

SOURCE: University of Pittsburgh Medical Center

University of Pittsburgh Researcher Finds Psychological and Educational Services Reduce Children's Involvement With Fire

PITTSBURGH, April 25 /PRNewswire Interactive News Release/ -- New research from the University of Pittsburgh suggests that structured treatments designed specifically to intervene with children who set fires are more effective in the long term than a brief service in which a firefighter visits the child's home, a commonly used intervention for child fire setters.

Cognitive behavioral therapy (CBT) and fire safety education (FSE) were found to significantly curtail firesetting and matchplay behaviors up to a year after intervention. More fires were set by children who received a home visit by a firefighter (HVF) by this one-year follow-up period.

Results of the study were published in the March 2001 issue of the *Journal of Child Psychology and Psychiatry*.

"Our results show that children who set fires are less likely to exhibit either firesetting or matchplay by 12-month follow-up if they receive CBT or FSE, rather than HVF," said David J. Kolko, Ph.D., associate professor of child psychiatry, psychology and pediatrics at the University of Pittsburgh School of Medicine. "Our research shows that using these two alternative approaches can reduce the number of repeat occurrences of these behaviors."

Dr. Kolko cautioned that because children set fires for different reasons, including curiosity and behavior problems, researchers need to determine how best to apply each intervention -- for example, CBT may work better for kids with behavioral problems and FSE may work better for children who are just curious about fire. Those interventions would then need to be refined to achieve the best results.

For the study, Dr. Kolko assessed a total of 70 children who had set a recent fire. Of the 54 children who entered the study, 38 were assigned to receive either CBT or FSE and 16 received HVF. At the conclusion of the intervention period, all three interventions were associated with a marked decrease in fire-related activities.

Initially, out of 13 children who received HVF, four (28.6 percent) had set another fire by the time they had completed the intervention. Only three out of 17 children receiving CBT (17.6 percent) and two out of 13 who received FSE (14.3 percent) repeated the behavior.

During a follow-up assessment one year later, children who received CBT or FSE had been less involved with fire and had fewer other problems related to fire than children who received HVF only. According to Dr. Kolko, only 15.4 percent of children in the study who

received FSE and 23.5 percent of children treated with CBT had set fires in the 12 months after treatment, whereas 50 percent of the children who received HVF had set another fire.

CBT and FSE were also better at reducing other activities associated with firesetting, such as playing with matches and being seen with matches or lighters. Whereas 57 percent of the children in a group being counseled with HVF for playing with matches repeated within a year, 35 percent of the CBT group and only 7 percent of FSE group did. Significantly, while all three types of interventions showed at least some decrease in the number of children seen with matches or a lighter a year after treatment, none of the 12 children in the CBT group was seen with them.

“In light of this study, it is our hope that CBT and FSE can become a more integral part of the standard services available for child firesetters,” said Dr. Kolko. “These results also give us a base upon which to expand our research to find out what types of alterations can be made to CBT and FSE to make those interventions more effective.”

Statistics from the National Fire Prevention Association indicate that children playing with fire were responsible for more than 98,000 fires in the United States that cost 408 civilian deaths, 3,130 injuries and more than \$300.7 million in direct property damages in one year (1994). Research conducted by Dr. Kolko over the past 15 years shows that, in some cases, more than half of all child firesetters will repeat the activity over a two-year period.

Some form of home visit from a firefighter, according to Dr. Kolko, is a common method of helping child firesetters and was never meant to be a long-term service. It usually involves a firefighter going to the home of a child who has set a fire, reviewing with the child and parents some ways to avoid using fire, and handing out some educational materials. Even though this brief home visit may not have been as effective as the other two, more intensive interventions, it was associated with a significant reduction in the number of fires that were set by those children and may be a cost-effective alternative service.

Cognitive-behavioral therapy for child firesetters involves the application of psychological strategies to enhance the child's self-control, assertion, and problem-solving and parents' use of effective discipline and communication, whereas fire safety education involves training in several fire safety principles and prevention activities.

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