CBT Cited as Only Proven Treatment for Trauma

BY FRAN LOWRY
Orlando Bureau

Only cognitive-behavioral therapy, of all the major interventions being used to reduce psychological harm in children and adolescents who have witnessed or been victims of trauma or violence, has strong evidence to show it is effective, according to a review.

Evidence was scant for the effectiveness of play therapy, art therapy, psychodynamic therapy, pharmacologic therapy, or psychological debriefing—the other interventions that were reviewed—in reducing depressive disorders, anxiety, posttraumatic stress disorder (PTSD), and other adverse sequelae in this population, said Holly R. Wethington, Ph.D., and associates of the task force on community preventive services at the Centers for Disease Control and Prevention.

"Children and adolescents in the United States and worldwide are commonly exposed to traumatic events, yet practitioners treating these young people to reduce subsequent psychological harm may not be aware of—or use—interventions based on the best available evidence," the authors wrote (Am. J. Prev. Med. 2008;35:287-313). The task force is a project that has been in place since 1995. Funded by the CDC and the Department of Health and Human Services, it reviews major interventions in multiple arenas of public health—such as tobacco control, motor vehicle safety, sexual behavior, diabetes control, and mental health—to determine what measures work, what might be harmful, and what areas need new research.

For this report, electronic searches for literature used databases including Medline and PsycINFO, and looked for articles written in English on the particular treatments up to March 2007. Types of trauma included physical or sexual abuse, community violence, suicide of a family member, juvenile cancer and treatment, traffic accidents, and natural disasters. Eleven studies were deemed appropriate for consideration for individual cognitive-behavioral therapy (CBT) and 10 for group CBT. Four studies were identified for play therapy, one for art therapy, two each for psychodynamic and pharmacologic therapy, and one for psychological debriefing.

The evidence was lacking for all the other interventions reviewed, even for pharmaceutical therapy.

DR. HAHN

Task force member Robert A. Hahn, Ph.D., said that children and adolescents in the United States are exposed to multiple trauma rates that were surprising to him because they were so high.

Not all children will go on to experience harmful psychological consequences, but a proportion will, and this can lead to risky behaviors—such as smoking, drinking, and criminal behavior—in the adult years, he said in an interview.

It is important that clinicians treat these children appropriately, with therapy that is effective. "Except for cognitive-behavioral therapy, the evidence was lacking for all the other interventions we reviewed, even for pharmaceutical therapy, which is important because it is used by many psychiatrists," said Dr. Hahn, who is also coordinating scientist for the violence prevention review team and the excessive alcohol prevention review team at the CDC.

One of the interventions reviewed, psychological debriefing, may even be harmful, Dr. Hahn noted. "This has been found to have some harm, at least in adults, because it is administered to people in a group, right after an event, whether they have symptoms or not. They sit around in a group and listen to each other's traumatic experience, so in a sense they are exposed to another version of the trauma they themselves suffered. This psychological debriefing may not provide an opportunity for them to get referrals and subsequent treatment, and we therefore urge caution and more research [regarding this intervention] in children and adolescents."

A "major challenge is that children and adolescents who have been traumatized and may need treatment for PTSD or other psychological conditions generally do not receive that treatment," according to the task force.

The work of Dr. Wethington and two other members of the task force was supported by funding from the Oak Ridge Institute for Science and Education. No other financial disclosures were reported by the authors of the report. ■

Acetaminophen Use Linked to Later Asthma Development

BY DIANA MAHONEY
New England Bureau

Exposure to acetaminophen might be an important risk factor for the development of asthma later in childhood, according to new data from an international asthma study.

In a sample of more than 200,000 children from 31 countries, those given the antipyretic for fever in their first year of life were about 50% more likely to have experienced asthma symptoms at age 6-7 years than were unexposed children.

Dr. Richard Beasley of the Medical Research Institute of New Zealand, Wellington, and his colleagues reported that in phase III of the International Study of Asthma and Allergies in Childhood (ISAAC), exposure to acetaminophen—known as paracetamol outside of the United States—in the first year of life was associated with significantly increased risk of severe asthma symptoms (Lancet 2008;372:1039-48).

The prevalence of asthma has increased over the past 50 years, as has the use of acetaminophen in children, the authors wrote.

Previous studies have reported associations between asthma risk and exposure to acetaminophen in utero, during infancy, and in late childhood and adulthood in populations from developed and developing countries.

The current analysis was designed to evaluate the consistency of the association between acetaminophen and asthma and to investigate one of the proposed biological mechanisms for the link—specifically, that acetaminophen exposure contributes to the development of oxidant-induced airway inflammation caused by reduced concentrations of the antioxidant glutathione in the lung and stimulation of the T helper cell 2 response.

Toward this end, parents and guardians of 205,487 children aged 6-7 years from 73 centers were asked to complete a prevalence questionnaire about symptoms of asthma, rhinoconjunctivitis, and eczema, and an environmental questionnaire about possible protective and risk factors for asthma and allergic disorders including the use of acetaminophen in the first year of life and now.

The primary outcome measure for the analysis was the association between acetaminophen use for fever in the first year of life and asthma symptoms at 6-7 years as measured by multivariate analysis.

In all, 194,555 children were included in the analysis of acetaminophen use for fever during the first year of life. Of these, 105,041 had complete covariate data and were included in the multivariate analysis. In this group, the association between asthma symptoms and acetaminophen use in the first year of life was significant (odds ratio, 1.46).

Despite the study's power, size, and multinational nature, the findings do not establish causality because of its design.

Dr. Beasley reported having received grant support and honoraria for lectures from GlaxoSmithKline Inc., the maker of acetaminophen. ■

Gene Variation May Flag Risk For Early-Onset Depression

BY MICHELE G. SULLIVAN
Mid-Atlantic Bureau

BARCELONA — Patients with childhood-onset depression who have a variant in the gene that codes for brain-derived neurotrophic factor also show unique variations in their electroencephalograms, opening the door to a possible screening tool for children deemed at risk for these psychiatric disorders.

Although the evidence is preliminary, "We're getting pretty good data showing that people who are at risk of early-onset depression can be identified by a combination of EEG and genetic information," Dr. James Kennedy said at the annual congress of the European College of Neuropsychopharmacology.

"The gene that codes for brain-derived neurotrophic factor (BDNF) has been studied for about 15 years," Dr. Kennedy said. "Emerging evidence indicates that this protein, which is reduced in depression, rises in the bloodstream after treatment with antidepressants or electroconvulsive therapy." Postmortem studies of suicide completers have shown that the protein is significantly decreased, compared with controls, he said.

As head of psychiatric neurogenetics at the Centre for Addiction and Mental Health, Toronto, Dr. Kennedy has been one of the key players in proving a link between the genetic variant and early-onset depression. Working with Maria Kovacs, Ph.D., of the University of Pittsburgh, Dr. Kennedy has confirmed this link in two large data sets—a group of 191 patients (children and adults) in the United States, with up to 25 years of follow-up, and a cohort of 258 child patients in Hungary.

Three variants are possible, Dr. Kennedy said: The gene can be homozygous for valine, homozygous for methionine, or contain both proteins. In both the Pittsburgh and Hungarian cohorts, the valine/methionine combination was significantly more common among cases than controls.

"In the Hungarian sample, we also looked at how the variants were transmitted from parents to children," Dr. Kennedy said. "The valine version was transmitted 100 times in the families of depressed children, while the methionine version as transmitted only 59 times. This is a highly significant indication that the valine version is creating a higher risk for childhood-onset depression."

His most recent study looked at EEG patterns in 187 adults with a history of childhood-onset depression and 93 healthy controls. Dr. Kennedy expected to find changes in the leads recording hippocampal activity, because BDNF is highly expressed in that area. Instead, he found changes in the theta waves. The changes were not seen in controls and occurred significantly more often in cases with the valine/methionine polymorphism.

"This suggests that that the functional BDNF variant affects EEG symmetry in the parietal brain regions in individuals with childhood-onset major depression," Dr. Kennedy and his colleagues wrote in the study (Neuromuscular Medicine 2008; doi:10.1007/s12017-008-8038-x). ■

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