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## PTSD Psychopharmacology Basics for Non-physicians and Beginning Psychiatrists

Linda Nagy, M.D. and Randall Marshall, M.D.



Dr. Linda Nagy

Veterans with PTSD are often treated with psychiatric medications together with psychotherapy. This is particularly true of veterans with severe and complex trauma histories, chronic PTSD, or comorbid psychological disorders or poor social functioning. A wide variety of medications are prescribed to treat PTSD and common comorbid symptoms, and some patients receive multiple medications. This is true despite the fact that there are a limited number of controlled trials in PTSD and essentially no trials that examine a combination treatment of medicine and psychotherapy in a controlled study. In other words, the clinical



Dr. Randall Marshall

need for pharmacotherapy currently is greater than our scientific knowledge of medication treatment. For this reason, an understanding of the expected effects and side effects of these medications can help veterans' primary mental health providers facilitate treatment and medication compliance.

In recent years there has been an increase in pharmacotherapy studies in PTSD and medications (sertraline and paroxetine) have for the first time received U.S. Food and Drug Administration indications for treatment of PTSD. The research that forms our knowledge base is more limited compared to that of some other psychiatric conditions, but this is an active area of investigation. Still, to date, only two medications have been studied rigorously enough to receive FDA approval for use in PTSD. All of the many other medications in use with these patients are used on an "off-label" basis because psychiatrists have found them to be helpful in clinical practice. This article summarizes pharmacotherapy studies of PTSD, and offers some suggestions for facilitating treatment. It is important to note that open trial studies and case reports do not provide the more definitive evidence of the effectiveness of medications that can come from double-blind, placebo-controlled randomized trials. Results of open trial and case report studies can be subject to error from the expectations of both the treating psychiatrist and the patient. Any single trial is unlikely to be representative of the entire population of interest, so multiple studies with different populations are ideal. Studies with veterans are highlighted in this article since this population may have unique features, particularly in the U.S.

It is helpful to remember the terms we use to refer to classes of medication, e.g. "antidepressant" or "mood stabilizers" are really only shorthand terms, not actual descriptive labels. Most medications have effects on multiple neurotransmitter systems and on more than one DSM-IV disorder. In addition, we do not yet fully understand either the neurochemical mechanisms involved in PTSD symptoms or the pharmacological effects of most medications. And since receptors are located throughout the body, not just in brain, "psychiatric" drugs can have multiple physical effects. Although there are factors that suggest a medication is best for a given patient, there is no good way to predict who will respond to which medication, so psychopharmacotherapy, by necessity, involves a trial and error process. As discussed by Friedman and colleagues (2), we now start with the selective serotonin reuptake inhibitors (SSRIs), as these currently are the only medications for which there is adequate data to support an indication for PTSD, and their tolerability and safety is generally favorable.

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## FROM THE EDITOR..

The regular posting of the National Center for PTSD Clinical Quarterly on our website ([http://ncptsd.org/publications/cq/cq\\_list.html](http://ncptsd.org/publications/cq/cq_list.html)) has broadened its readership to include readers far beyond its original primary audience, administrators and clinicians within the Department of Veterans Affairs and other key government officials. While the CQ has always placed a priority on articles related to improving the treatment and quality of life of veterans who suffer from PTSD, it also has made an effort through the years to publish informative pieces related to the assessment and treatment of PTSD in other populations (e.g., children, survivors of catastrophic events, victims of sexual assault, and victims of domestic and community violence).

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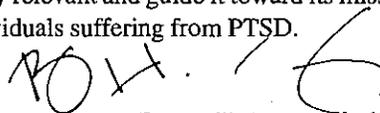
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As in the past, your input will help to keep the Clinical Quarterly relevant and guide it toward its mission to be a valuable source for practitioners working to improve the lives of veterans and other individuals suffering from PTSD.



**Bruce H. Young, Editor-in-Chief**

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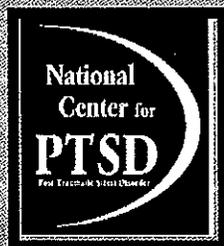
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### Serotonin Reuptake Inhibitors

Currently, the first-line medication used to treat PTSD is usually one of the selective serotonin-reuptake inhibitors (SSRIs; 1,2), which are generally known to effectively treat depression and anxiety disorders. Large scale, double-blind placebo-controlled trials have been conducted in PTSD for paroxetine (Paxil), sertraline (Zoloft), and fluoxetine (Prozac; 3-5); small open trials are promising for fluvoxamine (Luvox; 6) and more modest for citalopram (Celexa; 7.) The dosages used for PTSD are similar to those used for depression and

of the disorder. Side effects included weakness, diarrhea, abnormal ejaculation, impotence, nausea, and sleepiness. These were usually observed at the beginning of treatment and of mild to moderate intensity. Sertraline 100-200mg/d showed significant effect for the avoidance/numbing cluster, but inconsistent improvements for the reexperiencing and hyperarousal symptoms. Insomnia was more common on active sertraline than placebo, affecting 35%; one study also reported diarrhea, nausea, fatigue and decreased appetite more commonly than with placebo. Fluoxetine showed significant effect for reexperiencing and hyperarousal, and a trend for avoidance/numbing symptoms. In the large-scale placebo-controlled trial for PTSD, "side effects" were equally common for active and placebo. This illustrates a point that many symptoms such as headache, nausea, insomnia, dry mouth, and anxiety may occur in PTSD patients independent of medications. There are several promising open trials reported for fluvoxamine (Luvox) 100-300mg/d, and in particular, robust effects for combat veterans are reported for all 3 symptom clusters as well as specific improvements in trauma-related dreams and the common problem of interrupted sleep. Psychophysiologic reactivity also improved. The side effects were primarily in early treatment and included headache, insomnia, sedation, and gastrointestinal distress.

Sexual dysfunction, most commonly delayed ejaculation that was not present before treatment, often emerges as a concern with SSRIs. It can be managed by switching medications, "drug holidays" for drugs having a shorter half-life (fluoxetine's long half-life and active metabolite limit this option), or taking a second medication to counteract this effect. The choices are highly individual and patients should discuss the pros and cons with their doctor. The recent paroxetine trial found that 20mg had the same effectiveness as 40mg, so increasing the dosage conservatively can also help keep adverse effects to a minimum (9).

There is some question of whether civilians and veterans respond similarly to medications. For example, a placebo-controlled fluoxetine study conducted in Europe, Israel, and Africa reported positive results, and the study included male combat veterans. They found that younger patients with more recent single events were the most responsive. On the other hand, placebo-controlled trials of fluoxetine with U.S. combat veterans were negative. Combat veterans in the sertraline trial did not respond as well as other subjects, though the sample was relatively small. The paroxetine trial included veterans recruited from the community, some of whom did respond to treatment. This is a question that requires further investigation, but one possible explanation has to do with the proportion of patients recruited that have already failed multiple treatment attempts, and hence are relatively treatment-refractory.

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the time course of response is gradual, such that improvements might be apparent after 3-4 weeks at a therapeutic dose, and gradual continued improvement would be expected over a period of 8-12 weeks or more. In fact, a recent open trial found that patients continued to improve over a 6 month period, particularly among patients with high baseline severity. (8). The degree of improvement is typically partial, for example, studies have defined a "responder" as someone who has 30% to 50% decrease in PTSD symptoms, e.g. as rated using the Clinician-Rated PTSD Scale (CAPS), and a Clinical Global Impressions-Improvement rating of 1 (very much improved) or 2 (much improved). Of patients participating in trials of paroxetine, sertraline, and fluoxetine, approximately 50-65% of patients receiving active drug met these criteria, and 30-40% of patients receiving placebo; for citalopram 31% of veterans in an open trial were responders. In general, ratings of depression and anxiety improved along with PTSD symptoms. Patients treated with paroxetine 20-40mg/d showed significant improvement in all three PTSD symptom clusters (reexperiencing, avoidance/numbing, hyperarousal), so this medication might be expected to treat the full expression

### Other Antidepressants

Other antidepressant medications are commonly used for symptoms of PTSD and for the frequent comorbid symptoms of major depression or dysthymia (10). These include the tricyclic antidepressants (TCAs), monoamine oxidase inhibitors (MAOIs) and newer agents with novel pharmacological profiles.

Tricyclic antidepressants, such as imipramine, amitriptyline, and desipramine have been studied in combat veterans and were found to be effective in decreasing reexperiencing and avoidant symptoms. A review of TCA studies found approximately 45% of patients showed moderate to good improvement. They are less frequently used than SSRIs now, due to side effects and partial effectiveness. MAOIs such as phenelzine (Nardil) and tranylcypromine (Parnate) have demonstrated more robust efficacy than TCAs, with approximately 82% of patients showing moderate to good improvement, especially for reexperiencing symptoms and insomnia. A precaution is the need for a low tyramine diet and the avoidance of certain other medications to prevent a potentially lethal hypertensive reaction. Patients should receive a list of foods and medications to be avoided (such as fermented foods, decongestants, opiates) and education prior to starting these medications.

One placebo-controlled trial of nefazodone (Serzone) 200-600mg/d in veterans reported significant improvement for PTSD, especially for hyperarousal (9). Side effects included dry mouth, dizziness, gastrointestinal symptoms, and headache, and were similar among patients receiving placebo. Six additional open trials of nefazodone supported its effectiveness for all three symptom clusters, with 30-60% of patients responding. Recently, the manufacturer circulated a warning about possible liver failure, which, though rare, has increased monitoring and caution accordingly. One small uncontrolled report examining mirtazapine (Remeron) suggests improvement for PTSD in some severe, chronic patients (12). In one open trial in veterans, bupropion (wellbutrin) ameliorated hyperarousal symptoms (13). Although its effectiveness for PTSD is unclear, bupropion is effective for smoking cessation in veterans, which can be an important health issue.

### Mood Stabilizers

Several medications such as lithium carbonate and the anticonvulsants divalproate (Depakote) and carbamazepine (Tegretol) are sometimes used to help stabilize mood and for intense irritability (1,2). Patients who have comorbid bipolar disorder will likely be receiving one of these medications, and for those with a history of manic episodes, antidepressant medications need to be avoided to prevent triggering a manic

episode or inducing rapid mood cycling. These medications require regular laboratory monitoring for possible side effects and checking serum levels. Lamotrigine (Lamictal) is a newer mood stabilizer with antidepressant properties. One small placebo-controlled trial reports PTSD reexperiencing and avoidance/numbing was reduced in patients receiving lamotrigine up to 500mg/d (14). The main precaution is a slow dose increase due to risk of a potentially serious rash. Gabapentin (Neurontin) is a newer anticonvulsant examined in one chart-review study for PTSD. They report gabapentin 300-3600mg/d used as an adjunctive treatment improved sleep duration and nightmare frequency in veterans with chronic PTSD (15). Side effects included sedation and dizziness. Topiramate (Topamax), a novel antiepileptic medication was examined in a chart review study of civilian PTSD in dosages between 12.5 to 500 mg/d as an add-on or monotherapy (16). Patients experienced decreased nightmares, flashbacks, and intrusions, and those with PTSD self-ratings had significant reductions in all 3 symptom clusters. Another case report described a marked positive effect of topiramate in three patients who had been unresponsive to previous medications. Further study of these agents is needed in PTSD.

### Antipsychotic Medications

Newer antipsychotic medications, such as olanzapine (Seroquel), risperidone (Risperdal), and quetiapine (Seroquel) were initially prescribed for comorbid psychosis, but there is growing interest in use of relatively low doses of these medications for severe PTSD symptoms that have not responded to other medications or psychotic symptoms. The popularity of these newer agents is related to lower likelihood of side effect problems that are common with the older, traditional antipsychotics, such as tardive dyskinesia, other neuromuscular problems, and cognitive side effects, and novel mechanisms of action. Two open trials of olanzapine 5-20 mg/d, one in torture victims and one in veterans, found excellent response (17). One placebo-controlled study did not find active/placebo difference due to a high placebo response rate and small sample size. A few case reports describe patients who benefited from risperidone. Quetiapine 25-300 mg/d was studied in 20 combat veterans, a majority improved with decreases in all 3 symptom clusters and improved sleep (18). These data for atypical antipsychotics are preliminary, but encouraging for further study in PTSD.

It is important to note that the "typical" antipsychotics with primary binding to dopaminergic sites have not been shown effective in PTSD. Theoretically, the consciousness-impairment due to side effects from any medication, including antipsychotics, might actually impede the capacity to process a traumatic event. Thus, the use of atypical

antipsychotics in PTSD should be considered preliminary until controlled data becomes available

Before prescribing antipsychotics it is also important to consider whether apparent psychotic symptoms actually do reflect a psychotic process. For example, severe flashbacks can be misdiagnosed as hallucinations because consciousness is partially impaired during the flashback. In addition, culturally-syntonic experiences that may seem odd or even psychotic in the postindustrial West (e.g., seeing the spirit of someone who has died, or hearing one's name called aloud), but which are not associated with schizophrenic spectrum pathology. (19).

### Other Classes of Medications

Two uncontrolled reports suggest the anxiolytic buspirone (Buspar) was helpful for PTSD (20); this agent might be used in PTSD patients with prominent generalized anxiety disorder.

The limited studies of benzodiazepines [e.g. alprazolam (Xanax), clonazepam (Klonopin)] in PTSD are negative; though there was some decrease in anxiety, PTSD symptoms did not improve; and preclinical studies suggest they could hamper emotional processing after acute trauma or grief. There are additional concerns about dyscontrol and marked exacerbation of PTSD symptoms with sudden withdrawal, as well risk of abuse/dependence. Another study using a partially controlled design found that more patients treated with benzodiazepines after a traumatic event had PTSD at 6 months compared to a group that was not given benzodiazepines (21).

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Sleep problems are common in PTSD. Trazodone (Desyrel) is classified as an antidepressant, but clinically its use is primarily for its sedative qualities, especially in combination with SSRIs such as sertraline or fluoxetine that worsen sleep. A variety of other sleep agents [such as zolpidem (Ambien), chloral hydrate, other sedating antidepressants] might be used in PTSD patients. Cyproheptadine (Periactin) was hypothesized to help sleep due to actions on serotonin, but was found ineffective and possibly worsened sleep in veterans with PTSD (22). It is important to realize that making insomnia the primary focus of treatment does not appear to reduce PTSD symptoms or play any preventative role after acute trauma. A recent placebo-controlled trial found that treatment of insomnia alone with a benzodiazepine after a traumatic event did not reduce the risk of developing chronic PTSD (23).

Adrenergic agents (beta and alpha blockers) are sometimes used for hyperarousal symptoms (1,2). There is some interest in use of beta-adrenergic blocking medications, such as propranolol (Inderal,) in acute stress disorder to prevent the development of PTSD without interfering with essential learning and emotional processing during recovery, but this is still preliminary. A recent placebo-controlled trial of propranolol given to patients in the emergency room after a traumatic event had disappointing results (24). There are reports of clonidine (alpha-adrenergic agonist; Catapres), propranolol, guanfacine (alpha 2A agonist, Tenex), and prazosin (alpha-1 adrenergic antagonist (Minipres) having beneficial effects in individual patients. Larger scale studies and assessment of the full range of PTSD symptoms are critical for evaluating the use of these agents.

### General Aspects of Pharmacotherapy in PTSD

The high placebo response rate in many controlled trials in PTSD is similar to that seen in depression and anxiety trials, and makes large scale studies necessary to detect active/placebo differences. Most trials now are requiring a minimum duration of disorder since the natural recovery rate from PTSD is quite high in the initial months.

PTSD patients can be anxious and overly vigilant of physical symptoms. Therapists who are aware of this can help patients persist with a medication trial if tempted to discontinue prematurely. Side effects typically appear early, before therapeutic effects, are relatively mild, a nuisance only (not dangerous), and often subside with continued use of medication. In addition, for the antidepressant class of medications, a therapeutic dose needs to be achieved and maintained for at least 4 to 8 weeks before effectiveness can be assessed.

Patients should be cautioned against making changes they have not discussed with their psychiatrist. In addition to problems with subtherapeutic or toxic doses, interactions between some drugs can lead to an excess of serotonin, called a Serotonin Syndrome (e.g., syndrome characterized by abdominal pain, diarrhea, sweating, delirium, muscle contractions, restlessness, irritability, hostility, and mood change). Discontinuations should be planned and gradual, as a discontinuation syndrome (i.e., dizziness, nausea, fatigue, flu-like aches and chills, sensory and sleep disturbances, etc.) can result from stopping antidepressants too suddenly.

Many aspects of pharmacologic treatment have not yet been studied. Combinations of medications are often used, particularly for severely ill and comorbid patients. These patients are not represented in the medication studies thusfar performed in PTSD, so there are no data to clarify use of combinations of medication. As with any patient, medication decisions are

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based on clinical assessment of an individual patient and their specific clinical features. In cases when a patient has "accumulated" multiple medications over many years it may be beneficial to "prune back" and simplify their regimen. The goals are to remove ineffective medications, minimize side effects and unwanted drug-drug interactions, and improve compliance. Therapists can help support the positive nature of these changes for patients who express reluctance.

Thus far there are no data guiding length of pharmacologic treatment. One sertraline trial was extended to six months, and reported additional improvements. It is not known how to determine which patients will relapse after medication is discontinued, and which are at risk for relapse. Other chronic psychiatric disorders often require long-term treatment and, based on clinical experience, it appears that this is true for at least some patients with PTSD. Similarly, there is only one study to date comparing two medications, and this study was conducted before the SSRIs were available (25). None have compared medication with psychotherapy, or specifically examined the combination. Likewise, it is unclear whether medication can be discontinued after an effective course of psychotherapy. These are questions that require further research in PTSD.

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**NEW DIRECTIONS**

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Since 1989, this column has given me a unique opportunity to comment on the depth and breadth of new developments concerning traumatic stress. I've always insisted that our field encompasses an enormous spectrum of topics from the microscopic to the macroscopic. For example, in the last issue of the Clinical Quarterly, I reviewed current brain imaging findings regarding neuroanatomic abnormalities associated with PTSD. This time I'll focus on traumatic stress from a global social and humanitarian perspective.

A much awaited book will be published this spring, Trauma Interventions in War and Peace: Prevention, Practice and Policy, published by Kluwer Academic/Plenum Publishers. It is the culmination of a five-year collaboration between the United Nations and the International Society for Traumatic Stress Studies (ISTSS). The book was initiated by a request to ISTSS from John Langmore during his tenure as Director of the UN's Division for Social Policy and Development within its Economic and Social Council (ECOSOC). He was later joined in this request by Martin Barber, Director of the UN's Office for the Coordination of Humanitarian Affairs (OCHA). Both men were concerned that the importance of trauma-related issues had neither been adequately acknowledged nor incorporated into the UN's various missions. The book is but one component of an ongoing procedural initiative to influence UN policy and practice by detailing the impact of traumatic stress on the millions of people world-wide requesting or receiving UN assistance.

In order to produce both the book and associated UN documents, ISTSS's UN representative, Ellen Frey-Wouters, invited Terry Keane and, later, myself (as current and past presidents, respectively) to meet with John Langmore and Martin Barber and their colleagues from ECOSOC and OCHA. With their enthusiastic encouragement and support, the project quickly expanded to include approximately 50 international experts drawn from countries from the less and more developed regions as well as from countries in social and economic transition, with representatives from Argentina, Australia, Bangladesh, Barbados, Brazil, Canada, Denmark, Egypt, Ethiopia, Germany, India, Israel, Japan, Kenya, the Netherlands, Norway, Russia, Samoa, Slovenia, South Africa, Sri Lanka, Turkey, Uganda, the United Kingdom, and the United States of America. Production of the book was a daunting and complicated endeavor. Bonnie Green served as senior editor with assistance from myself, Joop de Jong, Susan Solomon, Terry Keane, John Fairbank, Brigid Donelan, and Ellen Frey-Wouters, as co-editors. Yael Danieli served as Special Editorial Consultant and Stacy Kaltman worked closely with Bonnie as special assistant.

To a person such as myself, trained as a clinician in a traditional one-on-one clinician-patient context, there were many new lessons to be learned in the course of this UN/ISTSS collaboration. (These lessons later helped me to think about massive trauma in nontraditional ways after the September 11<sup>th</sup> terrorist attacks which affected millions of Americans directly and indirectly.) First it was necessary for us to understand the consequences of traumatic stress from a public health perspective as a widespread problem that must be addressed from a societal/community rather than from a traditional individual clinical perspective. Second, the majority of people most affected by traumatic stress tend to come from resource-poor regions, nations and communities, lacking safety, security, sanitation, nutrition, health care, education, and the tools needed to live productively and independently. In addition, they usually lack more than a very small fraction of the well educated and adequately equipped professionals needed to provide basic services. In other words, following massive casualties or traumatization, traditional one-on-one clinical approaches just won't work because of the magnitude of need and the miniscule amount of available resources and qualified assistance.

As a result, a different model for global social and humanitarian intervention is essential. In our book, we offer the inverted psychosocial pyramid as the only viable conceptual and practical approach. The basic premise of the inverted psychosocial pyramid is that primary interventions must be designed to assist society as a whole. We propose four different levels of program intervention. Interventions designed for the whole population are the most cost-effective approaches. As we descend the pyramid, interventions target progressively smaller groups of people, until the pyramid's apex where the most costly, traditional one-on-one clinical interventions can be found that require clinical staff with specialized training. There are different types of interventions at each level with a successive focus on safety, legislative and public policy, public education, coordination, capacity building, training/education, self-help, counseling or clinical treatment.

In brief, Societal Levels of Intervention include international/national laws and public policy that promote safety, security, health, mental health, human rights, social justice, as well as availability and coordination of essential services. Societal interventions are both preventive and reactive measures designed to meet the psychosocial needs of those exposed to massive traumatic events in the most effective manner.

Community/Neighborhood Interventions may include public education, community empowerment, capacity building and training in addition to provision and coordination of direct assistance (through the UN or Nongovernmental Organizations).

Family Interventions make use of informal support systems of family, friends, neighbors and peers. As with community/neighborhood interventions, this level of support relies as much as possible on existing formal or informal networks and is often implemented by utilizing the indigenous leadership structure of such networks.

Finally, Individual Interventions are much more like traditional therapeutic and pharmacological clinical approaches when qualified personnel and available. They are the most costly and assist the smallest number of people, but for well-selected cases who have failed to benefit from larger-scale approaches, they are the interventions that are required.

As for the chapters themselves, they are divided into three major sections: general, social, and humanitarian. General issues include trauma-related factors pertinent to prevention, practice and policy regarding all the specific topics covered in subsequent sections of the book. Chapters on general issues address: the prevalence of trauma world-wide, the impact of traumatic-stress on individuals and society, social deprivation, and intervention options (based on the hierarchy of approaches within the framework of the inverted psychosocial pyramid) for society, communities, families and individuals. Chapters on social issues focus on: child abuse in peacetime, abuse of the elderly, people with mental and physical disabilities, victims of crime (including issues pertinent to human rights and social justice), and survivors of mass violence and torture. Finally, humanitarian-focused chapters address: children in armed conflict, refugees and internally displaced people, former combatants, and survivors of natural and technological disasters. The last chapter in the humanitarian section may interest many readers of the *Clinical Quarterly* since it focuses on the impact of traumatic stress on UN peacekeepers and civilian field personnel. Finally, the book ends on what we term a "call to action" regarding necessary and appropriate responses to social and humanitarian crises.

Since I believe that the field of traumatic stress is inherently global and humanitarian, this book is a long overdue status report on current practice and policy. We're at a very early stage in translating scientific and clinical knowledge about traumatic stress into social and humanitarian action. Our book is a useful contribution, in that regard, but it is only a start. Hopefully, it will help guide future policy and practice in this most important arena of human endeavor.



### **Group-administered early intervention**

Groups are important for early intervention. When individual care may be difficult to deliver (e.g., due to large numbers of affected persons, lack of availability of mental health providers, or cost-constraints), they provide a potentially cost-effective way of serving survivors. In some cases, trauma survivors are part of an existing group structure (e.g., work colleagues, military units), and that group will continue functioning as a unit and act as part of the ongoing recovery environment. In addition, it is possible that some helping processes may be better activated in groups than in one-to-one care. While little is known about the effectiveness of early group services in preventing PTSD and other trauma-related problems, evidence suggests that group treatment is beneficial for those with chronic PTSD (1).

There would seem to be much to recommend groups as delivery environments for early intervention services. Trauma survivor support groups are typically comprised of those who have undergone similar traumatic experiences and are thus well-suited to challenge common distressing perceptions of survivors (feeling alone, different, misunderstood by those around them) and reduce social isolation. Groups may be especially useful in helping survivors address the worries associated with traumas that are particularly difficult to talk about with family and friends, due to perceived social stigma, embarrassment or shame, guilt, or fear of negative reactions from others (e.g., sexual assault). Probably one of the most potentially powerful components of group interventions is social support. Greater received and perceived social support and higher levels of social embeddedness have been associated with less distress among disaster survivors (2), and lack of social support post-trauma is a risk factor for PTSD (3). Social support is actually an umbrella term that describes practical help with problems, emotional understanding and acceptance, normalization of reactions and experiences, mutual instruction about coping, and informal cognitive therapy. A special case of group-related social support is the self-help or mutual aid group. When survivors join together to help one another, they do much to reestablish a sense of control over events. Often, they go beyond mutual emotional support to address political or legislative issues affecting themselves and their community.

Groups may be used soon after traumatization to provide education, mobilize social support, and train skills for coping with traumatic stress reactions and other post-trauma challenges. Education, a component of all efforts to provide early mental health response, may be usefully delivered in a groups. Intended to improve recognition and understanding of reactions, reduce fear and shame, and, generally, "normalize" the experience of the survivor, education can make symptoms seem more predictable and less frightening and help individuals cope more effectively. Education should also aim to reduce negative forms of coping with symptoms, such as alcohol or drug use, social withdrawal, and extreme emotional avoidance. Finally, education should give participants information to help them better decide whether to seek further treatment. It should include matter-of-fact descriptions of what happens in counseling and group discussion about obstacles to help-seeking (e.g., stigma).

## EARLY INTERVENTION

The primary current model of early group intervention to reduce the impact of trauma is group stress debriefing (4). The idea is to pull together groups of persons affected by a common event, mobilize their support for one another, provide education to help normalize stress reactions, give advice about coping, facilitate the working through of the event, and give information about available services. The debriefing encounter also provides a significant opportunity for identification and referral of those requiring more intensive counseling. It is characterized by a sensitive effort to approach the experience in a gradual manner, starting with factual information moving toward discussion of feelings associated with the trauma, and exiting from the procedure via information about coping. While there is much debate about the advisability of early exploration of the traumatic experience, the goals of normalizing reactions, improving coping, mobilizing support, and directing to available services are generally well accepted by trauma specialists. However, a primary limitation of debriefing is a limitation of "psychoeducation," that is, a combination of simple advice and group discussion is likely to be limited in its impact on the more complex actions important to recovery. When presentation of information is expanded to include opportunity to observe and practice coping behaviors, likelihood of behavior change may increase. Some of the change "technologies" used in group treatment for other problems should be harnessed in the context of early post-trauma group intervention: demonstration of skills; skills training with instruction, practice, and coaching; self-monitoring or diary-keeping of key behaviors; and use of task assignments. Wherever possible, groups should involve multi-session contact, so that key messages can be repeated, supportive relationships among members can be developed, skills can be polished, recovery behaviors can be shaped and reinforced, and group helping processes can be extended in duration. Groups are important in post-trauma care, but there is a need for rethinking of their application; new models of structured early interventions with groups are needed and research on the preventive impact of evolving models is a priority for the field.

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**CORRECTION**

The last issue of the Clinical Quarterly erred in the listing of authors contributing to Women and Trauma: A Clinical Forum, leaving out Amy Nagle, Ph.D. The correct author listing for the article entitled "The role of self-defense training in preventing sexual revictimization" is Annabel Prins, Ph.D., Amy Naugle, Ph.D., Claire Sandringham, M.S., and Julie Weitlauf, Ph.D.

# HOMICIDE: HELPING CHILDREN IN THE AFTERMATH

ALISON SALLOUM, L.C.S.W

Every year in the United States thousands of children and their families cope with the aftermath of homicide. Such a violent death and the consequences of unresponsive and/or unsupportive systems may cause severe psychological and social challenges among these survivors. Group treatment approaches for adolescent survivors have shown promising results (1-2), but studies regarding individual and family treatment for children remain scarce, although theoretical and practice approaches have been described (3-6). While the bereavement literature offers a foundation for working with children, factors due to the homicide must be considered. Key issues to consider when working with children after homicide include the context, the facts surrounding the death, family strengths and social supports, the family's grief process, grief and trauma reactions, and issues of revenge. These key issues will be explored using research and literature regarding child survivors/ witnesses of homicide, bereavement, and trauma, as well as the author's practice experience with low-income families who have had loved ones murdered.

*An assessment of grief and traumatic reactions should be conducted with all affected family members, including very young children who are often overlooked.*

## CONTEXT: SYSTEMS AND ENVIRONMENTAL FACTORS

Webb's (7) interactive tripartite assessment, which includes individual factors, death-related factors, and factors in the support system, provides a basic foundation for assessing bereaved children. Individual factors include variables such as age, developmental stage, cognitive stage, temperamental characteristics, past coping, past experience with death/loss, peers, interests, and medical history. Death-related factors include degree of pain, presence of violence/trauma, element of stigma, presence at death, attendance at ceremonies, relationship to deceased, meaning of loss and grief reactions. The third main category of factors is the support system that can significantly contribute to resilience and/or risk factors in coping with the death. Factors in the support system include nuclear family, extended family, school, peers, religious affiliation, and cultural affiliation. However, if children are bereaved due to a homicide that affects all family members, practitioners must extend this tripartite assessment to consider numerous other factors.

An ecological and holistic approach that simultaneously maintains focus on the child and their environment in a reciprocal relationship over time provides a framework for working with children and their families after homicide. Such an approach includes all systems and environmental factors that impact the child and their family in the aftermath of homicide in addition to those included in the tripartite assessment.



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The media may add stress for the family by sensationalizing the crime, being the first to notify the family members by way of broadcasting the crime (8), asking intrusive or inappropriate questions, or not providing much coverage at all. However, the media can have positive effects on the family by providing information to solve the case, providing an avenue for the family to share their pain with the community, and emphasizing and giving meaning to their loved one's life (9).

The absence of a perpetrator or the slow response of the court system causes additional stress on the family (10). Survivors' criticism of police and the criminal justice system may be warranted in some cases, but such criticism may also be due to misinformation about the process and the desire for swift justice. Low-income and minority survivors have reported that they felt the police, detectives and entire criminal justice system did not respond to their needs because of their class and race (11-12). Spungen (9, p.179) advocates that when working with survivors we "should act as watchdogs for biased acts perpetrated against co-victims [a term for survivors] and actively seek to modify the system in a positive way." Survivors may need to be provided with education about the criminal justice process. Child survivors need special attention and need to have their questions answered according to their capacity to understand. If practitioners are not able to provide information or to advocate for the survivors, a victim advocate may need to become involved, especially if any family member is a witness.

Other environmental factors that may impact the family need to be considered such as the responses of the school and peers, housing issues, employment leave time, and finances. For example, for families without economic resources, pressing

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issues of finances and housing that have resulted from the homicide may take precedence over participating in psychotherapy (12). Parents (or caregivers) should be informed about crime victims' reparations programs. Case management and advocacy may need to be offered in addition to psychotherapy, especially for low income and/or minority groups who may have additional challenges after the homicide. Further, community-based services that are offered at flexible times and locations (community centers, schools, home, churches, workplace) should be considered especially for low-income survivors because of barriers such as transportation, daycare, safety, stress, and limited leave time from work.

**The "Facts"**

Homicide is a public concern and many people may have information about the crime. Reports and accounts from the media, detectives, witnesses and neighbors may all lead to distorted information about what happened. Further, the surviving adult members may have their own story and beliefs. As a result of various accounts of the murder, children often have a confused understanding about what happened (13). Practitioners should ask parents (or the primary caregiver) about their understanding of what the child knows. Many times, we may begin by asking each family member how he or she found out about what happened. Adults are often surprised to learn that the child has heard different stories from various sources. Practitioners may need to assist the parents in explaining in a developmentally appropriate manner the necessary details about what happened (13). Furthermore, both practitioners and parents (and caregivers) must provide and convey a sense of safety. This is often a difficult challenge if the perpetrator has not been apprehended. However, helping the child to regain a sense of safety is one of the most important goals. Consistent environments that promote a sense of safety need to be created. It is important that surviving children be around people who care about and nurture them. Also, routines need to be established or reestablished (14). If the primary caregiver has died, the child needs to know as soon as possible who will take care of them, as this is often a worry especially of young children.

**Strengths and Social Supports**

Practitioners must work collaboratively with survivors of homicide victims in a manner that conveys hope and highlights the strengths of the child and their family. An assessment of the child and family's strengths, social supports and environmental resources should be conducted. When their positive capacities are supported, children and their families are more likely to act on their strengths (15), which can help

facilitate survivors in coping with the many systems involved and promote restoration. Rynearson (16), who developed a restorative retelling approach primarily used with adult survivors, states that promoting resilience must be the first priority. He proposes that a series of open-ended questions, which inquire about current available supports, past coping strategies, current needs, and memories of the deceased, be used to explore and promote the capacity and resources of survivors. In addition to these questions, practitioners need to help children identify other family members or friends they can talk with or from whom they feel comforted. Also, because children spend so much time at school, teachers, school counselors and other school officials may need to be informed about ways to support them. In addition, children's positive abilities, talents, and interests must be supported as these strengths can help establish a sense of mastery and control, which is often unstable after a violent death.

**The Family's Grief Process**

Grieving parents and caregivers may have a difficult time responding to the emotional needs of their children due to their own grief and/or trauma (17) and they may need individual or group therapy to focus on their needs. However, even when parents and caregivers are available to assist their child in coping with the death, some children may be hesitant to share with their parents because they do not want to add to their pain or place additional stress on them (11). All family members need to be educated about the uniqueness of members' grief and encouraged to respect each person's approach to coping, as well as to be patient with one another. Not only are the family members' relationships to the deceased different, but their response to the violent death may also vary (18). Family members need to be educated about developmental traumatic and grief responses. Further, we must work with families in the context of understanding their cultural beliefs and practices, which may influence the variations in family members' traumatic and grief responses (19). Also, it is important to be aware of the family members' religious and/or spiritual beliefs and practices, which often become salient after a death and can help or hinder the healing process (20).

Generally, proximity to the violence and/or violent dying and degree of life threat increases traumatic symptomatology. Further, the closer the relationship between the survivor and the deceased, the greater the grief experienced. However, other factors such as the media showing graphic images and feelings of guilt may impact the severity of trauma and grief (21). An assessment regarding grief and traumatic reactions should be conducted with all affected family members, including very

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young children who are often overlooked (22, 23). Further, practitioners need to assess for children's prior traumatic experiences and losses, which can cause severe disturbances (24). Also, prior and current mental illness, prior trauma and loss and substance abuse within the entire family needs to be assessed and, if needed addressed.

**Children's Grief and Trauma Reactions**

Silverman and Worden (25) examined the reactions of a nonclinical group of 125 children aged six to seventeen years (70 families) who were within four months of a death of a parent. Grief reactions included crying, insomnia, difficulty concentrating, headaches and other somatic complaints, and for most children these symptoms were not prolonged and the stress did not seem to overwhelm the children. However, 88% of deaths were from natural causes and only one death was as a result of homicide. Research with child, adolescent and adult survivors of homicide victims has revealed significant levels of traumatic stress (21, 26-29). Traumatic stress after death includes intrusive thoughts, reexperiencing traumatic aspects, avoidance, fear, and hyperarousal, which are related to the thoughts and images of the dying and the events surrounding the death (30). Children and adolescents experience traumatic grief when both traumatic stress and bereavement occur, and when the posttraumatic stress reactions impinge on the child's ability to progress with the bereavement process (31).

Not all child survivors will experience traumatic symptoms. Therefore, both grief and traumatic responses and the combination of the two need to be assessed. Multiple sources and techniques for gathering information should be used (32). Assessment scales that have been used with children after violent death may be useful. The revised child posttraumatic stress reaction index is frequently used with children ages 6-17 who have had someone close die due to homicide (21). Alternative criteria and approaches for diagnosing (33), assessing and treating posttraumatic stress with very young children have been developed and should be used with young children since they are not able to describe verbally internal states (34). Current assessment scales regarding childhood bereavement and traumatic grief may be obtained from the National Center for Child Traumatic Stress (phone: 310-235-2633).

Practitioners need to have an understanding of how grief and trauma are expressed developmentally and interventions must be tailored accordingly. For example, Nader (4) states that when using trauma and grief-focused therapy with preschool children the emphasis is on play with the practitioner verbalizing the reactions and sequences. Play, drawing and cognitive approaches are used with school-aged children; more emphasis on discussion, including role-play and demonstration, is used with adolescents. Eth and Pynoos (35)

explain different developmental responses of preschool (3 through 5), school age (6 through 12) and adolescents (13 through 18) who have witnessed the homicide of a parent. However, similar reactions may occur with child survivors who did not directly witness the violent dying as they may have heard about it or witnessed the aftermath. Therefore, practitioners should assess for traumatic reactions such as the following: Preschool children, who are often passive observers of the violence, commonly feel defenseless, experience sleep disturbances, avoid reminders, engage in reenactment play, experience intensified separation anxiety, and may display regressive behaviors from previously attained skills. School age children may experience inability to concentrate (often resulting in declining school performance), intrusive memories about the death, fantasies of intervening and rescuing the person, obsessive recounts of details, avoid reminders, hypervigilance, irritability, decreased self-esteem and self confidence, reenactment play, and have psychosomatic complaints such as headaches and stomachaches. Adolescents may engage in posttraumatic acting-out behavior such as school truancy, precocious sexual activity, substance abuse and delinquency. Such behaviors along with poor impulse control and rebelliousness puts these youth at a high risk for hurting themselves and others. Other responses include guilt, scrutiny about how they responded during the murder, and concern about their future (35).

Interventions should be geared toward decreasing traumatic reactions and facilitating grief while promoting coping strategies and support. Reducing the traumatic reactions may take precedence over facilitating the grief work as thoughts of the deceased might lead to traumatic reminders (4, 36). Nader (17) explains that with childhood traumatic loss, the interplay of grief and trauma affect the bereavement process and symptoms common to both become intensified. For example, while anger is a common grief response, if trauma is present, it may be rage. Grieving children may think that somehow they caused the death and feel guilty; with trauma, guilt may be intensified because the child feels not only responsible, but helpless for not having been able to save the victim. Also, traumatic aspects may interfere with memories and dreams about the deceased, complicating the bereavement process. Further, with trauma, children may detach from others and feel more alone, which may interfere with others being able to help them grieve and cope. Children may have gruesome mental images of the violent death (whether they witnessed it or not) leaving them with a disturbing image of the deceased. It is important that practitioners work with children to restore memories of the deceased prior to the death. Such restored memories and positive feelings of connection to the deceased can help children cope with the loss (13), especially when other family members support this process.

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**Revenge Assessment**

Children may have thoughts and fantasies of revenge. Younger children may also express fears that the perpetrator will return and kill them too (12). Such thoughts of revenge and intervention fantasies can be explored in the context of a safe therapeutic environment. In addition, we must take the possibility of retaliation seriously and assess for gun accessibility and revenge plans (see 37 for homicidal risk assessment). The issue of revenge may need to be raised within the entire family. Family members may share that they too have had revenge thoughts, which provide normalization of such thoughts and wishes. However, and more importantly, older family members are encouraged to give clear messages that they do not want their children (including adolescents) to follow through with such revenge plans.

**Conclusion**

The assessment and treatment considerations explored in this article certainly do not address all of the issues that may arise, as there are many unique factors associated with every child and their family who had a loved one die due to violence. However, research and practice experience does identify key issues to consider. As the fields of trauma and bereavement evolve, practitioners must keep abreast of promising and effective approaches to help children and their families in the aftermath of violent death. However, this must not be our sole focus; we must promote policies, funding, research and activities that prevent such tragedies from occurring in the first place and that create safer environments for our children.

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