

SERVICE UTILIZATION AND ADJUSTMENT PATTERNS OF ELDERLY TORNADO VICTIMS IN AN AMERICAN DISASTER*

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INTRODUCTION

On May 6, 1975, a tornado touched down in the southwest corner of Omaha in the state of Nebraska. It traveled in a northeasterly direction through residential, commercial, and industrial areas of the city, leaving a path of destruction nine miles long and 600 yards wide, for a total of 2,000 city blocks. Both the death and injury tolls from the disaster were amazingly low; only three persons were killed while 157 were treated in hospitals for generally minor injuries.

Federal, city, and agency officials responded immediately to the tornado, resulting in the quickest recovery to date following a major natural disaster. The entire team from the United States Federal Disaster Assistance Agency arrived in Omaha the day after the storm. The cleanup effort initiated by city government officials and disaster agencies was accomplished within two weeks.

The Omaha tornado was unique, not only because of the low death and major injury rates as

well as prompt cleanup, but also because of the homogeneity of the residential area affected. The section was generally composed of white, blue-collar to upper middle-class individuals living in single family residences. The victims tended to be adequately insured against disaster-related losses. Thus, although they suffered material loss and disorganization for a period of time, they did not generally experience debilitating economic loss or the personal crisis caused by death or major injury of family members.

In September of 1975, the Gerontology Program of the University of Nebraska at Omaha contracted with the Eastern Nebraska Office on Aging (ENOA) to examine: (1) the social and psychological impact of the tornado on the older population of Omaha, (2) the service delivery efforts of ENOA and other agencies serving an aging clientele, and (3) the priorities necessary to perform significant and meaningful services for the elderly in subsequent natural disasters. Although this investigation focused on the aged (i.e., those victims over 60 years of age), comparable data were gathered to illustrate the similarities and differences of responses for younger victims as well as “non-victims.”

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THE "ELDERLY" VICTIM

Until quite recently, there have been very few age-specific references as to how the elderly fare in natural disasters. Consequently, the information from these studies is limited and occasionally inconsistent. When the elderly are identified, it is generally as one of many segments of a disaster-ridden community (Marks et al., 1954; Moore, 1958; and Form and Nosow, 1958). Specifically, the aged are mentioned as representing a proportionately higher number of the victims (Titmuss, 1950; Bernert and Ikle, 1952; Moore and Crawford, 1955; Wallace, 1956) and classified as one of many groups which tend to suffer greater financial loss, physical injury, and emotional disturbance (Marks et al., 1954; Moore, 1958; Form and Nosow, 1958; Loomis, 1964; Parr, 1970; White and Haas, 1975). Although older persons apparently have experienced the greatest losses and need the most services, they have either requested or received less in available disaster relief (Baldi, 1974; Poulshock and Cohen, 1975; Bolin, 1975; Drabek, 1975; Friedson, 1961).

Given the above inequities and general lack of reliable information, the present paper pursues two sets of data. The first involves a number of extensive interviews with young and old disaster victims, along with a sample of individuals not directly affected by the tornado. The second set is derived from interviews and

consultation with numerous service providers identified as playing a significant role in the disaster recovery process. Such an approach to data collection gives the research both an objective and subjective dimension. Besides the "standard" approach of describing and analyzing the findings, this report addresses the dual concerns of the social scientist and the policy planner, in that it points to several specific service implications (Bell, 1975; Kara, 1977).

THE SAMPLE

The present data are drawn from a series of interviews with a *quasi-experimental sample* of tornado victims residing in the urban area of Omaha, Nebraska, in the fall of 1975. In correlating information sources, victim lists were compiled through reference to (1) police records, (2) the Eastern Nebraska Office on Aging, (3) the Red Cross, (4) the U.S. Department of Housing and Urban Affairs, (5) the Mennonite Disaster Service, (6) the Salvation Army, (7) the National Guard, (8) the Interfaith Human Services Disaster Task Force, (9) the fire department, and (10) numerous hospitals and emergency service centers throughout the affected community. Thus enumerated, victim groupings were subsequently stratified on the basis of *age* (i.e., those 60 years of age and older versus those from 18 to 59 years) and the *degree of damage*

TABLE I

Background Characteristics of Interviewed Persons By "Treatment Condition"

Disaster Status	Mean Age	Educ.	Median SES ^a	Monthly income	Male	Fem.	White	Married ^b	Occupational status		% who are ^d		
									Retd. ^c	Empl.	Prot.	Cath.	Jew
Victims (N = 200)	52	13	55	\$ 810	90	110	198	153	60	140	45.5	44.5	3.0
Non-Victims (N = 100)	54	12.3	59	\$ 740	49	51	97	71	47	53	49.0	44.0	2.0

^aIn the absence of female employment, the respondent's SES was determined by reference to her husband's work.

^bSpouse living with each person.

^cRetirement status based on self-report.

^d"Other" and "no preference" categories have been omitted.

sustained to the households in question (i.e., dichotomized designations drawn from police and actuarial estimates). The final sample consisted of a total of 200 randomly chosen victims and 100 “controls,” the latter carefully matched to the victim population through the use of census and related materials.

As can be observed from Table I, the matching of “control” to “experimental” subjects has produced two fairly comparable subsamples of adults. For the most part, both groupings are made up of roughly equal proportions of males and females. The respondents are white, nearly equally divided in terms of religious affiliation, and the mean age of “experimental” versus “control” residents is fifty-two and fifty-four, respectively. The median socioeconomic status rankings (Reiss, 1961) for both groups, in turn, are fifty-five and fifty-nine. It should be noted, however, that “experimental” residents have slightly higher median incomes and formal education. “Control” respondents, on the other hand, exhibit proportionately more retired representatives.

From the standpoint of national comparison, data cited by Schulz (reported in Bell, 1976) and Carp (1972) suggest the present sample to be overly representative of upper occupational levels. This suggestion is borne out by two related indicators – education and income. The mean educational level of the sample, for instance, was 13 years, a figure well above the national average for all age groups (Daniels, 1974). In addition, the median income of the respondents was \$ 780 per month. This figure is considerably greater than that indicated by Streib and Schneider (1971) or Bogue (1975) [1].

MAJOR VARIABLES

Emotionality – Emotionality referred to the respondent’s phenomenal perceptions of anxiety associated with the disaster event. In the present investigation, each individual was presented with a series of twenty-one

emotionally-tinged adjectives (e.g., afraid, nervous, joyful, upset, happy, secure, etc.). Each word was displayed along a continuum suggesting the degree or extent to which each stimulus emphasis was manifest. A response range of “1” (little or none) to “5” (a great deal) was provided for both victims and non-victims. The task consisted of responding to each word relative to two reference periods. The time frames in question were “one week following the tornado,” and “at the present time” (a mean of 30 weeks subsequent to the destruction).

Perceived Stress – Stress was considered a state of social and/or psychological tension arising from one or more circumstances characterized by a real or perceived threat. In terms of the present study, the aforementioned natural disaster was viewed as such a circumstance. Stress reactions were explored in terms of three dimensions:

- (1) physical or health-related problems, e.g., headaches and upset stomachs;
- (2) decision associated stresses, e.g., difficulties in making decisions, inability to carry out routine tasks, and forgetting to take medications; and
- (3) emotional or affect-related expressions, e.g., nervousness, anxiousness, and quickness to weep or become angry.

Respondents were asked to indicate the type and specific instances of each stress reaction for various family members as well as themselves. A stress index was subsequently computed for each individual comprising the victim population.

Interpersonal Stability – Interpersonal stability was concerned essentially with the consistency and/or lack of disruption in interpersonal exchange. In the present investigation, consideration is given to such stability in three general areas – family, friends, and neighbors. Specifically, each respondent was asked to indicate the extent of his or her involvement in each area (the definition of the grouping was left to the respondent). The reference question

was whether the individual spends “less,” “more,” or “about the same” amount of time in each designated setting vis-à-vis pre-disaster circumstances. In addition, an affective assessment was made of all reported shifts. Victims and non-victims were asked to note, “In what ways have relationships changed since the tornado?” Response categories ranged from “1” (much worse) to “4” (much better than before).

Perceived Needs – Perceived needs were those phenomenal expressions of difficulty experienced by disaster victims at various temporal points of reference subsequent to the tornado in question. Through the utilization of open-ended questions, respondents were asked to recount the principal difficulties they had encountered over five time periods:

- (1) the first two weeks following tornado impact (T_1),
- (2) two to eight weeks later (T_2),
- (3) three to four months post-disaster (T_3),
- (4) five to seven months after “H” hour (T_4), and
- (5) “currently” – an average of 30 weeks after the tornado (T_5).

An analysis of responses yielded the following categories of perceived need:

- (1) utility services such as telephone, water, and electricity;
- (2) contractor repairs, i.e., the difficulty of finding reliable persons to make repairs quickly and fairly;
- (3) insurance settlements, i.e., the problem of finding people to appraise damage, file claims, and negotiate settlements;
- (4) residential relocation, i.e., finding a new or temporary residence, moving, and getting settled;
- (5) general cleanup, i.e., repairs to homes, removing debris, cleaning, etc.;
- (6) emotional tensions, e.g., having problems making decisions, being nervous, emotional, or edgy; and
- (7) refurbishing, i.e., replacing or purchasing new furnishings or belongings.

Service Utilization – Service utilization re-

ferred to the use of the services of various community relief agencies by disaster victims. Of principal concern in the present study were the number of contacts made in this regard. Specifically, respondents were asked to indicate the number and types of agencies from which services or aid was derived over the thirty week period in question. No consistent effort was made to assess the length or extent of the assistance received. Attention was directed to the age of the various service utilizers.

HYPOTHESES

Although it is difficult in an exploratory investigation to speak of true hypotheses worthy of empirical testing, it is at least helpful to examine the implications of previous research in this regard. To date, this research has been generally pessimistic relative to the older disaster victim. For the most part, it is expected that these individuals will exhibit a somewhat conflicting pattern of need expression and service utilization. That is, *while the aged should experience greater physical and emotional loss as a result of disaster circumstances (manifested, in turn, by greater objective and subjective “need states”), they will, nevertheless, make fewer demands on disaster relief agencies than their younger counterparts.*

THE FINDINGS

The first and foremost implication of a natural disaster relates to its negative impacts upon target populations. In the present instance, the focus of attention is upon the elderly vis-à-vis a younger contingent of disaster victims. The specific concern relates to the phenomenal experience of anxiety and stress associated with each grouping.

Table II presents a picture contrary to present expectations. It is observed, for example, that when one considers those adjectives which connote a more “anxiety-ridden” orientation, it is the *younger* not the older

TABLE II

Point Biserial Correlations Between Age Categories and Emotional Adjective Ratings for Both Experimental and Control Subjects^a

Emotional referent	Experimental Group (N = 200)		Control group (N = 100)	
	One week post disaster	30 weeks post disaster	One week post disaster	30 weeks post disaster
Afraid	-0.23**	-0.02	0.06	0.08
Thoughtful	-0.05	0.03	-0.21*	-0.13
Desperate	-0.01	-0.11	0.10	0.13
Steady	-0.11	0.05	0.04	0.04
Secure	0.18**	0.15*	0.18	-0.10
Fearful	-0.28**	0.05	-0.15	0.03
Frightened	-0.23**	-0.03	-0.10	-0.04
Pleasant	0.13*	0.05	0.15	-0.13
Nervous	0.15*	0.13*	0.23**	0.13
Loving	-0.08	0.09	0.09	-0.11
Panicky	0.10	0.09	0.11	0.15
Joyful	-0.11	0.11	0.04	-0.16
Happy	-0.10	-0.14*	0.14	-0.00
Shaky	0.11	0.03	0.13	0.05
Tense	0.13*	0.07	0.26**	0.07
Contented	0.12*	0.11	-0.14	-0.27**
Terrified	0.11	-0.08	0.03	-0.09
Worrying	-0.26**	0.13*	0.07	0.12
Cheerful	0.20**	0.06	-0.12	-0.05
Upset	0.33**	0.01	0.19*	0.09
Calm	-0.10	0.03	0.16	-0.14

^aA positive correlation indicates a higher score for those subjects "60 years of age and older".

* $p < 0.05$.

** $p < 0.01$.

victim who scores higher on each rating scale. One week subsequent to disaster events, younger respondents rank significantly higher on such adjectives as "afraid" ($p < 0.01$), "fearful" ($p < 0.01$), "frightened" ($p < 0.01$), and "worrying" ($p < 0.01$), while older victims rank significantly higher on *positive* adjectives such as "pleasant" ($p < 0.05$), "secure" ($p < 0.01$), "contented" ($p < 0.05$), and "cheerful" ($p < 0.01$). Although the aged respond more often to terms such as "nervous" ($p < 0.05$), "tense" ($p < 0.05$), and "upset" ($p < 0.01$), these adjectives do not seem to denote as much emotional upheaval and anxiety as those chosen by their younger counterparts.

The picture presented by the control group would appear to underscore the pattern observed in the experimental instance. Clearly, the disaster has been an influential event relative to the adjective rankings of both young and old.

Not only was it expected that the aged would experience more anxiety following the disaster in question, it was also anticipated that they would take longer to resolve disaster-related anxieties. Recourse to Table II once again, however, does not bear this out. Thirty weeks subsequent to the disaster event, there appear to be no marked differences in anxiety expressions of victim groupings. An examination of

TABLE III

Relationship Between Stress Indications and Age (Victims Only)

Area of stress	<i>r</i>	N	%	Significance level
Physical/health related	-0.17	197	98.5	0.008
Decision associated	0.09	197	98.5	0.115
Emotional/affect related	-0.30	197	98.5	0.001
"Other" stresses	-0.07	197	98.5	0.160
Personal stress (all types)	-0.14	196	98.0	0.026
Total reported stresses (all members)	-0.32	199	99.5	0.001

individual protocols, on the other hand, reveals a tendency toward earlier anxiety resolution on the part of the aged. This pattern of response is not sufficient, however, to warrant a general conclusion on the matter.

Both physical and emotional stress reactions are reported accompaniments of anxiety. In the physical realm, these reactions may range from headaches to upset stomachs and even more serious manifestations. From an emotional standpoint, the individual may respond by becoming nervous, anxious, and exhibit a propensity to weep or become angry. Associated with these physical and emotional concomitants are difficulties in decision making, an inability to carry out simple tasks, etc.

A careful examination of Table III reveals that when the age of victims is correlated with reported stress reactions, in all but one instance (decision-related) *younger* victims report *more* stress associated with disaster aftermath than do the aged. Not only are physical ($r = -0.17$; $p < 0.008$) and emotional ($r = -0.30$; $p < 0.001$) stress indications more dramatically in evidence in the case of younger victims, but the correlation with *all* reported reactions ($r = -0.32$; $p < 0.001$) strongly favors a *less* stressful impact in the case of *older* respondents.

An additional concern of this study involved the types of interpersonal support structures drawn upon by disaster victims — regardless of the degree of physical or emotional stress experienced. It has long been observed that as

formal organizational involvement declines, the elderly seek the informal social and emotional outlets of family, friends, and neighbors. These primary types of association purportedly maintain a sense of self worth and involvement deemed essential to psychological well-being. Accordingly, in a disaster such as the one in question, the maintenance of these relationships should become quite critical.

As is seen in Table IV, differences in informal social relations are noted only in the case of "experimental subjects." For the most part, non-victims maintain the same frequency of interaction with family, friends, and neighbors as they did prior to the tornado. The victim population, on the other hand, registers significant changes in all areas. In each instance, however, the differences reflect the *age* of the victim. Overall, the aged spend "about the same" or "more" time with family ($\chi^2 = 6.56$; $p < 0.038$), friends ($\chi^2 = 14.47$; $p < 0.001$) and neighbors ($\chi^2 = 17.43$; $p < 0.001$) than do their younger counterparts. That is, the amount of change or disruption wrought to tornado victims (as reflected in indications of "less" involvement) falls heaviest within the younger category of tornado victim. These disruptions are significant at the 0.05 level or less.

In a related fashion, elderly victims are seen to regard their relations in the areas of family ($r = 0.37$; $p < 0.001$), friends ($r = 0.28$; $p < 0.001$), and neighbors ($r = 0.37$; $p < 0.001$)

TABLE IV

Interpersonal Stability Indications for Both Experimental and Control Subjects

Areas of interpersonal involvement	Experimental subjects (N = 200)			Control subjects (N = 100)		
	χ^2	<i>df</i>	Significance level	χ^2	<i>df</i>	Significance level
Family	6.56	2	0.038	1.06	2	0.588
Friends	14.47	2	0.001	1.11	2	0.575
Neighbors	17.43	2	0.001	1.52	2	0.467

as “better” or “much better than before.” The younger victim notes no significant changes in subjective relations with either grouping.

In addition to differential stress indications, the data also reveal the *practical* need picture of tornado victims. In this case, as Table V makes apparent, there is little difference between older and younger respondents. With the excep-

tion of reported emotional and mental tensions, which appear to be resolved most quickly by older victims, there is no consistent pattern of age-specific needs expressed over the five time periods of investigation. Clearly, the elderly have not borne the brunt of disaster-related circumstances as has so often been assumed by social researchers.

TABLE V

Needs and Problems Over Five Time Periods: Comparing Younger and Older Victims

	Weeks 1 & 2 (T ₁)	Weeks 2–8 (T ₂)	Months 3–4 (T ₃)	Months 5–7 (T ₄)	Time of interview* (T ₅)
<i>Utilities</i>					
Percent under age 60 with problem	20%	2%	1%	—	—
Percent 60 and over with problem	20%	1%	1%	—	—
Chi-square value	0.03	0.17	0.16	—	—
Significance level	0.86	0.68	0.69	—	—
<i>Contractor, Repair, Service Arrangements</i>					
Percent under age 60 with problem	20%	37%	30%	15%	6%
Percent 60 and over with problem	31%	38%	31%	14%	4%
Chi-square value	2.92	0.01	0.00	0.00	0.05
Significance level	0.09	0.91	1.00	0.98	0.82
<i>Insurance Settlements</i>					
Percent under age 60 with problem	11%	15%	6%	—	2%
Percent 60 and over with problem	12%	9%	2%	—	4%
Chi-square value	0.03	1.18	1.37	—	0.29
Significance level	0.87	0.28	0.24	—	0.59
<i>New or Temporary Residence</i>					
Percent under age 60 with problem	24%	22%	11%	8%	2%
Percent 60 and over with problem	18%	10%	13%	9%	1%
Chi-square value	0.53	3.62	0.09	0.00	0.17
Significance level	0.47	0.06	0.77	0.98	0.68
<i>Cleaning and Making Repairs</i>					
Percent under age 60 with problem	40%	20%	9%	8%	11%
Percent 60 and over with problem	36%	30%	18%	8%	9%
Chi-square value	0.12	1.87	2.90	0.03	0.08
Significance level	0.73	0.17	0.09	0.86	0.78
<i>Emotional and Mental Tensions</i>					
Percent under age 60 with problem	23%	15%	17%	14%	12%
Percent 60 and over with problem	22%	12%	7%	4%	1%
Chi-square value	0.00	0.14	3.80	4.14	6.23
Significance level	0.95	0.70	0.05	0.04	0.01
<i>Refurbishing</i>					
Percent under age 60 with problem	5%	3%	10%	6%	3%
Percent 60 and over with problem	8%	7%	13%	7%	5%
Chi-square value	0.29	0.53	0.23	0.01	0.10
Significance level	0.59	0.47	0.63	0.94	0.76

*Approximately 30 weeks post disaster.

TABLE VI

Utilization of Disaster Relief by Age Categories

Disaster relief agency	Percent under 60 who used agency/service	Percent 60 and over who used agency/service	Chi-square value	Significance level
Red Cross	77	46	18.81	0.001
Salvation Army	34	19	4.77	0.03
Food Stamps	68	43	10.99	0.001
Internal Revenue Service	22	9	4.37	0.04
Federal Disaster Assistance Center	52	30	8.25	0.004
Department of Housing and Urban Development	25	19	0.79	0.38
American Insurance	10	4	1.55	0.21
Mennonite Disaster Service	24	24	0.01	0.91
Interfaith Taskforce	27	20	0.84	0.36
Eastern Nebraska Office on Mental Health	5	4	0.00	0.96
Nebraska Bar Association	5	1	0.84	0.36
Catholic Social Services	7	1	1.80	0.18
Police Department	58	34	9.84	0.001
National Guard	74	53	8.60	0.003
Fire Department	22	11	3.57	0.06
Eastern Nebraska Office on Aging	2	11	1.25	0.11

Finally, there is the question of actual service utilization by the aged as well as their younger counterparts. Table VI presents an indication of the various local, state, and federal relief agencies contacted for assistance by tornado victims.

Unlike the pattern observed in the case of reported problems, differential service utilization by age *is* apparent. In seven instances in particular, significant differences are seen which reflect a *greater* use of such assistance by the *young* as compared with the aged – the Red Cross, $\chi^2 = 18.81$; $p < 0.001$; Salvation Army, $\chi^2 = 4.77$; $p < 0.03$; Food Stamp Program, $\chi^2 = 10.99$; $p < 0.001$; Internal Revenue, $\chi^2 = 4.37$; $p < 0.04$; Federal Disaster Assistance Center, $\chi^2 = 8.25$; $p < 0.004$; Police, $\chi^2 = 9.84$; $p < 0.001$; and the National Guard, $\chi^2 = 8.60$; $p < 0.003$. Although the proportions are not statistically significant, in almost every other instance of relief employment, the *aged* place

fewer demands upon such agencies. Beyond a doubt, this aspect of disaster and recovery behavior is inconsistent with the almost equal perceptions of need evidenced by both age groups.

DISCUSSION

As many of the preceding findings stand in sharp contrast to expectation, it is as well to explore the circumstances of research in greater detail. As was observed, older victims did *not* experience greater anxiety over destructive events when compared with younger victims. On the contrary, the adjective choices of the aged sample were of a more “positive” character. The elderly individual shortly after the tornado expressed feelings of “security,” “contentment,” and “cheerfulness” not typical of the younger sample. In the case of the latter, anxiety-ridden (i.e., negative) adjectives such as

“afraid,” “fearful,” or “frightened” typified their response patterns. Although the elderly reported becoming “tense” and “upset,” these expressions connote far less anxiety than those characterizing the young.

A related observation was that the elderly did not seem to require longer periods to resolve disaster-related anxieties. Thirty weeks subsequent to the event in question, for instance, no differences were seen in the anxiety ratings of both groupings. Poorly developed data from research protocols, however, suggested the elderly may resolve their anxieties *earlier* than younger victims.

Although the above findings appear contradictory to logic – especially when one considers the social and physical plight of the nation’s elderly as a whole – several things should be kept in mind by way of interpreting the present data. First of all, recourse to Table I makes it clear that the elderly sample in this instance is somewhat atypical of elderly groups. Education, income, and employment data reveal the sample to be generally middle class in orientation. As such, this group has access to a more complete accompaniment of physical, social, and psychological resources with which to weather disaster circumstances.

Secondly, one cannot underestimate the effects of prior disaster experience on the populations concerned. Considering only the element of age, it would seem reasonable to assume that older respondents have confronted a variety of “disasters” in their life times. Although not always of a “natural” nature, these events have, in all likelihood, conditioned an attitude of acceptance relative to loss and suffering. Those having experienced a major depression, two or more wars, separation and divorce, the deaths of loved ones, etc., would have developed a more resilient character – one especially functional to the circumstances of natural disasters. Evidence from individual research protocols would seem to bear out this suggestion.

Although emotionality might be contained or “adjusted to” more quickly by the elderly

victim, perceived stresses should, in all likelihood, be greater for later age categories. Such was not the finding of the present research. On the contrary, when the age of victims was correlated with reported stress reactions, in all but one instance (decision-related) *younger* victims reported more stress associated with disaster aftermath than did the aged. Not only were physical and emotional stress indications more dramatically in evidence in the case of younger victims, but the correlation with *all* reported reactions strongly favored a *less* stressful impact in the case of older respondents.

Again, it is quite likely that prior disaster experience can account for the results reported. Along with this, however, it should be pointed out that objectively (that is, from the standpoint of monetary damage) losses in many areas of the tornado’s path were not excessive. In instances such as this, it is quite possible that the extent of damage might account for higher reports of perceived stress. Subsequent analysis with this possibility in mind, however, failed to divulge such a pattern. What was clear from this analysis, on the other hand, was that the *young* attached more subjective value to material possessions than did the old. The loss or damage to such items as autos, houses, trees, etc. was regarded as more emotionally upsetting to the younger victims. Apparently, there is considerable validity to the stress reports noted in each age category.

In the area of informal social relations, findings were as expected. That is, the elderly experience fewer disruptions in the areas of family, friends, and neighbors. A significantly greater proportion of aged victims in comparison with younger respondents indicated that they spent “about the same” or “more” time within the areas in question than did their younger counterparts. In addition, the importance of such relations was more strongly emphasized by aged respondents. In this respect, the elderly victim regards his or her relations with family, friends, and neighbors as “better” or “much better than before” the tornado in question. The younger

respondents reported no significant changes in subjective relations with either grouping.

It would appear from these findings that *informal support structures* serve the elderly more effectively in disaster circumstances than they do younger victims. While some increases in activity are noted in each area — especially the first or second week subsequent to disaster — only older respondents consistently value these associations. It seems likely that older individuals perceive of themselves in a more independent and valued position relative to the needs of family, friends, and neighbors in disaster circumstances. Such an orientation might be viewed as a rudimentary experiment in role development for older persons. That is, in disaster circumstances the elderly — because of lowered anxiety and personal stress — might prove the most effective workers in the disaster recovery efforts of other age groups. Such a suggestion is made more along the lines of an hypothesis than a general conclusion at this time.

The suggestions made thus far seem consistent with the somewhat contradictory findings on perceived needs and service utilization patterns. The elderly may, indeed, have experienced the same types of “practical” difficulties with disaster circumstances. The data make clear, however, that they have *not* suffered to any greater extent than their younger counterparts. Nevertheless, previous disaster experience, a more resilient attitude to loss and suffering, the maintenance of informal social support structures, and a generational emphasis upon independence and “carrying one’s own weight,” may be logically seen as “explanations” for the rather minimal demand placed upon relief agencies for subsequent assistance. When viewed in this light, the question as to whether the aged get their fair share of disaster assistance becomes a moot one.

Before leaving this issue, however, a word should be said as to the points at which the aged in the present study who sought disaster assistance encountered the greatest difficulties.

In almost every instance where problems were encountered, the issue concerned the methods or procedures whereby one might gain agency assistance. Specifically, respondents were repeatedly confused, intimidated, and frustrated by time delays, complicated forms, and procedural regulations. These difficulties, rather than physical access to the agencies in question, posed the greater barriers to service utilization. While these problems were cited by a minority of older victims, they seem of sufficient note to alert agency and policy planners to areas where restructuring would be appropriate.

SERVICE IMPLICATIONS

The results of the present research make apparent the interrelated nature of victim needs and service provision. In this regard, it is apparent that any successful service effort must predicate its philosophy of assistance on an understanding not only of the physical and emotional needs of potential “clients,” but also on the social and community context which constitutes the arena of service deliverance. To this extent, it may be necessary for the traditional disaster relief agency to simplify its intake procedures to the point of requesting only minimal information. Such an approach in times of crisis may serve to speed service delivery and actually encourage subsequent utilization of agency resources.

A second aspect of the needs-service dimension concerns “pre-disaster” work on the part of the various Area Agencies on Aging. Interviews with both service providers as well as victim populations make evident the need to “condition” (i.e., prepare in advance) older persons to the service potential of specific agencies. Indeed, it is at this point that agency staff can discern reluctance on the part of their aged clientele. Having “isolated” those with such hesitations, concerted effort can be directed toward the establishment of a firm personal as well as “informed” relationship

with these persons. Such an approach should insure not only a greater awareness of potential agency assistance, but also promote a willingness on the part of seniors to avail themselves of such deserved benefits.

Finally, procedures, forms, etc., should not be pursued or simplified at the expense of the older disaster victim. It seems that nothing can replace an open and sensitive attitude toward these individuals in their time of need. Education, therefore, must be directed at agency staff as well as their aged clientele. The form this "education" will take will be best formulated within the framework of community customs, agency resources, and the expectations of the aged themselves relative to service assistance.

NOTES

- 1 Corroborative interviews were conducted with the following service providers in an effort to validate both the services available and the utilization patterns of the elderly victims: ENOA, the Red Cross, Department of Housing and Urban Development, the Salvation Army, the fire department, the Interfaith Human Services Disaster Task Force, the office of Civil Defense, and the Mennonite Disaster Service.

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