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In this issue:

SOCIAL SUPPORT AND TRAUMATIC STRESS

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Most often social support is referred to as social interactions that provide individuals with actual assistance and embed them into a web of social relationships perceived to be loving, caring, and readily available in times of need. This broad definition points to three major facets of social support: received support (actual receipt of help); social embeddedness (quality and type of relationships with others); and perceived support (the belief that help would be available if needed). Reviews of literature frequently note the limitations of supportive relationships in times of stress but have generally concluded that social support is beneficial to psychological well-being and physical health. The vast majority of studies that have provided evidence for such conclusions were based on two dominant theoretical formulations: the stress buffer (interactive) model and the main effect (additive) model (Cohen et al., 2000).

One of the first studies in the area of traumatic stress that addressed the buffering function of social support compared a group of people living near the Three Mile Island (TMI) nuclear power plant with a randomly selected group of control respondents residing in demographically similar areas. Fleming et al. (1982) showed that perceived social support exerted significant main effects on a variety of emotional and behavioral symptoms of distress. Most importantly, social support interacted with the accident exposure, and patterns of these interactions formed a classic stress-buffering effect. TMI residents with lower levels of perceived support exhibited more symptoms of global distress, depression, alienation, and anxiety than did respondents from other groups. Eriksson et al. (2001) studied humanitarian aid workers and found a significant interaction between exposure to threatening events and perceived social support from family and friends. Participants who experienced more life threats and also reported greater levels of perceived support during re-entry home exhibited fewer PTSD symptoms than did those aid workers with high exposure and low social support. Ozer and Weinstein (2004) examined recent exposure to community violence in a large sample of girls and boys from urban middle schools and demonstrated that perceived helpfulness of support from mothers, fathers, and siblings buffered the effects of violence on PTSD and depression.

However, not many studies show such pristine and unqualified buffering effects of social support. Stress-buffering properties of social support are often confined to specific sources, subgroups, and types of support, as illustrated by the studies of Stephens & Long (1999), Llabre & Hadi (1997), and Palinkas et al. (1992). In a prospective study of older persons who experienced the 1993 Midwestern floods (Tyler & Hoyt, 2000), the interaction between support and exposure produced a significant pattern that was inconsistent with the buffering hypotheses – the levels of depression among respondents aged 55-69 with low social support decreased as the flood exposure increased. Indeed, other studies have also presented patterns of the Support X Trauma interaction that deviate from those predicted based on stress buffering notions (e.g., Hammack, et al. 2004).

Whether or not they searched for the evidence of stress-buffering, most studies of trauma show a salutary main effect of perceived social support on psychological well-being. In fact, it is rather unusual not to register these effects, at least at a bivariate level. Even more unusual is for higher perceived support to be associated with more symptomatology, but it happens occasionally. Springer & Padgett (2000) found that perceived support from friends was linked to greater distress among female adolescents exposed to interpersonal violence. Hobfoll & London (1986) studied Israeli women whose relatives were in armed forces during a military conflict. Among women with high self-esteem and mastery, greater levels of intimacy with friends were predictive of more, not less, anxiety and depression symptoms. These findings were interpreted as "pressure-cooker" effect whereby, paradoxically, exchanges of social support in the context of shared fears and worries may exacerbate symptoms of distress.

Hobfoll and London also measured support actually received during the crisis and its higher levels were significantly related to more distress as well. All in all, the findings of studies that assessed received social support are less consistent than those of studies that examined perceived social support. Kaniasty & Norris (1992) followed the template of the optimal stress-support matching model and examined the buffering properties of

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six types of social support (three perceived, three received) with longitudinal data collected from a representative sample of crime victims and nonvictims. Perceived support exhibited several buffering effects, protecting both violent and property crime victims against various manifestations of distress. The stress-buffering capabilities of received support were much more limited. In a sample of victims of Hurricane Andrew, Sanchez et al. (1995) also showed buffering effects of received support (from employers), but again they were restricted to very specific outcomes (i.e., work tension, not anxiety or physical symptoms). A few more recent studies documented a stress-buffering function of received support (e.g. Muller et al. 2000; Schat & Kelloway, 2003), yet measures of support receipt are not frequently used in trauma research. One notable exception is a programmatic work with the Crisis Support Scale initiated with investigations of the survivors of two disasters at sea. Joseph's (1999) review of these studies clearly testifies that greater levels of received support (i.e., being given opportunities to talk, vent, and disclose) both immediately (retrospectively measured) and later after the crisis had salutary direct associations with lower posttraumatic distress.

The reason for the neglect of received social support may be that many stress and coping studies revealed no effects, or worse, documented positive associations between receiving help and psychological distress. Such an association is not surprising given that the presence of psychological suffering constitutes a clear cue for support networks to mobilize their efforts to provide for those in need. Nevertheless, the available evidence points to a more robust presence of stress-moderating and direct effects of social support in its cognitive, evaluative, and perceived form. Consequently, the superiority of perceived support over received support has been readily accepted because it more reliably promotes (direct effect) psychological health and protects it (buffer effect) in times of stress.

A major conceptual problem with the buffer and direct effect models is that they assume that stress and social support are unrelated. A closer inspection of correlation tables in most trauma studies reveals that perceived support is often correlated negatively with trauma exposure, and received support is often correlated positively with trauma exposure. These relations should not be ignored because they suggest different mechanisms by which social support operates. One such mechanism is referred to as "social support deterioration," wherein perceived social support declines in the aftermath of trauma and contributes to the detrimental impact of stress rather than serving to counteract or buffer it. Kaniasty & Norris (1993) tested this model following a severe flood by using a prospective design that controlled for pre-event levels of functioning. Postdisaster declines in perceived support and social embeddedness mediated (partially accounted for) the immediate and delayed impact of disaster on distress. Other studies linked different forms of interpersonal violence to erosion or lower levels of perceived support, which in turn, fully or partially, explained the violence-to-distress link (Salazar et al. 2004; Thompson, et al., 2000). Research on combat-related PTSD also has presented evidence congruent with the social support deterioration model, as is illustrated by the studies of L. King and colleagues (King, L.A., & King, D.W. et al.; 1998; Taft et al., 1999).

However, what is the role of received support in that process? Can these two aforementioned processes, the instantaneous mobilization of received support and subsequent deterioration of perceived support, be combined into one explanatory model? Norris & Kaniasty (1996) proposed a "social support deterioration deterrence model," and showed that victims of hurricanes who received high levels of help after the impact were less likely to experience a subsequent erosion of perceived support. Perceived support mediated the effects of both disaster exposure and postdisaster received support on distress.

Another topic in the research on social support is the influence of negative social interactions. For example, veterans who return home from war to unsympathetic, judgmental, and possibly hostile social environments show greater vulnerability to developing psychopathology (e.g., Dirkzwager et al., 2003; Neria et al., 1998; Stretch, 1986). Rejection and perceived unavailability of support functioned in a manner consistent with the social support deterioration model as mediators of war trauma on PTSD (Fontana et al., 1997). Interactions with people who are insensitive, uninterested, or dismissive impede recovery from all traumas. Negative responses of support providers ("negative support") have been implicated as a more powerful predictor of distress than "positive social support" among victims of crime or abuse (e.g., Campbell et al., 2001; Ullman & Filipas, 2001; Zoellner et al., 1999). Lepore, et al. (1996) proposed that negative and unsupportive social reactions toward victims would induce them to inhibit and suppress trauma-related thoughts and interfere with cognitive processing of the experience, and this notion has been supported in several investigations of patients coping with life-threatening illnesses (e.g., Cordova et al., 2001; Lepore & Helgeson, 1998). Some studies have shown that detrimental effects of social constraints and beneficial effects of social support can occur simultaneously (Manne et al., 2000; Widows et al, 2000).

Finally, we must not forget that the majority of studies are cross-sectional, and even if they follow trauma victims longitudinally, very few have pre-event measures of psychological and social well-being. Hence, the conundrum of "reversed causality" or the notion of "social selection" (i.e., distressed people have difficulties in maintaining social relationships) remains viable underneath a general consensus that the "social support-to-distress" link is primary. Keane et al. (1985) presented intriguing data retrospectively collected from combat veterans with PTSD that showed a pattern of "downfall" of various social support facets across time since their discharge from service. Prior to entering the military, traumatized veterans had levels of support similar to veterans in non-distressed comparison groups. D.W. King et al. (in press) reported in a cross-lagged panel analysis that an earlier assessment of PTSD

in male veterans predicted subsequent levels of perceived support, not the other way around. PTSD and other manifestations of trauma-related distress do have an injurious impact on the quality and quantity of social support resources, making D.W. King et al.'s point about the need to help persons suffering from PTSD rehabilitate or retain interpersonal skills.

In summary, social support is important for people coping with trauma. Although various indices of support, when examined in conjunction with other trauma-relevant variables, usually explain only small amounts of variance in symptomatology, recent meta-analytical studies of PTSD risk/protective factors placed perceived social support at the top of the list of predictive factors (Brewin et al., 2000; Ozer et al. 2003). We must recognize that social support is not a generic variable standing merely for good social relationships. Whether it is perceived or received, whether it acts independently or in a company of other resources, and what does it provide, when, and from whom? —all of these are true distinctions. Social support and its functions are rife with complexities, and only "with a little help from (our) friends" will we be able to figure them out one day.

REFERENCES

BREWIN, C., ANDREWS, B., & VALENTINE, J. (2000). **Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults.** *Journal of Consulting and Clinical Psychology, 68,* 748-766.

COHEN, S., UNDERWOOD, L.G., & GOTTLIEB, B.H. (Eds.). (2000). ***Social support measurement and intervention: A guide for health and social scientists.*** New York: Oxford University Press.

OZER, E.J., BEST, S.R., LIPSEY, T.L., & WEISS, D.S. (2003). **Predictors of posttraumatic stress disorder and symptoms in adults: A meta-analysis.** *Psychological Bulletin, 129,* 52-73.

SELECTED ABSTRACTS

CAMPBELL, R., AHRENS, C.E., SEFL, T., WASCO, S. M., & BARNES, H.E. (2001). **Social reactions to rape victims: Healing and hurtful effects on psychological and physical health outcomes.** *Violence and Victims, 16,* 287-302. In this study, 102 rape survivors were interviewed about the social reactions they received from family and friends post-rape. Results supported Ullman's (1996b) conclusion that the overall contribution of positive social reaction (e.g., providing support, listening, believing) on victims' recovery is negligible, but that negative social reactions (e.g., blaming) hinder recovery. In contrast to Ullman's (1996b) work, this research also examined whether rape victims have similar perceptions as to what constitutes a "positive" and "negative" social reaction. Results indicated that victims often agree as to what reactions are healing (positive), but that they do not agree as to what is hurtful (negative). By taking victims' perceptions into account, this study was able to compare the relative contributions of social reactions that were considered healing, social reactions that were considered hurtful, and the absence of social reactions. Results indicated that survivors who had someone believe their account of what happened or were allowed to talk about the assault—and considered these reactions to be healing—had fewer emotional and physical health problems than victims who considered these reactions hurtful, or victims who did not experience these reactions at all. Implications for future research on social reactions are discussed.

CORDOVA, M.J., CUNNINGHAM, L.L., CARLSON, C.R., ANDRYKOWSKI, M.A. (2001). **Social constraints, cognitive processing, and adjustment to breast cancer.** *Journal of Consulting and Clinical Psychology, 69,* 706-711. This cross-sectional study of 70 breast cancer survivors examined relationships among social constraints, behavioral and self-report indicators of cognitive processing, depression, and well-being. On the basis of a social-cognitive processing (SCP) model, it was predicted that social constraints would inhibit cognitive processing of the cancer experience, leading to poorer adjustment. Constraints were positively associated with intrusions, avoidance, and linguistic uncertainty in cancer narratives. Greater uncertainty, intrusions, and avoidance, as well as less talking about cancer, were associated with greater depression and less well-being. Intrusions partially mediated the positive constraints-depression relationship. Talking about cancer partially mediated the inverse avoidance-well-being relationship. Findings support the SCP model and the importance of using behavioral indicators of cognitive processing to predict positive and negative psychosocial outcomes of cancer.

DIRKZWAGER, A.J.E., BRAMSEN, I., & van der PLOEG, H.M. (2003). **Social support, coping, life events, and posttraumatic stress symptoms among former peacekeepers: A prospective study.** *Personality and Individual Differences, 34,* 1545-1559. This study examined both cross-sectionally and longitudinally the relationship between social support, coping strategies, additional stressful life events, and symptoms of posttraumatic stress disorder (PTSD) among Dutch former peacekeeping soldiers. Two groups of peacekeepers were investigated: 311 peacekeepers who participated in the peacekeeping operation in Lebanon between 1979 and 1985, and 499 peacekeepers who were deployed after 1990. These peacekeepers completed a questionnaire in 1996 and again in 1998. The results show that more negative social contacts and fewer positive social contacts were associated with more PTSD symptom severity. More use of the coping strategies «wishful thinking» and «accepting responsibility» was related to more PTSD symptoms. Conversely, more planful problem solving and seeking social support was related to less PTSD symptom severity. In addition, a bilateral relationship was found between additional stressful life events and PTSD symptom severity. The results indicate that social support and coping strategies may be valuable aspects of prevention and intervention programs.

ERIKSSON, C.B., VAN DE KEMP, H., GORSUCH, R., HOKE, S., & FOY, D.W. (2001). **Trauma exposure and PTSD symptoms in international relief and development personnel.** *Journal of Traumatic Stress, 14,* 205-219. International relief and development personnel may be directly or indirectly exposed to traumatic events that put them at risk for developing symptoms of PTSD. In order to identify areas of risk and related reactions, surveys were administered to 113 recently returned staff from 5 humanitarian aid agencies. Respondents reported high rates of direct and indirect expo-

sure to life-threatening events. Approximately 30 percent of those surveyed reported significant symptoms of PTSD. Multiple regression analysis revealed that personal and vicarious exposure to life-threatening events and an interaction between social support and exposure to life threat accounted for a significant amount of variance in PTSD severity. These results suggest the need for personnel programs; predeployment training, risk assessment, and contingency planning may better prepare personnel for service.

FONTANA, A., SCHWARTZ, L.S., & ROSENHECK, R. (1997). **Posttraumatic stress disorder among female Vietnam veterans: A causal model of etiology.** *American Journal of Public Health, 87*, 169-175. *Objectives:* The Vietnam and Persian Gulf wars have awakened people to the realization that military service can be traumatizing for women as well as men. This study investigated the etiological roles of both war and sexual trauma in the development of chronic posttraumatic stress disorder among female Vietnam veterans. *Methods:* Data from the National Vietnam Veterans Readjustment Study for 396 Vietnam theater women and 250 Vietnam era women were analyzed with structural equation modeling. *Results:* An etiological model with highly satisfactory fit and parsimony was developed. Exposure to war trauma contributed to the probability of post traumatic stress disorder in theater women, as did sexual trauma in both theater and era women. Lack of social support at the time of homecoming acted as a powerful mediator of trauma for both groups of women. *Conclusions:* Within the constraints and assumptions of causal modeling, there is evidence that both war trauma and sexual trauma are powerful contributors to the development of posttraumatic stress disorders among female Vietnam veterans.

HAMMACK, P.L., RICHARDS, M.H., LUO, Z., EDLYNN, E.S., & ROY, K. (2004). **Social support factors as moderators of community violence exposure among inner-city African American young adolescents.** *Journal of Clinical Child and Adolescent Psychology, 33*, 450-462. Using both surveys and the experience sampling method (ESM), community violence exposure, social support factors, and depressive and anxiety symptoms were assessed longitudinally among inner-city African American adolescents. Moderator models were tested to determine protective factors for youth exposed to community violence. Several social support factors emerged as protective-stabilizing forces for witnesses of violence both cross-sectionally and longitudinally, including maternal closeness, time spent with family, social support, and daily support (ESM). Contrary to hypotheses, several social support factors demonstrated a promotive-reactive effect such that, in conditions of high victimization, they failed to protect youth from developing symptoms. Effects did not differ by outcome or sex, though sex differences in findings emerged. Protective-stabilizing effects occurred more for witnessing violence, whereas promotive-reactive patterns occurred more for victimization. Results affirm social support factors as protective from the adverse effects of violence exposure, but they also suggest that some factors typically conceived as contributing to resilience might at times fail to protect youth in conditions of extreme risk.

KANIASTY, K., & NORRIS, F.H. (1992). **Social support and victims of crime: Matching event, support, and outcome.** *American Journal of Community Psychology, 20*, 211-241. Investigated the buffering properties of six types of social support (three perceived, three received) with regard to four psychological consequences (depression, anxiety, fear of crime, hostility) of criminal victimization (violent crime, property crime). These relationships were examined using longitudinal data collected from a sample of representative subsamples of victims and nonvictims. Effects of the perceived support measures (perceived appraisal support, perceived tangible support, self-esteem) were more pervasive than those of the received support measures (received information support, received tangible support, received emotional support). Perceived support consistently exhibited buffering effects, protecting both violent and property crime victims against various symptoms they would have otherwised experienced. The stress-buffering capabilities of received support were limited to informational and tangible help protecting victims of violence from experiencing excessive fear. These findings are discussed in the context of recent theoretical developments concerning the stress-support matching hypothesis.

KANIASTY, K., & NORRIS, F.H. (1993). **A test of the social support deterioration model in the context of natural disaster.** *Journal of Personality and Social Psychology, 64*, 395-408. This prospective longitudinal study examined stress-mediating potentials of 3 types of social support: social embeddedness, perceived support from nonkin, and perceived support from kin. As participants in a statewide panel study, 222 older adults were interviewed once before and twice after a severe flood. It was hypothesized that disaster exposure (stress) would influence depression directly and indirectly, through deterioration of social support. LISREL analyses indicated that postdisaster declines in social embeddedness and nonkin support mediated the immediate and delayed impact of disaster distress. No evidence was found for the mediational role of kin support. Findings are in accord with conceptualizations of social support as an entity reflecting dynamic transactions among individuals, their social networks, and environmental pressures.

KEANE, T.M, SCOTT, W.O., CHAVOYA, G.A., LAMPARSKI, D.M., & FAIRBANK, J.A. (1985). **Social support in Vietnam veterans with posttraumatic stress disorder: A comparative analysis.** *Journal of Consulting and Clinical Psychology, 53*, 95-102. In a cross-sectional study of the social support systems of Vietnam veterans, the following groups were compared: (a) Vietnam veterans who received a diagnosis of PTSD, (b) Vietnam combat veterans who were well adjusted, and (c) Vietnam-era veterans who were not in combat but who were currently hospitalized in a Veterans Administration Medical Center. Retrospective reports of social support were obtained from each group for 3 adult-life periods: (a) 1-3 months prior to entering the service, (b) 1-3 months following discharge from the service, and (c) at the present time. Indexes of social support included social network size, material support, physical support, sharing, advice, and positive social interactions. Prior to Vietnam, all three groups reported comparable levels of support across all dimensions. For the PTSD veterans, qualitative and quantitative measures of social support systematically declined over time to extremely low levels at the present time period, whereas for the comparison groups, social support was either stable or improved over time.

KING, D.W., TAFT, C.T, KING, L.A., HAMMOND, C., & STONE, E. (in press). **Directionality of the association between social support and posttraumatic stress disorder: A longitudinal investigation.** *Journal of Applied Social Psychology*. This study examined the nature of the association between social support and posttraumatic stress disorder

(PTSD) symptomatology among 2,249 male veterans of the 1990-91 Gulf War. Using structural equation modeling, a cross-lagged panel analysis indicated a strong negative relationship between PTSD at Time 1 and social support at Time 2, while social support at Time 1 did not predict PTSD at Time 2. Findings suggest that, over time, interpersonal problems associated with PTSD may have a detrimental influence on the quality and quantity of available social support resources.It is recommended that greater focus be placed on the inter-personal skills of those suffering from PTSD.

KING, L.A., KING, D.W., FAIRBANK, J.A., KEANE, T.M., & ADAMS, G.A. (1998). **Resilience-recovery factors in post-traumatic stress disorder among female and male Vietnam veterans: Hardiness, postwar social support, and additional stressful life events.** *Journal of Personality and Social Psychology, 74,* 420-434. Structural equation modeling procedures were used to examine relationships among several war zone stressor dimensions, resilience-recovery factors, and PTSD symptoms in a national sample of 1,632 Vietnam veterans (26 percent women and 74 percent men). A 9-factor measurement model was specified on a mixed-gender subsample of the data and then replicated on separate subsamples of female and male veterans. For both genders, the structural models supported strong mediation effects for the intrapersonal resource characteristic of hardiness, postwar structural and functional social support, and additional negative life events in the postwar period. Support for moderator effects or buffering in terms of interactions between war zone stressor level and resilience-recovery factors was minimal.

LEPORE, S.J., SILVER, R.C., WORTMAN, C.B., & WAYMENT, H.A. (1996). **Social constraints, intrusive thoughts, and depressive symptoms among bereaved mothers.** *Journal of Personality and Social Psychology, 70,* 271-282. The study examined how social constraints on discussion of a traumatic experience can interfere with cognitive processing of and recovery from loss. Bereaved mothers were interviewed at 3 weeks (T1), 3 months (T2), and 18 months (T3) after their infants' death. Intrusive thoughts at T1, conceptualized as a marker of cognitive processing, were negatively associated with talking about infant's death at T2 and T3 among socially constrained mothers. The reverse associations were found among unconstrained mothers. Controlling for initial level of distress, there was a positive relation between T1 intrusive thoughts and depressive symptoms over time among socially constrained mothers. However, higher levels of T1 intrusive thoughts were associated with a decrease in T3 depressive symptoms among mothers with unconstrained social relationships.

LLABRE, M.M., & HADI, F. (1997). **Social support and psychological distress in Kuwaiti boys and girls exposed to the Gulf crisis.** *Journal of Clinical Child Psychology, 26,* 247-255. Tested hypotheses about the role of social support in the relation between trauma from the Gulf crisis experience and psychological or health distress 2 years after the crisis. Participants were 151 Kuwaiti boys and girls exposed to high or low levels of trauma during the crisis. Participants were administered the Post-Traumatic Stress Disorder Index (PTSDI), Children's Depression Inventory (CDI) and measures of social support and health complaints. Children exposed to high levels of trauma had higher PTSDI and CDI scores and more health complaints than controls. Social support did not mediate the relation between trauma and distress. However, social support and sex functioned jointly as moderators of trauma on distress. Social support was shown to buffer the effect of trauma in girls but not in boys. Boys, however, reported lower levels of support than girls. The findings underscore the importance of the appropriate model specification in studies of stress and social support.

MANNE, S., DUHAMEL, K., & REDD, W.H. (2000). **Association of psychological vulnerability factors to post-traumatic stress symptomatology in mothers of pediatric cancer survivors.** *Psycho-Oncology, 9,* 372-384. The current study investigated whether individual differences in coping style, lifetime experience of traumatic events, perceived social support, and perceived social constraints were associated with symptoms of post-traumatic stress among 72 mothers of children who had successfully completed cancer treatment. Results suggested that more perceived social constraints and less perceived belonging support were associated with significantly more post-traumatic stress symptomatology, and this association was present after controlling for the effects of child age. Monitoring coping style and lifetime traumatic events were not significantly predictive of post-traumatic stress symptoms. The results of this study indicate that a sense of belonging to a social network as well as comfort expressing cancer-related thoughts and feelings to friends and family may play a key role in mothers' long-term adjustment to this extremely difficult life experience.

MULLER, R.T., GOEBEL-FABBRI, A.E., DIAMOND, T., & DINKLAGE, D. (2000). **Social support and the relationship between family and community violence exposure and psychopathology among high risk adolescents.** *Child Abuse and Neglect, 24,* 449-464. *Objective:* The objective of this study was to examine the protective effect of social support in the relationship between exposure to violence and psychopathology. Exposure to violence in the family and exposure to violence in the community were examined separately. Exposure to violence was further divided according to whether violence was experienced as a victim or as a witness. Internalizing and externalizing forms of psychopathology, as well as post-traumatic stress symptomatology, were examined. *Method:* Participants consisted of 65 high-risk adolescents admitted consecutively to psychiatric inpatient units. Data were collected by means of individual interviews, self-report questionnaires, and hospital charts. *Results:* Social support emerged as a protective factor with respect to the maladaptive effects of community violence, regardless of whether violence was experienced as a victim or as a witness. In contrast, social support did not appear to buffer the maladaptive effects of community violence, regardless of whether the violence was experienced as a victim or as a witness. In fact, the relationship between community violence and psychopathology was found to be generally nonsignificant regardless of social support status. *Conclusion:* These findings suggest that exposure to family violence may affect development differently than exposure to community violence, allowing social support to effectively buffer the effects of family, but not community violence. This finding highlights the importance of examining violence exposure that occurs within the family separately from violence exposure that occurs within the community.

NORRIS, F.H., & KANIASTY, K. (1996). **Received and perceived social support in times of stress: A test of the social support deterioration deterrence model.** *Journal of Personality and Social Psychology, 7,* 498-511. The authors evaluated the impact of receiving social support on subsequent levels of perceived social support and psychological distress in 2 independent samples of victims of severe natural disasters: Hurricane Hugo (n = 498) and Hurricane Andrew (n = 404). A social support deterio-

ration deterrence model was proposed that stipulated that postdisaster mobilization of received support counteracts the deterioration in expectations of support often experienced by victims of major life events. LISREL analyses of data collected 12 and 24 months after Hugo and 6 and 28 months after Andrew provided strong evidence for the hypothesized model: Perceived support mediated the long-term effects on distress of both scope of disaster exposure and postdisaster received support. Theoretical and application issues of social support are discussed.

OZER, E.J., & WEINSTEIN, R.S. (2004). **Urban adolescents' exposure to community violence: The role of support, school safety, and social constraints in a school-based sample of boys and girls.** *Journal of Clinical Child and Adolescent Psychology, 33,* 463-476. This study examined recent exposure to violence in the community and in other settings, protective factors, and current psychological functioning among 348 young adolescents from 9 urban middle schools. The majority (76%) of adolescents reported witnessing or being victimized by at least 1 violent event in the prior 6 months. Nearly half of adolescents who talked about their experience of a violent event reported feeling constrained from sharing their thoughts or feelings because of others' reactions. After controlling for daily hassles, more exposure to violence was associated with more self-reported posttraumatic stress disorder (PTSD) and depressive symptoms. Exposure to violence was not a significant predictor of teachers' ratings of adaptive functioning or internalizing symptoms. Support from specific individuals, perceived school safety, and lower constraints for discussing violence showed protective effects in the relation between exposure to violence and specific dimensions of psychological functioning. The implications of these results for school-based interventions are discussed.

THOMPSON, M.P., KASLOW, N.J., KINGREE, J.B., RASHID, A., PUETT, R., JACOBS, D., & MATTHEWS, A. (2000). **Partner violence, social support, and distress among inner-city African American women.** *American Journal of Community Psychology, 28,* 127-143. This study examined the role of social support in the partner violence/psychological distress relation in a sample of African American women seeking medical care at a large, urban hospital (n = 138). Results from bivariate correlational analyses revealed that partner violence was related to lower perceived social support and greater psychological distress, and lower social support was related to more distress. Furthermore, findings based on path analysis indicated that low levels of social support helped account for battered women's increased distress. Findings point to the need for service providers to screen for partner violence in nontraditional sites, such as hospital emergency rooms, and to address the role of social support resources in preventive interventions with African American battered women.

TYLER, K.A., & HOYT, D.R. (2000). **The effects of an acute stressor on depressive symptoms among older adults: The moderating effects of social support and age.** *Research on Aging, 22,* 143-164. This study uses longitudinal data to examine the potential moderating effects of social support and age among older adults exposed to an acute stressor. Using a sample of 651 older persons, data were gathered in the spring of 1992 and in the fall of 1993, approximately 60 days after the peak impact of flooding in the Midwest. Results indicate a positive association between pre- and postflood depression and a negative association between social support and postflood depression. For the youngest of the two older age groups, there is also a positive association between flood exposure and postflood depression, controlling for prior levels of depression. Age interactions reveal that social support moderates the effects of flood exposure on depression only for the younger age group.

ULLMAN, S.E., & FILIPAS, H.H. (2001). **Predictors of PTSD symptom severity and social reactions in sexual assault victims.** *Journal of Traumatic Stress, 14,* 369-389. Demographics, assault variables, and postassault responses were analyzed as correlates of PTSD symptom severity in a sample of 323 sexual assault victims. Regression analyses indicated that less education, greater perceived life threat, and receipt of more negative social reactions upon disclosing assault were each related to greater PTSD symptom severity. Ethnic minority victims reported more negative social reactions from others. Victims of more severe sexual victimization reported fewer positive, but more negative reactions from others. Greater extent of disclosure of the assault was related to more positive and fewer negative social reactions. Telling more persons about the assault was related to more negative and positive reactions. Implications of these results for developing contextual theoretical models of rape related PTSD are discussed.

ADDITIONAL CITATIONS

Annotated by the Editor

FLEMING, R., BAUM, A., GISRIEL, M.M., & GATCHEL, R.J. (1982). **Mediating influences of social support on stress at Three Mile Island.** *Journal of Human Stress, 8,* 14-22.

One year after the TMI accident, perceived social support buffered the impact of location/stress (TMI vs. control sites) on distress, depression, alienation, and behavioral indicators of stress. Support did not moderate the effects of locale on somatic symptoms or biochemical responses.

HOBFOLL, S.E., & LONDON, P. (1986). **The relationship of self-concept and social support to emotional distress among women during war.** *Journal of Social and Clinical Psychology, 4,* 189-203.

Intimacy with family and friends and support received during the crisis were measured in a sample of Israeli women whose loved ones were mobilized into armed forces. Intimacy with friends was positively correlated with anxiety, but not with depression. Amount of received support was positively correlated with depression. The impact of these social support measures on distress was also moderated by self-concept (self-esteem and mastery).

JOSEPH, S. (1999). **Social support and mental health following trauma**. In. W. Yule (Ed.), *Post-traumatic stress disorders. Concepts and therapy* (pp. 71-91). Chichester, UK: John Wiley & Sons.

Reviewed trauma studies that used the Crisis Support Scale, a six-item measure of received support that frequently showed a direct negative association with PTSD and other indices of distress. The success of the Crisis Support Scale may be partly due to its very specific link to the event and the preponderance of items closely tapping into the emotional needs of victims.

LEPORE, S.J., & HELGESON, V.S. (1998). **Social constraints, intrusive thoughts, and mental health after prostate cancer**. *Journal of Social and Clinical Psychology, 17*, 89-106.

Surveyed prostate cancer survivors about intrusive thoughts about cancer, social constraints in talking about cancer, avoidance, and distress. A stronger negative relation between intrusive thoughts and distress emerged among men who felt socially constrained in talking about their illness than among men who felt unconstrained. Social constraints were positively associated with avoidance in thinking and talking about cancer which, in turn, was associated with poorer mental health.

NERIA, Y., SOLOMON, Z., & DEKEL, R. (1998). **An eighteen-year follow-up study of Israeli prisoners of war and combat veterans.** *Journal of Nervous and Mental Disease, 186*, 174-182.

Israeli ex-POWs and a control group of combat veterans were assessed for PTSD and other psychiatric symptomatology 18 years after the war. Respondents who met with negative reactions at homecoming reported more avoidance and distress. Those who experienced positive support at homecoming had fewer PTSD symptoms.

PALINKAS, L.A., RUSSELL, J., DOWNS, M.A., & PETTERSON, J.S. (1992). **Ethnic differences in stress, coping, and depressive symptoms after the Exxon Valdez oil spill**. *Journal of Nervous and Mental Disease, 180*, 287-295.

Perceived social support from family and declines in social relations were assessed a year after the Exxon Valdez oil spill. Disaster exposure was associated with declines in social relations. Exposure was also correlated with a decline in perceived support among Euro-Americans. Perceived support was not directly associated with depression. However, it served as a buffer of the exposure on distress for Euro-Americans, but not native Alaskans.

SALAZAR, L.F., WINGOOD, G.M., DICLEMENTE, R.J., LANG, D.L., & HARRINGTON, K. (2004). **The role of social support in the psychological well-being of African American girls who experience dating violence victimization**. *Violence and Victims, 19*, 171-187.

Assessed the relationship between dating violence victimization and psychological well-being among African-American girls. Consistent with the social support deterioration model, perceived social support served as a mediator of the link between violence and distress.

SANCHEZ, J.I., KORBIN, W.P., & VISCARRA, D.M. (1995). **Corporate support in the aftermath of a natural disaster: Effects on employee strains**. *Academy of Management Journal, 38*, 504-521.

Adult employees were asked about support they received from employers 1 and 3 months after Hurricane Andrew. Received support had beneficial main effects on a number of outcomes. There were also 2 significant interactions between received support and disaster losses in predicting work tension both showing typical buffering effects of tangible and informational support.

SCHAT, A.C.H., & KELLOWAY, E.K. (2003). **Reducing the adverse consequences of workplace aggression and violence: The buffering effects of organizational support.** *Occupational Health Psychology, 8*, 110-122.

With a very specific measure assessing receipt of support from coworkers, supervisors, and management, the results showed that such support protected employees subjected to workplace violence against losses in emotional well-being, somatic health, and job-related affect, but not against a fear of future violence or job neglect.

SPRINGER, C., & PADGETT, D.K. (2000). **Gender differences in young adolescents' exposure to violence and rate of PTSD symptomatology.** *American Journal of Orthopsychiatry, 70*, 370-379.

In a school-based sample of adolescents, higher levels of perceived support from friends were linked to PTSD symptoms for female, but not for male, adolescents.

STEPHENS, C., & LONG, N. (1999). **Posttraumatic stress disorder in the New Zealand police: The moderating role of social support following traumatic stress.** *Anxiety, Stress and Coping, 12*, 247-264.

Traumatic experiences of police officers were positively related to PTSD symptoms, but this relationship was attenuated for officers who reported greater perceived social support from peers (co-workers). Other measures of social support (supervisors, family/friends) showed no interactive effects with trauma, although they were significantly and negatively related to the outcome.

STRETCH, R.H., 1986). **Incidence and etiology of Post-Traumatic Stress Disorder among active duty Army personnel.** *Journal of Applied Social Psychology, 16,* 464-481.

Vietnam veterans whose interactions with others since returning home had been critical and non-supportive (negative) had significantly higher PTSD symptomatology than veterans whose interactions with others after returning from Vietnam had been primarily supportive (positive).

TAFT, C.T., STERN, A.S., KING, L.A., & KING, D.W. (1999). **Modeling physical health and functional health status: The role of combat exposure, posttraumatic stress disorder and personal resource attributes.** *Journal of Traumatic Stress, 12*, 3-23.

Social support deterioration model was supported in path analyses with female and male Vietnam veterans. Combat exposure had a negative association with perceived support and that relation partially mediated the link between combat and PTSD for both men and women.

WIDOWS, M.R., JACOBSEN, P.B., & FIELDS, K.K. (2000). **Relation of psychological vulnerability factors to posttraumatic stress disorder symptomatology in bone mar row transplant recipients.** *Psychosomatic Medicine, 62,* 873-882.

Perceived social support and social constraints were assessed in a sample of patients who completed bone marrow transplantation. Lower levels of perceived support and greater social constraint were associated with increased PTSD symptomatology above and beyond relevant demographic and medical variables.

ZOELLNER, L.A., FOA, E.B, & BRIGIDI, B.D. (1999). **Interpersonal friction and PTSD in female victims of sexual and nonsexual assault.** *Journal of Traumatic Stress, 12,* 689-700.

Female victims of sexual or nonsexual assault were assessed at both 2 weeks and 3 months following the trauma. Interpersonal friction predicted greater PTSD severity. Amount of received social support was not related to posttraumatic distress.

PILOTS UPDATE

Many of us were thrilled to learn that the ivory-billed woodpecker, considered extinct for half a century, has managed to survive in the dense thickets of eastern Arkansas. Newspaper and radio reports cited a report in *Science* by a team of Cornell University ornithologists. As the official journal of the American Association for the Advancement of Science, *Science* is America's best-read scientific journal. It is also readily available online. So there is little doubt that this report will find a wide readership. But not everyone will read the same thing.

Print readers will see a brief report of the bird's rediscovery, including a detailed description of the diagnostic features that allowed the authors to identify it as an ivory-billed woodpecker. Online readers have access to ten pages of "Supporting Online Material," including an elaborate description of materials and methods and a selection of photographs, charts, and maps. They also can see a brief movie of the ivory-bill in flight.

The use of supplementary material to convey information that print could not provide predates the World Wide Web. Twenty years ago, articles in *Movement Disorders* were often accompanied by supplementary material on videotape, and well before that several scientific societies maintained repositories of supplemental data in microform. These provide little difficulty for the indexer, who has merely to record the bibliographic data present in print and note the existence of supplementary material.

Today there are many journals that are published only in electronic form. Other online journals offer printed editions for archival purposes. These, too, present few bibliographic problems — provided that their publishers have made arrangements for the permanent preservation of their content. (If the publisher of a printed journal goes out of business, existing issues can still be read in the libraries that subscribed to them. But if an online journal ceases publication, how will back issues be read?) The PILOTS Database indexes online as well as printed journals, and the National Center's PTSD Resource Center keeps archival copies of online publications that we have indexed.

There is a form of hybrid publishing that is a bit more problematical. Hotopf et al (2003) explored differences in the prevalence of physical and mental disorders between Gulf War veterans and comparable non-deployed military personnel. This article is published in two versions. An abridged version appears in the printed edition of the *British Medical Journal*; the full version appears on the BMJ website. This makes sense; those BMJ readers who seldom deal with the problems of veterans can skim through the printed version, and those with a greater interest can read the full article on their computer screens or print it out for more convenient perusal. But it does present some problems to the bibliographer.

Many journals publish both online and print editions. In most cases their content is identical, except for illustrations that appear in color online and in monochrome in print, so our indexing need not concern itself with distinguishing between print and online content. But we did need to make a distinction in this case.

In indexing Hotopf et al (2003), we decided to assign descriptors based on our examination of the online version, as this contains the most information. A PILOTS Database user who consults only the printed journal may not find some of the data that our indexing would indicate, because two tables were omitted from that abridged version. We added a note to our record saying, "This article is published in two versions. The abridged version (for which pagination is given) appears in the printed edition of the *British Medical Journal*. The full version (on which PILOTS Database indexing is based) appears on the BMJ website." We must hope that database searchers read that note when selecting publications to read.

We can expect to encounter more tricky indexing problems as publishers continue to experiment with the expanded opportunities for presenting information afforded by the online environment. Just as we shall have to learn how to deal with these challenges, so database searchers will have to learn how to make the best use of our work.

REFERENCES

FITZPATRICK, J.W., LAMMERTINK, M., LUNEAU, M.D., GALLAGHER, T.W., HARRISON, B.R., SPARLING, G.M., ET AL. (2005). **Ivory-billed woodpecker (*Campephilus principalis*) persists in continental North America.** *Science*, 28 April 2005 (10.1126/science.1114103).

HOTOPF, M., DAVID, A.S., HULL, L., NIKALOU, V., UNWIN, C., & WESSELY, S.C. (2003). **Gulf war illness — better, worse, or just the same?: a cohort study.** *British Medical Journal*, *327*, 1370-1372.

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