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ATTITUDES OF AFFECTEES OF OJHERI CAMP DISASTER: SOCIAL-PSYCHOLOGICAL CONSEQUENCES

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The study measured the attitudes of the affectees of Ojheri camp disaster who either lost their relatives or were injured or lost their property or suffered from a combination of these damages. A questionnaire containing positive and negative attitudinal statements was administered to 48 female and 42 male affectees after 3 months of the disaster. The affectees were living at varying distances from the place of disaster. The attitudinal statements were about the government's role during and after the disaster. A series of analyses of variance were performed. The results indicated that the nearer the residence of the affectees from the site of the disaster the more negative attitude they held toward the government. It was also found that the politically affiliated persons held more negative attitudes toward the government as compared to politically non-affiliated persons. The results indicated that the affectees were generally critical of the government and they expressed strong negative feelings toward government's handling of the disaster and its post-disaster relief work. The findings have been discussed in a social-psychological frame work.

In recent years there has been growing interest in research on the effects of man-made technological disasters, e.g., Three Mile nuclear accident (Chisholm & Kasl, 1982; Chisholm, Kasl, & Eskenazi, 1983; Chisholm, Kasl, & Mueller, 1986), blast disaster in an explosive's factory (Barling, Bluen, & Fain, 1987). There are other studies which have addressed to both natural and technological disasters (Baum, Flemming, & Davidson, 1983).

As these studies deal with the effects of a disaster in a naturalistic field setting which greatly differs from disaster to disaster it becomes rather difficult to generalize the findings of

a specific study to that of another. As the disasters vary on a number of dimensions (Baum, et al. 1983; Berren, Beigel, & Ghertner, 1986) their effects may be specific and limited to that particular disaster. This makes the possibility of generalized causal inferences about the effects of particular disaster very cumbersome. Moreover, it becomes difficult in studies conducted in naturalistic field settings to experimentally isolate the various components of the disaster to see their causal effects (Cook & Campbell, 1979). This would mean that it would be hard to say which characteristics of a disaster lead to which effects. A way out of this situation may be to study several disasters differing in salient characteristics and by comparing two disasters in which only one component varies, the influence of that component could then be determined (Barling, et al. 1987).

Majority of researches on disasters have mainly focussed on the negative psychological and physiological effects of a disaster or post-disaster events (Barling, et al. 1987; Chisholm & Kasl, 1982; Chisholm, et al. 1983; Chisholm, et al. 1986). Some of these researches suggest that there may be a change in the contents of dreams following a disaster and there may be a considerable increase in psychic numbing, death anxiety and death guilt (Lifton & Olson, 1986). Others have suggested that specific fears may follow a disaster (Dollinger, O'Donnell, & Staley, 1984).

There is considerable degree of disagreement among researchers regarding the method of investigation of negative psychological effects following a disaster. Some researchers are of the view that negative psychological functioning followed by a disaster can best be ascertained with the help of psychiatric interviews rather than standardized psychological tests as the former are more sensitive to the nature of psychiatric symptoms (Perry, 1979). Some researchers were successful in detecting negative effects for 58 months following the disaster with the help of standardized tests (Davidson & Baum, 1986), whereas others have shown that the effects of an acute stressor can be isolated whether interview or survey methodologies are used (Dollinger, et al. 1984). Apart from the negative psychological and physiological effects of a disaster there may be some effects of social-psychological nature, e.g., social withdrawal, social anxiety, delusions of persecution,

negative attitudes towards others, especially, if the disaster is man-made.

One of the aftermaths of Bhopal gas disaster was the strong negative feelings of the affectees toward the Union Carbide which was responsible for the disaster and toward the government over the issue of compensation and post-disaster relief work.

The happening of the events during and just after the disaster may determine, to a greater extent, the feelings and attitudes of persons toward the agent of the disaster and the government. This may include the government's information policy about the disaster, the distorted estimates about the extent and severity of the disaster and its long term effects, the immediate relief work and first aid provided during the disaster, the medical facilities provided to the injured persons and the financial compensation for the injuries, loss of life and / or property following the disaster. Moreover, the severity of the experience of the calamities of the disaster may also determine a person's psychological functioning and his attitudes and feelings after the disaster. All these factors may contribute toward the social-psychological implications of a disaster and the consequent negative psychological effects.

Present Study

In April, 1988, the people of twin-cities of Rawalpindi-Islamabad experienced the worst and the most fatal man-made disaster in the history of Pakistan. The disaster started with a huge blast in the ammunition depot at Ojheri Camp and was followed by over an hour long pounding of missiles, rockets and granades on the twin-cities of Rawalpindi-Islamabad. Some of the rockets and missiles landed as far as 15 kilometres from the place of blast. The death toll was in hundreds, several thousands were injured and there was an extensive damage to the property. As this disaster continued over an hour, it resulted in a lot of panic. People fled their houses as a result of which many children were lost. Even after several days of the disaster the whereabouts of many people were not known. The public did not know the cause of this disaster and what precautionary measures to take as the government remained silent over this incidence. The police

and civil defence were absent from the scene and there were no signs of medical or other relief work. During the disaster there were also incidences of robbery and kidnapping. The damage to the property around the place of blast and even at a distance of 15 kilometres was caused by the rockets.

Keeping in view all these aspects, a study was conducted after 3 months of the incidence to determine the attitudes of affectees of this disaster toward the government and its post-disaster relief work. The affectees entailed persons from the twin-cities of Rawalpindi-Islamabad whose property was either damaged, or who themselves were injured, or lost any of their relative or suffered from a combination of these damages.

Hypotheses

1. As the nature of the loss and severity of the damage varied with the distance of residence from the place of blast, it was expected that the attitudes of the affectees residing at different distances from the place of blast would also vary.

The first hypothesis of the study stated that persons living near the place of disaster would hold more negative attitude toward the government as compared to the persons living at greater distance from the place of disaster.

2. The persons who are politically oriented show more interest in public affairs and generally view the government's and other organized activities more critically as compared to general public. It was expected that a person's political affiliation of any kind is likely to influence his attitude toward the government and its post-disaster relief work.

It was hypothesized that a politically affiliated person will hold more negative attitude toward the government than a politically non-affiliated person.

3. The compensation of the damages was a crucial issue in the post-disaster relief work. The majority of the affectees around the place of blast belonged to the lower and lower middle class who suffered the most.

It was hypothesized that persons belonging to lower class will hold more negative attitudes toward the government as compared to the persons belonging to lower middle and middle class.

METHOD

Sample

The subjects were 90 adults (48 women, 42 men) from and around the place of blast disaster, ranging in ages from 20 to 60 years. The subjects were randomly selected from the residential areas located at increasing distance from the place of disaster, i.e., within 1 kilometre 1-3 kilometres and 3 kilometres and above from the place of blast. The subjects were also categorized into three different income groups; up to Rs.1000 (lower class), Rs.1001-3000, (lower middle class), Rs.3001-5000, (middle class).

Instrument

Two researchers constructed attitudinal statements in Urdu language related to Ojheri Camp disaster. The statements consisted of negative and positive items which covered three aspects of the disaster, namely, the incident itself, the role of government, and the medical and other relief work provided during and after the disaster.

The items on the incident were about the responsibility of the disaster, i.e., whether it was due to the negligence and irresponsibility of the concerned authority and whether the disaster could be averted or its severity be reduced. The items on the role of government included its informational strategy during and after the disaster, army's efficiency/inefficiency in containing and controlling the situation and feelings of the people toward the government. The items on the medical and other relief work were about the first aid available during the disaster, medical facilities and treatment provided at the hospitals, post-disaster relief arrangements, especially the shelter provided to the affectees, and the compensation paid for the damages.

A panel of three judges belonging to the population of affectees screened these statements for their understandability, redundancy, and evaluative contents. First, the redundant and unclear statements were excluded. Second, the remaining statements were rated for their evaluative content, i.e., positive and negative. The final version of the questionnaire contained 18 positive and 20 negative statements to be rated on a five-point rating scale ranging from I through 5. The rating categories were labelled as 1= highly disagree, 2= disagree, 3= do not know, 4= agree, 5= highly agree. A proper Likert-type scale was not constructed as it was considered inappropriate to use a sample of affectees of disaster for the purpose of scale construction.

Procedure

The questionnaire constructed was administered to the affectees of Ojheri Camp disaster to measure their attitudes toward government and its post-disaster relief work.

Before conducting interviews the researchers selected the disaster affected areas situated at varying distances from the Ojheri Camp. Then two female interviewers went to these areas, randomly selected the houses, and approached the inhabitants of these houses. The interviewers explained the purpose of the study to the subjects, assured them of anonymity, and requested them to participate in the study. Once they had agreed, they were asked to fill out the questionnaire which was in Urdu language.

None of the subjects refused to participate in the study. All the subjects filled out the questionnaire themselves. If the subjects asked any question it was answered by the interviewers. The data collection was completed in about two weeks.

After the questionnaire was completed the subjects were requested to provide some demographic information on a leaflet attached to the questionnaire. This information was about the age, sex, education, marital status, income, political affiliation, distance of residence from the place of incident, physical distance from the site of blast at the time of

explosion, and the nature of loss (i.e., property, injury, death, or a combination of these).

RESULTS

A series of analyses of variance were performed. The valence of the attitudinal statements was taken as repeated measure, i.e., positive and negative attitudinal statements.

The first analysis was a 3 x 2 (distance of residence from the place of disaster x valence of attitudinal statements) factorial analysis of variance. The results show a highly significant interaction between attitude valence and the distance of residence from the place of incident, $F(2,174) = 5.39$, $p < .005$. The results also show a highly significant main effect of valence of attitudinal statements, $F(1,174) = 139.914$, $p < .0001$.

Table 1

Two factor analysis of variance between the valence of attitudinal statements and the distance of residence from the place of accident

Source of Variation	*SS*	*df*	*MS*	*F*	*P*
Main Effects					
Statements' Valence	23851.022	1	23851.022	139.914	.0001
Distance of Residence	366.173	2	183.086	1.074	.344
Interaction					
Statements' Valence x distance of Residence	1837.793	2	918.897	5.390	.005
Explained	26054.988	5	5210.998	30.569	
Residual	29661.656	174	170.469		
Total	55716.644	179	311.266		

The second analysis was a 2 x 2 (political affiliation x valence of attitudinal statements) factorial analysis of variance. The results show a marginal significant interaction between the attitudinal statements' valence and political affiliation, $F(1, 176) = 3.64$, $p < .058$. A highly significant main effect of attitudinal statement valence was also found, $F(1,176) = 136.497$, $p<.0001$.

Table 2

Two factor Analysis of variance between the valence of the attitudinal statements and the political affiliation

Source of Variation	*SS*	*df*	*MS*	*F*	*P*
Main Effects					
Statements' Valence	23851.022	1	23851.022	136.497	.0001
Political Affiliation	475.783	1	1475.783	2.723	.101
Interaction					
Statements' Valence x Political Affiliation	636.280	1	636.280	3.641	.058
Explained	24963.085	3	8321.028	47.621	
Residual	30753.560	176	174.736		
Total	55716.644	179	311.266		

The third analysis was a 3 x 2 (income of the persons x valence of attitudinal statements) factorial analysis of variance. The result indicated a highly significant main effect of attitudinal statement valence, $F(1, 174)= 136.291$, $p<.0001$. All other effects were insignificant.

Table 3

Two factor Analysis of variance between the valence of the attitudinal statements and the income of persons

Source of Variation	*SS*	*df*	*MS*	*F*	*P*
Main Effects					
Statements' Valence	23851.022	1	23851.022	136.291	.0001
Income of Persons	883.248	2	441.626	2.524	.083
Interaction					
Statements' Valence x Income of Persons	532.248	2	266.112	1.521	.221
Explained	25266.495	5	5053.299	28.876	
Residual	30450.149	174	175.001		
Total	55716.644	179	311.266		

DISCUSSION

The results show a highly significant interaction between the attitudinal statement valence (positive, negative) and the distance of residence from the place of incident. This indicates that the affectees who were living near the place of disaster held extreme negative feelings toward the government's relief work during and after the disaster as compared to those who were living at farther distances. However, there was no difference between the negative feelings of the people living at a distance of 3 kms and more than 3 kms. The differences in the positive sentiments of people towards the government and the relief work as a function of distance from the place of disaster are not very clear. The people living near the place of disaster and those at a distance of over 3 kms have the same degree of positive feelings (moderate positive feelings) toward the government, whereas the people living at a distance of 3 kms show very little positive attitude towards government.

These findings confirm the first hypothesis that those residing near the place of disaster had the most negative

feelings towards the government and its post-disaster relief work. Those people who were near the place of disaster were worst affected both in terms of horrors of the disaster and the damages incurred by it. The estimates show that besides total damage to the property the death toll was quite high within 1—2 kms area of the blast. During the disaster, people from areas far and near Ojheri Camp abandoned their houses and work places and ran away in panic to seek shelters. Majority of them were injured in the ensuing panic and many of them remained in a state of shock even hours after the disaster was over. People from this area experienced a state of total uncertainty and high insecurity. Besides all these negative and highly stressful experiences they were deprived of essential first-aid and other medical assistance. The damage caused to the houses and property left them unprotected and as a result jewellery, money and other valuables from these houses were stolen. This material loss was not compensated, which added to the grievances of the affectees. This explains why the affectees of the disaster from the Ojheri Camp had strong negative feelings not only toward the government but also toward the post-disaster relief work, etc. This suggests in the first place that the post-disaster relief work might have not been adequate and, hence, fell short of their expectations and secondly, a lack of psychological assistance and services might have maintained the post-disaster grief even 3 months after the disaster.

The results also indicate a marginal significant interaction between the valence of attitudinal statements and the political affiliation. The politically affiliated people held more negative feelings toward the government as compared to non-political persons. This supports the second hypothesis that politically affiliated persons will hold negative sentiments towards the government and its post-disaster relief work. However, the two groups did not differ in their positive feelings toward government and its post-disaster relief work.

These results suggest that politically affiliated people view the performance and effectiveness of a government more critically as compared to non-political persons. The politically oriented persons were more critical of the government's handling of the disaster's situation and the post-disaster relief work as compared to non-political people. Nevertheless, these results should be interpreted rather cautiously. The negative feelings of politically motivated

persons should not be regarded as an indicator of their opposition to the government under every circumstance as non-political persons also indicated more negative sentiments toward the government as compared to positive feelings. This suggests that the government's handling of the disaster and the post-disaster relief work played a role in determining the negative feelings of all affectees of the disaster, but the politically involved persons viewed the situation more critically than the non-political persons.

The results indicate a nonsignificant interaction between the income of persons and valence of attitudinal statement. This means that different income groups did not differ in their feelings toward the government and its post-disaster relief work. These results do not confirm the third hypothesis. One possible reason for these non-significant results may be a lack of difference between the feelings of the individuals falling at the boundaries of these various income groups. As this difference is very small these persons would have not differed significantly in their feelings from each other. This could have influenced the overall results. Another possible reason for the non-confirmation of the third hypothesis may be an equal distribution of persons with mild and severe damages in various income categories. This would mean that regardless of the income the degree of severity of losses suffered by a person is the major factor in determining his feelings toward the government.

The three factors related to the hypotheses of the study were manipulated independently of each other. The results indicate that these factors had an impact on the attitudes of the affectees, nevertheless, in a differential manner.

The income factor did not show any significant effect regarding the attitudes of the affectees, the possible reasons for which have been discussed above.

The political affiliation of the affectees influenceed their attitudes toward the government. The strongest factor to emerge out of this study seems to be the distance of residence from the place of disaster. The mere distance from the place of disaster is not the primary factor to influence the feelings of the affectees of the disaster but the extent of losses suffered by the affectees residing in these areas. As mentioned earlier, the

people living near the place of disaster suffered more in terms of material damage and loss of human life as compared to those living at increasing distance from the place of disaster. This indicates a dependence between the extent of losses and the distance of residence from the place of disaster, which, nevertheless, is independent of other two factors (political affiliation and income) manipulated in the study.

The results also show an overall highly significant main effect of valence of attitudinal statements for all analyses. The negative attitudinal statements about the government and its post-disaster relief work were overwhelmingly endorsed by the affectees. This shows an overall negative feelings of the affectees of Ojheri Camp disaster toward the government. The negative statements contained in the questionnaire were critical of government's handling of the situation during the disaster, its informational strategy about the disaster, its efficiency and concern in providing relief, facilities, and compensation for damages after the disaster. The endorsements of these statements indicate that affectees were highly critical of all the aspects of the disaster asked in the questionnaire. They were totally dissatisfied with the government and its general attitude toward them.

The Ojheri Camp disaster was an acute stressor which was characterized by an immediate low point (Pratt & Barling, 1987). It has been found that the effects of an acute stressor are experienced immediately and dissipate after some days (Loo, 1986). This would mean that any negative effects would be more likely to emerge immediately following an acute disaster and would dissipate shortly thereafter. Some other studies (e.g., Barling et al., 1987) also did not find any negative psychological effects in the affectees 2—month post-disaster. Barling et al. (1987) attributed this non-existance of negative psychological effects to the acute (as opposed to chronic) nature of the disaster. Although there was loss of human life and property in the disaster studied by Barling et al., none of its affectees suffered either loss of his property or the life of his relatives.

Although our study has not measured negative psychological effects of Ojheri Camp disaster, yet it was found that strong negative feelings of affectees toward government and its post-disaster relief work persisted even three months

after the disaster. It is assumed that this might have been true for the negative psychological effects also, had they been measured. In the opinion of the authors the feelings of the affectees of a disaster and its negative psychological effects are related to the nature and severity of loss regardless of the acute or chronic nature of a disaster. In Ojhri Camp disaster the affectees were not only injured themselves, but many of them lost their relatives and/or suffered extensive property damage. This supports our notion that negative psychological effects may persist longer if ones personal losses (like loss of property and lives of near and dear ones) in a disaster are high. Consistent with the researchers' assumptions, some studies indicate the existence of negative psychological effects after a disaster (Chisholm & Kasl, 1982; Chisholm et al., 1983, 1986; Davidson & Baum, 1986), whereas others have pointed out towards the role of moderator variables, e.g., lack of social support and personality hardiness (consistency) in determining the negative psychological effects after a disaster (e.g., Barling, et al. 1987). We assume that constant negative feelings might also act as moderator in determining the negative psychological effects such as increased insecurity, uncertainty about the future, depression, feelings of helplessness, increased hostility, etc. The results of this study indicate that negative emotional feelings among the affectees persisted three months after the disaster. This may be partly because of government's negligence and inappropriate post-disaster relief work. We suggest that following such disaster, in which there is loss of both life and property, the affectees should be property compensated for their losses. Moreover, a long-term strategy should be evolved to provide psychological assistance to the affectees.

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