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MENTAL HEALTH SERVICE UTILIZATION BY  
CHILD VICTIMS OF NATURAL DISASTERS

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## Abstract

Three comparable school districts were selected from areas similarly affected by tornadic storms. Psychological services characterized in traditional mental health terms were made available during the initial three weeks to one school and during weeks six to nine to another. The third was given early access to identical services whose description minimized mental health connotations. Students whose parents requested these services were provided group relaxation training, group desensitization, and expressive counseling sessions. Younger students and females tended to be referred more regardless of the degree to which they were affected by the storm. All but two of the 183 referrals came from the system receiving later solicitation as traditional mental health service and the remaining two came from the system given earlier solicitation but the same description. The findings were compromised by potential manipulation failures and only suggestive that conventional wisdom on timing and mental health labels may be overdrawn.

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More so than with adults, fear reactions among children may be construed as age-appropriate developmental reactions whose remediation can be expected as a function of time alone. Not only intensity but relatively extended duration has been deemed relevant in ascribing clinical significance to a child's fears (Graziano, DeGiovanni, & Garcia, 1979). This standard seems to stem from survey study evidence that most child fears are resolved within two years whether or not treatment occurs and regardless of intensity (Hampe, Noble, Miller, & Barrett, 1973). However, when those fears derive from the sometimes extraordinary trauma of a natural disaster, a different standard may apply. For example, Boatright (1985, p. 139) noted a four-year course for some disaster-linked fears. The issue of whether, how, and when to intervene has not been resolved for disaster victims.

Contrary to Hampe et al(1973), some suggest that where disaster trauma is involved, children may actually be among those most at psychological risk' (Kingston & Rosser, 1974). Though not

focal to children and hardly unanimous (Taylor, 1978, p. 271), the disaster specialist tends to endorse professional intervention and advocate its application soon after the experience (Wilkinson, 1985). Early intervention is endorsed because behavioral and affective dysfunctions tend to surface among children within hours after the disaster (Boatright, 1985, p. 138). As a result, failure to intervene may perpetuate conditions which, in theory, might foster incubation or the enhancement of conditioned anxiety into anxiety disorder pathologies, particularly phobias (Eysenck, 1976; Seligman, 1971) or post-traumatic stress disorder (Frederick, 1985, pp. 112-113). These positions derive more from judgement and opinion than from the limited body of systematic research with child disaster victims. Even within that data base methodological differences yield substantial discrepancies in reported incidence of disaster-linked psychopathology (Perry, 1979). Most of our knowledge about child anxiety disorders remains little more than an extrapolation from the greater body of cumulative work with adults (Morris & Kratochwill, 1983, p. 144).

The adult literature advises that clients are more likely to accept interventions if we obscure the mental health character of those services and offer them in ways that differ from their traditional application (Farberow & Frederick, 1978). Given the difficulty in rapidly instating and making victims aware of such

services, perhaps low utilization rates reflect something other than felt stigmatization. It may be more a matter of failing to adequately promote those services during the heroic period when adult victims are most focused upon the needs of others.

Utilization of mental health services might be more readily forthcoming for a referral process early in the post-impact phase.

#### Problem and Design

The present research question considered the relative rate of service referrals as a function of early timing versus minimizing mental health attributes in announced psychological services for child victims of natural disasters. Descriptions and referral solicitations were presented to three independent public school districts in Texas during the first three-weeks (early) and the third three-weeks (later) after each had been struck by a major tornado. Services characterized as traditional mental health interventions were described to two of the school systems and referrals solicited, one during the early post-impact period and the other during the later period. During the early period only, a third school system received a description that was devoid of obvious mental health connotations and, instead, emphasized self-help and stress management training. This yielded a 2 X 3 between-subjects design involving six combinations of timing (early vs. later) and program description (overtly traditional vs.

mental health de-emphasis) whose respective rate of referrals for service were compared.

#### Method

##### Subject Pool

Mid-November tornadoes in Texas produced significant damage in 24 counties and injuries/deaths in 11 of those counties. Initial contacts were made with officials representing the majority of the disaster relief areas. One responsive contact was the individual designated to coordinate disaster relief mental health services for the two counties with the most extensive devastation and casualties, Cherokee and Anderson County. The storms effects in each of these areas included deaths and at least 50 injuries in addition to major property damage. As a result the three largest and demographically most comparable school districts from those two counties were approached. The school systems were centered in and served communities of 12,000 to 15,000 people. The availability of psychological services for all public school students was announced in a manner consistent with associated experimental conditions.

Eight individuals volunteered and were trained to conduct the planned services along with the senior investigator. These individuals included three female public school counselors and five psychology graduate students in counseling and clinical

training programs, two male and three female. All were trained at the Master's degree level or its equivalent. In addition, a female volunteer assisted in administering fear survey pre-tests. Each of the professionals volunteering was the leader of groups of students assembled for psychological services in numbers ranging from six to fifteen persons.

### Materials

Parental consent forms solicited retrospective reports on the child's fears before and after the tornado along with information about the nature of the child's exposure to the storm. A 91-item survey of fear content and intensity was administered to all subjects who appeared for services. The scale had been used in previous studies of child disaster victims and was called the Children's Fears & Worries Scale (CFWS). It is an informal composite of items from existing commercial scales, drawn so as to accord equal 10-item weighting to eight classes of fear content that could be categorized as either concrete (Nature, Health, Safety and Animals) or abstract (supernatural, social, home, and school). An additional eleven items were used as a "lie scale" to assess distorting response sets or unsystematic responding. Subjects rated the intensity of indicated fears on a five-point Likert scale anchored by "a little" at 1 and "a lot" at 5. All items rejected as feared were scored zero. Finally, three

open-ended items allowed subjects to indicate idiosyncratic fears or worries not specified in the survey. Administration was as a paper and pencil test except at elementary grade levels where one of the volunteers read and explained each item for the subjects.

### Procedure

During the initial three weeks subsequent to declaration as disaster areas, introductions to school officials were secured through the disaster plan's Mental Health Coordinator. At this time and in all subsequent contacts, explicit indications of traditional mental health interventions were given one school while the same procedures were described to a second school in terms of self-management and stress management training. Contacts with the third school were initiated at the same time but formal service descriptions were developed four weeks later in written solicitation of referrals emphasizing traditional mental health interventions. Identical group interventions were then made available to all who requested them. Early sessions consisted in administration of the CFWS and relaxation training. The CFWS results were used to assess the appropriateness of a generalized desensitization hierarchy formed along a progression of events leading up to and accompanying the tornado experience. This was immediately followed by abbreviated relaxation training that was standardized in theme and muscle group but adjusted to accommodate

major differences in subject age levels (Ollendick & Ceray, 1981, pp. 67-75). Home-based practice in relaxation exercises was assigned between sessions as well. Relaxation training continued until all participants were able to successfully exhibit relaxation of at least a majority of muscle groups trained. No more than three muscle groups were introduced in a session. Succeeding sessions began with an abbreviated reprise of relaxation exercises. Group desensitization training was then begun. The process followed the classic pattern of progressing through increasingly stressful images as long as relaxation could be established concurrently (Morris & Kratochwill, 1983, pp. 152-154). The rate of progression through the successive images was geared to the relaxation abilities of the slowest child in each group. A portion of each session allowed for the expression of feelings about and reactions to the storm experience by each child who wished to do so. Sessions were usually 45 min. in length and occurred during school hours over a two to three week period.

#### Results and Discussion

A total of 183 students were referred for psychological assistance and some reliable trends did emerge. There were more females(104) than males(79) and more younger students (elementary students=97) were referred than older ones (middle school, n=30).

The verbal reports of some students or their parents allowed differentiation between those for whom the tornado effects could be considered slight, moderate, or heavy. Among those categorized, an interaction existed between student age and the extent to which they were affected by the storm. All of the older referrals categorized had experienced either moderate or heavy impact from the storm. By contrast, 87% of the elementary level female referrals and 50% of the elementary level male referrals were only slightly affected by the storm. Obviously, parents were more cautious and concerned with storm effects on younger female children regardless of the known impact while older children tend to be referred only when the adverse impact of the storm was well established and more marked.

The above constitute secondary elements of the analysis. The major impetus to this study involved issues of timing and mental health labeling. In contrast to our speculations, all of the 183 students were from schools given a traditional mental health characterization of the intervention. Even more striking, 181 of those students were referred out of the schools for whom the solicitations were delayed. Clearly, generalizations endorsing avoidance of a mental health emphasis were not supported by the present findings. Neither did these findings follow most speculations about the importance of earlier timing. Taken at

face value, these results would seem to refute and even directly contradict conventional wisdom. Not a single referral emerged from the school system given early information about assistance that avoided mental health labels. At the same time, there was also a highly limited response from the system given early information that did not guise its mental health character. Despite those findings, there is ample basis for caution. Only the responsive school system's written communications with parents could be directly verified as following the intended mental health emphasis. The remaining systems used oral announcements that may or may not have retained the intended character. In the absence of a manipulation check or some confirmation that the intended characterizations were actually implemented, the two systems that were unresponsive may well have been so solely on the basis of the lesser enthusiasm felt by the school contacts for those systems. In view of the findings, it certainly seems possible that those indicating the services' availability to parents in the unresponsive schools simply failed to vigorously solicit referrals. Conversely, the responsive school system's personnel seemed enthusiastic from the outset and it is this differential enthusiasm for the assistance that, in this investigator's view, constitutes the most plausible account. Given the questionable manipulations, inferences about timing and mental health emphasis must await future replications of these comparisons.

## References

- Boatright, C.J. (1985). Children as victims of disaster. In J. Laube & S.A. Murphy (Eds.), Perspectives on Disaster Recovery (pp. 131-149). Norwalk, CN: Appleton-Century-Crofts.
- Eysenck, H.J. (1976). The learning theory model of neurosis: A new approach. Behavior Research and Therapy, 14, 252-268.
- Farberow, N.L. & Frederick, C.J. (1978). Training Manual for Human Service Workers in Major Disasters. Rockville, Md.: National Institute of Mental Health, DHHS Publication No. (ADM) 86-538.
- Frederick, C.J. (1985). Selected foci in the spectrum of posttraumatic stress disorders. In J. Laube & S.A. Murphy (Eds.), Perspectives on Disaster Recovery (pp.110-130). Norwalk, CN: Appleton-Century-Crofts.
- Graziano, A.M., DeGiovanni, I.S., & Garcia, K.A. (1979). Behavioral treatment of children's fears: A review. Psychological Bulletin, 86, 804-830.
- Hampe, E., Nobel, H., Miller, L.C., & Barrett, C.L. (1973). Phobic children: 1 and 2 years posttreatment. Journal of Abnormal Psychology, 82, 446-453.
- Kingston, W. & Rosser, R. (1974). Disaster: Effects on mental and physical state. Journal of Psychosomatic Research, 18, 437-456.

- Morris, R.J. & Kratchowill, T.R. (1983). Treating Children's Fears and Phobias: A Behavioral Approach. NY: Pergamon.
- Ollendick, T.H. & Cerny, J.A. (1981) Clinical Behavior Therapy with Children. NY: Plenum Press.
- Perry, R.W. (1979). Detecting psychopathological reactions to natural disaster: A methodological note. Social Behavior and Personality, 7, 173-177.
- Seligman, M.E.C. (1971). Phobias and preparedness. Behavior Therapy, 2, 307-320.
- Taylor, V.A. (1978). Future directions for study. In E.L. Quarantelli (Ed.), Disasters: Theory and Research. Beverly Hills, CA: Sage Publications, 251-280.
- Wilkinson, C. (1985). Cited in R. Londer, After a Catastrophe, Parade, 8.