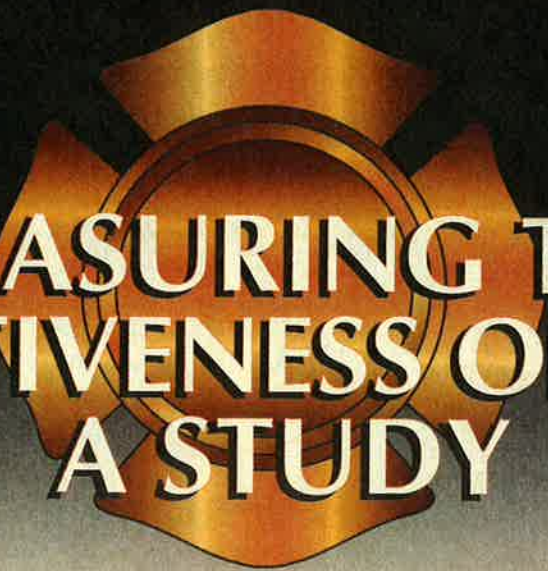


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MEASURING THE EFFECTIVENESS OF CISD: A STUDY

BY NANCY BOHL, Ph.D.

It is not unusual for a firefighter to be unable to rescue a victim and so be forced to witness such horrifying sights as the death or injury of another human being or the pain of a burn victim. Not surprisingly, firefighters experience guilt, anxiety, and depression after the event.¹ Additional stress symptoms may be delayed for a long time and can occur weeks later; they include sleep disturbances, flashbacks, a tendency to get extremely angry and hostile with little provocation, the inability to concentrate, a loss of self-confidence, and fatigue.² What is of special concern is that the effects of having been involved in traumatic situations are cumulative. A firefighter who appears to be functioning adequately may ultimately experience one incident too many with devastating personal and professional results.

Some departments now recognize that "toughing it out" is not enough and have elected to provide professional help to prevent the later occurrence of a delayed stress syndrome.³ Such a program provides that individuals who have been involved in a traumatic incident meet with a psychologist for a counseling session some time during the first 48 hours after the incident. Individuals are seen only once, typically for one or two hours, but the session is intense. Participants are asked to describe the traumatic episode and encouraged to vent the strong feelings aroused by the incident. They are reassured about the normality of those feelings, provided with information about the possible occurrence of delayed symptoms, and helped to assimilate the occurrence so it can be seen in the context of prior experiences.

Several articles have been published about how to set up treatment programs and their expected benefits.^{4,5} However, in the absence of real evidence of their effectiveness, many fire departments have remained skeptical.

In the study reported here, a formal evaluation was done. Objective tests were used to assess symptoms, and treated firefighters were compared with untreated firefighters. The results showed that a brief intervention, 1½ hours in length, given 24 hours after a critical incident reduces delayed stress symptoms in firefighters.

THE TEST METHOD

The study included 65 male firefighters. All had been involved in a critical or traumatic incident, defined as one in which human lives had been lost or serious injuries had been witnessed. Thirty men received treatment; 35 did not. Participants in the treated group came from departments that had mandatory treatment programs; participants in the untreated group were from departments that did not have such programs. There were no fundamental differences between the two departments, except for the speed with which they implemented changes in departmental policy. They were in close geographical proximity, were of similar size, and served people of the same socioeconomic level. The departments that did not have mandatory intervention programs at the outset of the study now have them.

The two groups did *not* differ significantly in demographic variables of age, education, number of years worked, and number of prior critical incidents.

Because the appearance of symptoms can be delayed, the long-term effects of treatment were evaluated three months after the traumatic incident. Once an individual had been identified as a potential participant—whether in the treated or untreated group—his record was monitored. Anyone involved in a second critical incident was excluded from the study. All participants, then, were tested only once—three months after a critical incident. The groups differed only in that one group had received treatment immediately after the incident, and the other group had not. Formal psychological tests were used to measure anxiety, anger, depression, and common stress symptoms such as flashbacks and changes in sleeping and eating habits. The treatment program was modeled after the one devised by Mitchell.⁶ Treated men were seen within 24 hours after the incident for a session that lasted 1½

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TABLE 1: PSYCHOLOGICAL MEASURES

Measure	Treated Group		Untreated Group		t-tests*
	Mean	SD ¹	Mean	SD ¹	
Depression	1.27	1.77	11.82	7.14	7.74
Anger	174.46	54.98	224.22	35.98	4.37
Anxiety	26.93	8.27	51.00	11.02	9.81
Long-term stress symptoms	3.66	2.03	6.94	2.65	5.50

1. Standard deviation.

* All comparisons between groups were significant at $p < .001$.

TABLE 2: DEMOGRAPHIC MEASURES

Measure	Treated Group		Untreated Group		t-tests*
	Mean	SD ¹	Mean	SD ¹	
Age (in years)	24.86	4.62	25.85	4.94	0.83
Number of years worked	3.93	3.52	3.94	2.22	0.00
Number of years of education	13.30	1.48	13.78	1.53	1.27
Number of prior critical incidents	4.63	5.11	7.14	8.06	1.46

1. Standard deviation.

* None of the comparisons was statistically significant ($p > .05$ in all cases).

hours. Participants were asked to describe the traumatic episode and to express the feelings experienced at the time. They then talked about the symptoms they were experiencing. The counselor then explained symptoms typically experienced after a traumatic episode and assured participants that anger, guilt, and nightmares were normal. An attempt was made to get participants to relate the present episode to past experiences. Finally, at the end of the session, the counselor summed up what had

been expressed during the session.

INTERPRETATION OF TEST RESULTS

On all four measures tested—depression, anger, anxiety, and long-term stress symptoms—the untreated group scored significantly higher, which meant that men in the group had more signs of delayed stress than the treated group. They were more anxious, depressed, and angry and were experiencing more nightmares, flashbacks, and changes in sleeping and eating habits.

The p -value or significance level shown in Table 1 means that the results are highly unlikely to be due to chance; only once in a thousand times would differences that large be due to chance.

The differences found between the groups on the psychological variables after treatment were due to the treatment and not to differences in demographic background (see Table 2). The average participant in the study was in his 20s, had been a firefighter for about four years, had one to two years of college, and had been involved in four to seven critical incidents before the study.

Firefighters sometimes witness episodes that are so far beyond the ordinary that they would evoke psychological distress in any healthy, normal individual; but, because firefighters feel such a need to demonstrate that they are strong and in control,⁷ they often are reluctant to seek professional help on their own. It is recommended, therefore, that treatment be mandatory for firefighters who have been involved in a critical incident. The findings presented here provide clear evidence that, as is the case with police officers,⁸ such treatment works. A mandatory program would take the burden of decision making out of the individual's hands. ■



Footnotes

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