a diverse literature. The author proposes that there is an underlying commonality in the human response to atrocities, whether these occur in the public sphere of

politics and war, the traditional sphere of men, or in the private sphere of sexual and domestic relations, the traditional sphere of women. The book delineates a spectrum of traumatic disorders and proposes a new diagnostic construct, "complex PTSD," for the sequelae of prolonged and repeated trauma. Because the traumatic syndromes have certain basic features in common, recovery also follows a common pathway. The three basic stages of recovery are establishing safety, reconstructing the trauma story, and restoring the connections between survivors and their community. The guiding principle throughout these stages is empowerment of the survivor. [JLH]

HERMAN, J.L., PERRY, J.C. & VAN DER KOLK, B.A. (1989). **Childhood trauma in borderline personality disorder.** *American Journal of Psychiatry*, 146, 490-495. Subjects with borderline personality disorder (N = 21) or borderline traits (N = 11) and nonborderline subjects with closely related diagnoses (N = 23) were interviewed in depth regarding experiences of major childhood trauma. Significantly more borderline subjects (81 percent) gave histories of such trauma, including physical abuse (71 percent), sexual abuse (68 percent), and witnessing serious domestic violence (62 percent); abuse histories were less common in those with borderline traits and least common in the subjects with no borderline diagnosis. These results demonstrate a strong association between a diagnosis of borderline personality disorder and a history of abuse in childhood.

KOSS, M.P. (1990). **The women's mental health research agenda: violence against women.** *American Psychologist*, 45, 374-380. The focus of this article is violence against women: scope, impact, community response, clinical treatment, and prevention. Conclusions include the following: (a) Nationally representative data on the scope of violence are lacking. (b) The mental health implications of violence are not currently addressed by the practices of mental health professionals. (c) Discontinuity exists between clinical understanding of the impact of violence and empirical treatment research. (d) Victim services are proceeding in program development without direction from empirical data. (e) Prevention efforts have been isolated from the social context in which violence against women occurs. Nine directions for future research are highlighted that intersect with the stated priorities of the National Institute of Mental Health.

KOSS, M.P. & BURKHART, B.R. (1989). **A conceptual analysis of rape victimization: Long-term effects and implications for treatment.** *Psychology of Women Quarterly*, 13, 27-40. Recent prevalence studies have suggested that 15-22% of women have been raped at some point in their lives, many by close acquaintances, although few victims seek assistance services or professional psychotherapy immediately post-assault. Surveys have revealed that 31-48% of rape victims eventually sought professional psychotherapy, often years after the actual assault. These observations suggest that the primary role of clinicians in the treatment of rape victims is the identification and handling of chronic, post-traumatic responses to a nonrecent experience. However, it is concluded that most of the existing literature on rape treatment addresses only the target symptoms that represent the immediate response to rape. In this article, contemporary theoretical and empirical discussions of stress, cognitive appraisal, cognitive adaptation, and coping are used to conceptualize the long-term impact of rape and the process of resolution. Directions for future research on the clinical treatment of rape are suggested.

KOSS, M.P. & HARVEY, M.R. (1991). **The rape victim: Clinical and community interventions** (2nd Ed.). Newbury Park, CA: Sage Publications. This book offers a comprehensive review of the rape literature. The crime of rape is defined as are the various types of assaults it subsumes. Current incidence and prevalence research is reviewed and summarized. An ecological view of rape trauma and recovery organizes the presentation of research concerning the psychological impact of sexual assault on individuals and is employed to examine the impact of sexual assault on the larger community. A feminist view of rape and rape prevalence is discussed and the history and contributions of the rape crisis movement are reviewed. Two chapters describe and consider the research on clinical interventions with rape victims: the first focuses on individual interventions, the second on group treatment, which is seen by many in the field as the treatment of choice for rape survivors. The special advantages of group treatment are considered and a range of group approaches are described. The book concludes with a discussion of rape prevention activities and with an emphasis on the need for competence-oriented, primary prevention efforts. [MRH]

LEBOWITZ, L., HARVEY, M.R. & HERMAN, J.L. (in press). **A stage by dimension model of recovery from sexual trauma.** *Journal of Interpersonal Violence*. This paper offers a conceptual model of recovery from sexual trauma in the context of treatment. The model, currently being developed at the Cambridge Hospital's Victims of Violence Program, integrates: (1) an ecological view of psychological trauma, (2) the idea that recovery from interpersonal trauma unfolds in a progressive, identifiable series of stages, and (3) a multi-faceted definition of what constitutes recovery from psychological trauma. These ideas comprise a model which offers clinicians and researchers some useful ways of thinking about trauma, treatment and recovery.

ROTH, S. & LEBOWITZ, L. (1988). **The experience of sexual trauma.** *Journal of Traumatic Stress*, 1, 79-107. The present research was designed to describe women's experience of sexual trauma and its aftermath as it relates to difficulties in coping with the trauma. A small, but heterogeneous, sample of survivors seeking treatment was interviewed in an unstructured format and encouraged to present their story of what had happened and what it had meant to them. The definition and examples of 14 themes are presented. They provide evidence that sexual trauma confronts the individual with affects and meanings which are extremely difficult to manage and which may have long-term effects. The themes are discussed in reference to general psychological processes involved in the response to acute stress, the cultural context of sexual trauma, and the implications for the psychotherapeutic treatment of sexual trauma victims.

ROTH, S. & NEWMAN, E. (1991). **The process of coping with sexual trauma.** *Journal of Traumatic Stress*, 4, 279-297. In coping with sexual trauma, a survivor must come to understand the emotional impact of the trauma so that she is no longer preoccupied or driven by negative feelings, and must grapple with the meaning of the trauma until an adaptive resolution is achieved. In this paper, we present a conceptual system that we believe characterizes the coping process of recovery from sexual trauma. We present clinical examples of the use of the system from a psychotherapy group for female incest survivors, and the system's preliminary reliability results in measuring the coping process.

RUSSELL, D.E.H. (1982). **The prevalence and incidence of forcible rape and attempted rape of females.** *Victimology: An International Journal*, 7, 81-93. A more accurate estimate of the true prevalence of rape in the general population of females was the major goal of the study to be described. In-person interviews with 930 randomly selected adult female residents of San Francisco were conducted. Following the legal definition of forcible rape in California and most other states in 1978, 44% of the 930 women reported at least one episode of attempted rape. Only 8% of the total number of rape and attempted rape incidents were ever reported to the police.

Assuming that the prevalence of rape of females is not substantially different in San Francisco than in other major cities in the United States, this survey reveals a problem of extremely serious magnitude, which in turn suggests the inappropriateness of continuing efforts to explain rape as a psychopathological phenomenon.

RUSSELL, D.E.H. (1983). **The incidence and prevalence of intrafamilial and extrafamilial sexual abuse of female children.** *Child Abuse and Neglect*, 7, 133-146. Data obtained from a random sample of 930 adult women in San Francisco provide the soundest basis heretofore available for estimating the prevalence of intrafamilial and extrafamilial sexual abuse of female children. This article describes the methodology of this survey, as well as some of the key findings. For example: 16% of these women reported at least one experience of intrafamilial sexual abuse before the age of 18 years; 12% reported at least one such experience before the age of 14 years; 31% reported at least one experience of extrafamilial sexual abuse before the age of 18 years; and 20% reported at least one such experience before the age of 14 years. When both categories of sexual abuse are combined, 38% reported at least one experience before the age of 18 years; and 28% reported at least one such experience before the age of 14 years. Only 2% of the cases of intrafamilial and 6% of the cases of extrafamilial child sexual abuse were ever reported to the police. A plea is made for the urgent need to recognize the magnitude of the problem of child sexual abuse, and to act to prevent it.

RUSSELL, D.E.H. (1988). **Pornography and rape: A causal model.** *Political Psychology*, 9, 41-73. In order for rape to occur, a man must not only be predisposed to rape, but his internal and social inhibitions against acting out rape desires must be undermined. My theory in a nutshell is that pornography (1) predisposes some men to want to rape women or intensifies the predisposition in other men already so predisposed; (2) undermines some men's internal inhibitions against acting out their rape desires; and (3) undermines some men's social inhibitions against the acting out. Some of the research substantiating this theory is presented and discussed, and suggestions are made for further research.

WYATT, G.E. (1985). **The sexual abuse of Afro-American and white-American women in childhood.** *Child Abuse and Neglect*, 9, 507-519. This study examined the prevalence of child sexual abuse in a multi-stage stratified probability sample of Afro-American and white American women, 18 to 36 years of age, in Los Angeles County. The sample ranged in demographic characteristics by age, marital status, education, and the presence of children. Of the total sample of 248 women, 154 (62%) reported at least one incident of sexual abuse prior to age 18, with 57% of Afro-American women and 67% of white American women having been abused. Sexual abuse before the age of 18 appears to be of equal concern for both ethnic groups, although similarities and differences in the circumstances under which abuse inci-

dents occurred were subtle and deserve attention. The need for identifying contemporary factors that contribute to the prevalence of abuse over the past 40 years is stressed.

WYATT, G.E., GUTHRIE, D. & NOTGRASS, C.M. (1992). **Differential effects of women's child sexual abuse and subsequent sexual revictimization.** *Journal of Consulting and Clinical Psychology*, 60, 167-173. This study examines the differential effects of sexual revictimization in a community sample of 248 African-American and white American women, ages 18 to 36. Two classifications of sexual revictimization over the life course were used to assess the effects on later sexual and psychological functioning. The findings suggest that unintended pregnancies and abortions were significantly associated with sexual revictimization. Women who reported more than one incident in both childhood and adulthood were also likely to have multiple partnerships and brief sexual relationships. The findings are discussed within the context of the dynamics of sexual revictimization and its effects. Suggestions are offered for therapeutic strategies with survivors in order to minimize the effects of sexual revictimization.

## ADDITIONAL CITATIONS Annotated by the Editors

BART, P.B. (1981). **A study of women who both were raped and avoided rape.** *Journal of Social Issues*, 37(4), 123-137. Interviewed 13 adult women who had been raped and who had successfully avoided rape on a different occasion. Rape was associated with: a known perpetrator; talking or pleading only as an avoidance strategy; an assault at home; a primary concern of not being killed or mutilated; and threat of force. Avoidance was associated with: an unknown perpetrator; use of multiple avoidance strategies; an assault outside; and a primary concern of not being raped.

BRIERE, J. (1988). **The long-term clinical correlates of childhood sexual victimization.** *Annals of the New York Academy of Sciences*, 528, 327-334. Reports a study of 195 adult female psychiatric outpatients, 133 of whom were sexually abused in childhood. Abuse victims, relative to women who were not abused, reported more dissociation, sleep disturbance, sexual problems, anger, drug and alcohol addiction, past suicidality, and self-mutilation, and were more likely to have been raped or sexually assaulted as adults. In victims, longer periods of abuse, physical abuse, bizarreness of abuse, and multiple perpetrators were correlated with sexual problems, alcoholism, drug addiction, adult rape or sexual assault, and suicidality; sexual intercourse was related to dissociation and suicidality.

BROWNE, A. & FINKELHOR, D. (1986). **Impact of child sexual abuse: A review of the research.** *Psychological Bulletin*, 99, 66-77. Reviews the empirical literature on the initial and long-term effects of child sexual abuse in female victims. The authors also report effects by aspects of abuse and conclude that experiences involving father figures, genital contact, and force are most damaging. They conclude with recommendations for future research.

BURGESS, A.W. & HOLMSTROM, L.L. (1974). **Rape trauma syndrome.** *American Journal of Psychiatry*, 131, 981-986.

Reports on 92 adult female rape victims who sought treatment at an emergency room within one year of the rape. The authors describe a rape trauma syndrome and note that for some victims the syndrome may be compounded by past or current problems or by not reporting the rape to anyone.

CARMEN, E.H., RIEKER, P.P. & MILLS, T. (1984). **Victims of violence and psychiatric illness.** *American Journal of Psychiatry*, 141, 378-383.

Examined inpatient records from 188 male and female psychiatric patients to investigate the relationship between psychiatric illness and physical and sexual abuse. Fifty-three percent of the females and 23% of the males had been abused. There were no differences in diagnoses or admission symptoms between abused and nonabused patients. The abused group was more likely to have a history of parental alcohol abuse. The abused group tended to remain hospitalized longer and to direct anger inward during hospitalization. Also, abused males, but not abused females, were more likely to have abused others.

GELINAS, D.J. (1983). **The persisting negative effects of incest.** *Psychiatry*, 46, 312-332.

Reviews literature on the long-term negative effects of incest and attempts to explain these effects, including chronic traumatic neurosis, relational imbalances, and intergenerational risks. The author describes the often "disguised presentation" of abuse victims in therapy and argues that focusing on this presentation may worsen a victim's symptoms and prognosis.

HERMAN, J.L. (1981). **Father-daughter incest.** Cambridge, MA: Harvard University Press.

Reports an investigation of 40 adult female incest survivors who were psychotherapy outpatients and 20 control females. Variables examined include family characteristics, characteristics of the incest, psychopathology, and other long-term effects. The author also discusses several therapeutic issues, including disclosure, family dynamics, legal issues, and prevention.

HERMAN, J.L. (1988). **Considering sex offenders: A model of addiction.** *Signs: Journal of Women in Culture and Society*, 13, 695-724.

Reviews sociocultural and psychopathological accounts of sexual assault and presents a model in which the behavior of the offender is interpreted as addiction. The author argues that such a model can incorporate both feminist and psychological analyses. She also argues that the model has major implications for treatment: 1) that one offense can not be dismissed as benign; 2) that one cannot assume the offender is motivated to change; and 3) that the focus of treatment must be on changing the behavior itself.

HERMAN, J.L., RUSSELL, D. & TROCKI, K. (1986). **Long-term effects of incestuous abuse in childhood.** *American Journal of Psychiatry*, 143, 1293-1296.

Studied two groups of female incest survivors, 53 outpatients and 152 nonpatients. The nonpatients reported a range of experiences and outcomes, whereas the outpatients' reports were more consistently severely traumatic; e.g., 63% of the nonpatients but only 8% of the patients reported abuse of less than 6 months' duration. The authors suggest that the estimate of complete or mostly complete recovery in half of the nonpatients may be optimistically biased.

KILPATRICK, D.G., SAUNDERS, B.E., VERONEN, L.J., BEST, C.L. & VON, J.M. (1987). **Criminal victimization: Lifetime prevalence, reporting to police, and psychological impact.** *Crime and Delinquency*, 33, 479-489.

Studied 391 adult community-residing females, 75% of whom had been the victim of a crime. Fifty-three percent of the sample had been sexually assaulted, on average 22 years prior to the study. Over one-quarter of the victims had experienced PTSD following their attack, ranging from 11.1% in cases of attempted molestation to 57.1% in cases of completed rape.

KLUFT, R.P. (Ed.). (1990). **Incest-related syndromes of adult psychopathology.** Washington, DC: American Psychiatric Press.

Presents a collection of chapters on the long-term psychiatric symptoms associated with incest. Topics include: long-term effects, somatoform disorders, developmental disturbances, cognitive processes, PTSD, dissociation, and revictimization.

KOSS, M.P., GIDYCH, C.A. & WISNIEWSKI, N. (1987). **The scope of rape: Incidence and prevalence of sexual aggression and victimization in a national sample of higher education students.** *Journal of Consulting and Clinical Psychology*, 55, 162-170.

Reports a national survey of 2,972 male and 3,187 female predominantly white, post-secondary students with an average age of 21.4 years. Over half (53.7%) of the women reported sexual victimization, and 25.1% of the men reported sexual aggression. The estimated 6-month incidence was 83 per 1,000 for female victimization and 34 per 1,000 for male aggression.

NATIONAL VICTIMS CENTER (1992). **Rape in America: A report to the nation.** National Victims Center.

Summarizes the findings of two studies conducted by the National Victims Center and the Crime Victims Research and Treatment Center at the Medical University of South Carolina. The National Women's Study, funded by the National Institute of Drug Abuse, is a three-year longitudinal study of a national probability sample of 4,008 women. A second study surveyed 370 agencies providing crisis assistance to rape victims. Results indicate that one of eight adult women in America has been the victim of forcible rape, that almost 61% of rapes occur before the victim's age 18, that few rapes are reported to police, and that rape has a "devastating impact on the mental health of victims."

PUTNAM, F.W., GUROFF, J.J., SILBERMAN, E.K., BARBAN, L. & POST, R.M. (1986). **The clinical phenomenology of multiple personality disorder: Review of 100 recent cases.** *Journal of Clinical Psychiatry*, 47, 285-293.

Describes the symptomatic presentation of multiple personality disorder in 92 females and 8 males. The authors note a high prevalence of sexual abuse and other trauma in this group and a clinical presentation that includes depression, dissociation, labile mood, self-destructive behavior, and sexual dysfunction.

ROTH, S., WAYLAND, K. & WOOLSEY, M. (1990). **Victimization history and victim-assailant relationship as factors in recovery from sexual assault.** *Journal of Traumatic Stress*, 3, 169-180.

Used a probability sample of 502 female college students and 503 women who worked on the same campus to examine how a victim's sexual assault history and her relationship with the assailant(s) mediate recovery. Repeated assault was related to denial, which the authors discuss in terms of its likelihood of increasing the risk of revictimization.

ROTHBAUM, B.O., FOA, E.B., RIGGS, D.S., MURDOCK, T. & WALSH, W. (1992). **A prospective examination of post-traumatic stress disorder in rape victims.** *Journal of Traumatic Stress, 5*, 455-475.

Reports a longitudinal study of 95 female rape victims who were followed for a period of 12 weeks beginning soon after the assault. The percentage of women with PTSD decreased from 94% to 47% over this period. The authors discuss predictors of the course and severity of symptoms following sexual trauma.

RUSSELL, D.E.H. (1984). **Sexual exploitation: Rape, child sexual abuse, and workplace harassment.** Beverly Hills, CA: Sage Publications.

Reviews the literature on rape (incidence and prevalence, causes, rapists, and victims), child sexual abuse (incidence and prevalence, causes, legal issues, perpetrators), and sexual harassment. The review documents the frequency with which these crimes occur and emphasizes social and cultural factors as an explanation. The author argues that each type of crime may be better understood by viewing their causes as related.

RUSSELL, D.E.H. (1986). **The secret trauma: Incest in the lives of girls and women.** New York: Basic Books.

Presents detailed results of a community sample of 930 adult females, 38% of whom reported incestuous and/or extrafamilial sexual abuse before the age of 18. Chapters address topics such as prevalence, characteristics of the abuse and its context, victim characteristics, long-term effects, victimization, perpetrators, and family issues.

WATKINS, B. & BENTOVIM, A. (1992). **The sexual abuse of male children and adolescents: A review of current research.** *Journal of Child Psychology and Psychiatry and Allied Disciplines, 33*, 197-248.

Comprehensively reviews the literature on sexual abuse in boys. While noting the frequent methodological problems in this literature, the authors are able to draw several conclusions, including: 1) that sexual abuse in male children is more common than was previously thought; and 2) that both the initial effects and long-term outcomes can be extremely negative.

WESTEN, D., LUDOLPH, P., MISLE, B., RUFFINS, S. & BLOCK, J. (1990). **Physical and sexual abuse in adolescent girls with borderline personality disorder.** *American Journal of Orthopsychiatry, 60*, 55-66.

Examined history of physical and sexual abuse in 50 adolescent female psychiatric inpatients, 27 of whom met criteria for borderline personality disorder. Both types of abuse were more common among the borderlines. Abuse was associated with poorer interpersonal function, inappropriate behavior, and lower IQ scores. The authors recommend assessing psychiatrically disturbed adolescents for a history of abuse.

WYATT, G.E., NOTGRASS, C.M. & NEWCOMB, M. (1990). **Internal and external mediators of women's rape experiences.** *Psychology of Women Quarterly, 14*, 153-176.

Used path analysis to study processes that mediate the effects of rape in a community sample of 31 African-American and 24 Caucasian adult female victims. Although characteristics of the rape (e.g., severity) predicted outcomes, there also were indirect effects of self-blame and the support provided for revealing the rape. Involvement of authorities predicted negative effects but was not influenced by characteristics of the rape.

## PILOTS UPDATE

For an increasing number of researchers and clinicians, computer networking is becoming a dominant medium for professional communication. In this and future columns we will talk about some ways in which we are using networks to advance work in PTSD.

Several years ago, the Advanced Research Projects Agency of the U.S. Department of Defense established a communications network linking major computer centers with scattered sites at which defense research was being carried out. Scientists soon began using it to exchange files and messages as well as to solve problems on distant computers. The ARPAnet evolved into the Internet, while other networks evolved: BITNET within the academic community; FORUM in the Department of Veterans Affairs; private networks in large corporations, institutions, and universities. CompuServe and GENIE made interactive communication available to anyone with a computer, a modem, and a credit card. Links between networks and across borders have created an amorphous international matrix of computers which has come to be called "the Net."

Three years ago, when the National Center for PTSD was planning the PILOTS database, the *PTSD Research Quarterly*, and its other activities, the Net was a much quieter place than it is today. While university libraries were converting from card to online catalogs, these were rarely accessible from off campus. Most database searching was done by librarians or other trained intermediaries, who used modems to dial into BRS, DIALOG, and other databanks. Computer "bulletin boards" devoted to special topics existed, but these were hard to discover and harder to use. Outside of library automation departments and campus computer centers, the Net had little impact on the way scholars and civilian researchers worked and lived.

That was then; this is now. The Net has become an integral part of academic life, and is increasingly important to administrators, clinicians, and service providers. It is certainly becoming an integral part of our way of doing things at the National Center for PTSD. We shall be using it to make the PILOTS database available free of charge to users anywhere; to distribute our publications in electronic form; to communicate with PILOTS users and readers of the *PTSD Research Quarterly*; and to alert researchers and clinicians working in many disciplines to the National Center's activities. We hope to have these features in operation by the end of the year, and we shall be announcing details in our next issue.

Our goal in all of this is to use modern computer technology to share information among people working with PTSD, for the ultimate benefit of PTSD patients and everyone affected by traumatic stress.

(A good introduction to computer networking is *Zen and the Art of the Internet*, by Brendan P. Kehoe. The first edition was widely distributed on the Net, and is available from many campus computer centers; a second edition will be published in book form.)

## PTSD RESEARCH AT THE PHILADELPHIA VAMC

Richard J. Ross, MD, PhD

When I joined the staff of the Philadelphia VA Medical Center in 1983, I began a collaborative research effort with Adrian Morrison, DVM, PhD, School of Veterinary Medicine, University of Pennsylvania. Dr. Morrison's laboratory had for over a decade been studying the physiology of rapid eye movement (REM) sleep in the cat and had advanced the idea that REM sleep could be viewed as a state of ongoing vigilance to internally generated stimuli. The possibility had been raised that the nervous system in REM sleep behaves as if continuous startle, like the startle typically associated with awakening, was occurring. Just having begun to work with veterans who had PTSD, I was struck by the congruence between the PTSD symptom complex, including repetitive, stereotypical anxiety dreams and exaggerated startle responses, and the presumptive neurophysiological mechanisms of REM sleep. In 1989, we published a theoretical article outlining the reasons for believing that a REM sleep disturbance might be fundamental to the pathophysiology of PTSD.

William Ball, MD, PhD, joined us in 1986 and began a series of parametric studies of the CNS response to tones during sleep. These helped to establish that the processing of stimuli differed between REM sleep and non-REM sleep and were consistent with the notion that REM sleep is a vigilant state. In 1988 Larry Sanford, PhD, joined the group, which has continued to pursue the hypothesis that orienting mechanisms are recruited spontaneously during REM sleep. Our basic research on REM sleep control also has included an exploration of the neuropharmacological systems that are involved. We remain particularly interested in inhibitory modulation by monoamines because of the possibility that insights gained in the animal laboratory could have implications for the design of pharmacological treatments for PTSD in humans.

Complementary clinical studies were initiated in 1987, in collaboration with Steven M. Silver, PhD, of the Coatesville VAMC, where we have continued to recruit many research subjects from the specialized PTSD treatment unit. We first showed that combat veterans with PTSD were capable of habituating normally the eyeblink component of the startle reflex. Accordingly, the focus of this work shifted from a possible habituation deficit to sensory and cognitive factors that might malfunction in PTSD leading to an exaggerated startle response. With Pratap Yagnik, MD, at the Philadelphia VAMC, we recently have developed a precise electromyographic measure of startle.

Polysomnographic studies have been a major focus of our clinical research. David Dinges, PhD, and Nancy Kribbs, PhD, of the Unit for Experimental Psychiatry, Institute of Pennsylvania Hospital and the University of Pennsylvania Dept. of Psychiatry helped in establishing a sleep laboratory at the Philadelphia VAMC. We have observed REM sleep changes in combat veterans with

PTSD, in some ways resembling polysomnographic findings in REM behavior disorder, a parasomnia characterized by abnormal motor activation during REM sleep and vivid, dysphoric dreams. These REM sleep changes appear to be distinguishable from those in major depression, and we are now further defining polysomnographic abnormalities that are specific to PTSD. With Edward Schweizer, MD, of the University of Pennsylvania Dept. of Psychiatry, we are surveying the sleep and dream mentation of depressed, non-PTSD subjects, hoping eventually to compile a database on parasomnias in a range of psychiatric disorders.

Recently, our group has become interested in investigating prospectively the development of PTSD. With Carole-Rae Reed, RN, MSN, and Ann Burgess, PhD, FAAN, of the University of Pennsylvania School of Nursing, we have begun to explore the physiological response to traumatization in female rape victims. We hope that this approach will contribute to an understanding of the neurophysiological mechanisms of PTSD and ultimately the design of more effective treatments.

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