

## **A SOCIAL PSYCHOLOGICAL STUDY OF MEASURES FOR HELPING PERSONS BEREAVED DUE TO NATURAL DISASTERS**

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### **ABSTRACT**

The objective of this study was to seek measures that would help ordinary people alleviate the grief of those who have lost family members in a natural disaster. Detailed interviews were conducted with bereaved persons after the Nihonkai Chubu Jishin (earthquake) of 1983 and Nagasaki Suigai (flood) of 1982. The then local government officials, journalists and community leaders, as well as a Buddhist priest and a psychiatrist were interviewed. Alleviation measures found to be effective were recovering the remains of the dead promptly; giving the bereaved a chance to confirm that death had occurred and to have a last look at the remains; utilizing anything available to substitute for the lost target of love; helping the bereaved to discharge and share their grief by showing high evaluation and respect for the dead; lessening anxieties about financial matters, solitude and lack of general knowledge; protecting the bereaved from exposure to extremely crude or cruel facts about the dead; helping them to recognize that the tragedy was caused by a "natural disaster"; and arresting the spread of malicious rumors about economic gains by the bereaved because of the disaster, or about the responsibility of the dead or the bereaved. Cultural and environmental factors, personal traits and the unique characteristics of the disaster also were found to be involved.

### **1. INTRODUCTION**

Natural disasters cause financial and property losses as well as the loss of human life. In ex-

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**KEY WORDS:** Natural disaster; the bereaved; recovery of the remains; social support; social psychological support measures; taking the last look at the remains; discharging, replacing and sharing the grief; compensation for the lost target; lessening the emotional loading on the cognition; mass media; malicious rumor.

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treme cases, the lives of one's closest relatives are suddenly extinguished, causing grief and despair that are much keener than when death is due to aging or sickness. The psychological pain suffered by the bereaved is unmeasurable, so much so that the death is perceived as absurd and acceptance of it as fact is refused.

Although the passage of time and their own perseverance help the bereaved to endure and overcome their excruciating agony and grief, it is important that they receive outside support. It is the responsibility of society to organize support systems, various types of which exist in all societies: mutual aid from neighbors, relief activities provided by welfare and volunteer groups, and organized aid provided by governmental administrative organs. These systems can be divided into four categories along two main axes; formal-informal, and physical/material-psychological/mental. For example, (1) formal-physical/material supports include governmental welfare allowances, lending housing, helping to find employment, and contributions from various groups and associations. (2) Formal-mental support may include consultations with and advice from social workers, memorial services held by municipal governments and letters of condolence from municipal leaders. (3) Informal-physical/material support includes financial aid from relatives and relief goods obtained from friends and acquaintances. (4) Informal-mental support includes comforting words and encouragement from neighbors and sermons by clergy men.

In contemporary society, categories (1) and (3) in many cases, are the most central and systematic forms of support. The grief and despair produced by the sudden and tragic death of the close relative cannot be expected to be alleviated merely by providing material support or by lessening anxiety about the future. As it is not sufficient to receive only the kind of support found in categories (2) and (4), it is the responsibility of society to mobilize whatever resources are available to help the victims. The endeavors of government agencies in providing relief measures is based on the recognition of such needs and takes due consideration of the mental states of natural disaster victims. Although these agencies are expected to take the initiative in providing physical and material support, they cannot be expected to give comparable mental support. In this regard, support systems organized at the level of the general public are more effective; e.g. by relatives, acquaintances, friends and neighbors (hereafter called "social-psychological support" to distinguish it from the material support and psychological/medical support extended by experts).

With the above understanding, we examined various measures used to help mitigate the psychological pain and grief of persons bereaved because of a natural disaster. Measures related to mental support vary, but we here consider only those which persons engaged in disaster prevention programs and those closely associated with the bereaved routinely must consider rather than such specialized measures provided by experts as clinical psychoanalysis and medical treatment. Accumulated past experiences and common sense wisdom, in the broader sense, are an important part of our disaster-related culture. We conducted a survey of bereaved persons after two different natural disasters in order to review what considerations in what aspects are important for helping them. A basis for constructing future support systems is discussed.

## 2. THEORETICAL BACKGROUND

Psychological responses of humans at the time of bereavement have been examined in the medical sciences, in particular in psychiatry. Psychological responses are regarded to be the results of target loss or post-traumatic disorder (PTD). Advances in modern medicine and changes in family structure have brought about a new situation in terms of the physical circumstances of a person's death; people increasingly die in hospitals rather than at home. This situation has oriented peoples' interest toward medical and nursing care for the dying and the care of those who have lost a close relative [Kohno, 1985].

Issues of bereavement have evoked the deep interest of social science researchers as well as that of researchers in the medical and nursing sciences. In Japan, such studies have been limit-

ed in number and scope to family sociology and the psychology of the aged [Kawaai, 1987] and nursing science [Miyamoto, 1989]. In the field of social psychology, there has been only the report by Ishikawa which discusses relevant literature published in the United States and Europe [Ishikawa, 1990]. Because the content of bereavement obviously is closely related to the inherent nature of a culture, studies on the characteristics of bereavement in Japan are needed rather than relying on results of studies conducted elsewhere.

There have been numerous studies on the bereavement that results from a natural disaster, accident or war, including one study on the atomic bomb survivors of Hiroshima [Lifton, 1968]. Raphael compiled a large amount of data on the effects of disasters on people and reported a number of factors that influence people's recovery from post-disaster grief that include "participation in reconstruction activities", "assisting others" and "talking through" [Raphael, 1986]. Several other studies have since been published: one on bereavement as the result of traffic accidents [Lehman et al, 1987]; interviews with persons left bereaved by accidents and disasters in Sweden [Lundin, 1987]; a series of studies on the damage done by the volcanic eruption of Mt. St. Helens [Murphy, 1989]; and a study of the psychological aspects of persons left bereaved by industrial disasters [Hodgkinson, 1989].

In Japan, a study has been made of psychiatric patients who manifested symptomatic changes after the devastating Nagasaki flood of 1982 [Araki et al., 1984], and a psychiatric study of persons left bereaved by the Japan Air Lines crash of August, 1985 [Noda, 1992]. No studies have been published in the social sciences about the responses of bereaved persons who show symptoms that fall short of the psychotic.

### 2.1. *The Process of Recovery from Grief*

In studies of bereavement, the main focus of research has been on the process of recovery from grief that occurs immediately after the death of a close relative. Bowlby earlier proposed a model of this recovery process as made up of "retention·protest", "depression·despair" and "detachment". Caplan describes a process that starts with "anticipatory target loss" and terminates in "recovery" [Okonogi, 1985].

Various theories based on different approaches have been proposed in recent studies. Based on his experience as a counselor in terminal care cases, Deeken divides his model into 12 steps starting with "trauma and paralysis", going through "denial" and "panic" and ending with "recovery" [Deeken, 1985]. Other researchers postulate that the recovery process differs, not every individual going through a beginning stage of intense pain which gradually is mitigated with time. Some "consistently suffer from mild pain of grief", whereas others "continually suffer from sustained pain" [Wortman & Silver, 1988]. In interviews with 20 people whose spouses died in the hospital, Miyamoto found four patterns of recovery from grief; "accepting things as they are", "actively coping with the situation", "endurance" and "shutting oneself away from others" [Miyamoto, 1989]. These four patterns in general correspond to those of Wortman & Silver and support the validity of their model. A survey of old people living in Tokyo who had lost their spouses showed, however, that as many as 55% of the respondents felt that the "death of their spouse was the greatest blow of their life", and more than 80% suffered some type of psychosomatic reaction [Kawaai, 1987]. This indicates that intense agony generally accompanies grief.

### 2.2. *Factors Influencing Recovery*

Studies of recovery from grief have primarily focused on factors that influence the recovery process. These factors can be roughly classified in four groups: factors that are inherent to the bereaved person(s) irrespective of bereavement; those involving the relation of the bereaved to the dead; those related to the circumstances of death; and those related to circumstances after death. Table 1 gives the studies in which these categories have been investigated.

A number of key studies have dealt with factors related to people associated with the be-

Table 1. Factors Related to Recovery from Grief

Name of researcher	Factors	Variables
Kouno (1985)	The bereaved	Mental & emotional maturity of family members, social & financial status, religion, philosophy about death
	Relationship with the deceased	Status of the deceased within the family, and financial status
	Circumstances of death	The mode of death, age of the deceased, experience of caring for the deceased prior to death, relationship with medical professionals
Sanders, C. (1988)	The bereaved	Age, sex, social & financial status, personality (emotional stability), health condition
	Relationship with the deceased	Ambivalent feelings toward and dependence on the deceased, family relation
	Circumstances of death	Unexpectedness
	Circumstances after death	Social support, associated financial difficulty
Weiss, R.S. (1988)	The bereaved	Self-evaluation
	Relationship with the deceased	Dependence on the deceased, ambivalent feelings, sense of responsibility & commitment
	Circumstances of death	Meaning of loss
Rosenblatt (1988)	The bereaved	Cultural effects on the expression of grief
	Circumstances after death	Brief contact with someone outside of the family, belongings of the deceased (photo album, mementos, etc.)
Kawaai (1988)	The bereaved	Age, health condition, occupation
	Circumstances of death	Income, number of friends, period of sickness
Stroebe et al. (1988)	The bereaved	Personality (control over emotions)
Miyamoto (1989)	The bereaved	Age, life stage, significance of work, future ambitions, self-confidence, desire to help others
	Circumstances of death	Self-evaluation and evaluation from others, regarding care-taking of the deceased during illness
	Postdeath circumstances	Existence of social support network, place and opportunity of expressing emotions, place and opportunity of recalling fond memories

reaved, another (the topic of our study) the support extended by those associated with persons who had lost a close relative(s) [Lopata, 1988]. Vachon & Stylianos warn that excessive social support may aggravate the stress of the bereaved. They assert that support from family members is vital immediately after bereavement, friends becoming important only after the bereaved establishes a new social role [Vachon & Stylianos, 1988].

In medicine and psychiatry, emphasis is attached to the importance of the commitment of

people associated with the bereaved in assisting him/her to recover from grief and distress. Grollman, for example, listed ten factors that are effective in relieving the grief of bereavement and emphasized the particular importance of "friends", a "self-supporting group" and "counseling" [Grollman, 1986]. Hirayama suggests nine ways of coping with grief and stresses the importance of "providing adequate information on the mental mechanism and process related to grief", "providing health education and medical care", and "securing a time and place within the community for the bereaved to mourn fully" [Hirayama, 1985].

### 3. SURVEY

As stated in the Introduction, our study explores measures which can be used routinely and generally to give mental support to the bereaved by people associated with them to help alleviate the psychological pain and grief of those left bereaved by a natural disaster. Our focus is not on specialized expert skills (such as psychiatric treatment) but on measures that are commonly known and that are available in daily life because (1) however deep and grave the psychological pain and despair of the bereaved may be, such mental reactions are seldom of psychopathological nature and (2) natural disasters are likely to take the lives of numerous people simultaneously, leaving a large number of bereaved persons; therefore, aid which relies on the availability of expert skills is not realistic or practical.

We conducted detailed interviews with people who had lost a close relative in a natural disaster and the people closely associated with the bereaved in order to determine what factors helped to alleviate mental pain or aggravate grief. The items investigated were:

- 1) Face Sheet (sex, age, family members, etc.)
- 2) Immediate post-disaster events (how the news was received, circumstances of viewing the remains of the deceased, etc.)
- 3) Organization of the funeral
- 4) Subject's situation up to the first anniversary of the death (emotions after the funeral, etc.)
- 5) Changes in life and emotions (how and when feelings and emotions underwent changes)
- 6) Behavior of family members (reactions and commitment of family members, etc.)
- 7) Behavior of friends, relatives and neighbors towards the bereaved (how the community or the company for which the deceased worked reacted, etc.)
- 8) Recovery process (talking through, etc.)
- 9) Assessment of the present situation (present feelings and thoughts about the disaster, etc.)

The survey was conducted in regard to two natural disasters.

(1) An earthquake in the Central Japan Sea

1. Type of disaster and area of investigation:

An earthquake in the central Japan Sea that registered a magnitude of 7.7 on the Richter Scale occurred off the coast of Noshiro City, Akita Prefecture at about 12:00 noon, May 26, 1983. A total of 217 cities, towns and villages in 13 prefectures suffered damage. The tsunami (tidal wave caused by the earthquake) was extensive. It killed 79 of the 93 persons who died in Akita Prefecture.

2 Interview sample:

Subjects interviewed were bereaved relatives of the tsunami wave victims, living in Noshiro City and its vicinity. Names of bereaved family members were obtained from the Noshiro Municipal Government. A list of about 40 prospective interviewees was drawn up. These were contacted individually by letter and by telephone. Ten people agreed to be interviewed. In addition, a government officer, two senior staff members from the local newspaper, and two reporters and a newscaster from a TV broadcasting

company, all of whom had been involved with the disaster, were interviewed.

3 Interview procedure:

Two local people (associated with education) were employed as assistants. One researcher from the study team was paired with each assistant and visited each subject. A semi-constructed questionnaire was used for each interview. Interviews were recorded on sound tape with the consent of the subject, after which they were transcribed by a person well acquainted with the local dialect.

4 Period:

November 7–11, 1990

(2) The flood in Nagasaki Prefecture

1 Type of disaster and area of investigation:

A flood caused by heavy downpours of rain struck the southern part of Nagasaki City on July 23, 1982. The precipitation per hour reached 187 millimeters, the highest rainfall ever recorded in Japan. The flood took a heavy toll, killing 299 people (inclusive of those found dead and those reported missing). The damage done, which included the destruction of houses and public buildings as well as damage to agriculture, forestry, marine industries and public works, was calculated as ¥315 billion. As many as 88% of those who died or were reported missing were killed in landslides.

2 Interview sample:

The subjects interviewed were those who lost relations in the flood, who live in Nagasaki City and its vicinity. Names of the bereaved were obtained from the Nagasaki Municipal Government. A list of 51 prospective interviewees was drawn up. These were contacted individually by letter and by telephone. Fifteen people agreed to be interviewed. In addition, a government officer, the president of a community association in the flooded area, a senior staff member of the local newspaper, a Buddhist priest and a psychiatrist (all of whom had been involved with the disaster) were interviewed.

3 Interview procedure:

The same as that used in the Noshiro City survey conducted in 1990.

4 Period:

October 18–21, 1991

#### 4. RESULTS OF THE ANALYSIS

The contents of the taped interviews with the bereaved and other persons, as well as written records were analyzed to determine what factors aggravated or alleviated the psychological pain and grief of the bereaved and what were the intervening variables in that aggravation or alleviation. Details of the interviews are omitted in order to protect the privacy of the interviewees. The analytical findings and discussion follow:

(1) Recognizing and Confirming the Fact of Death

When faced with the sudden death of a family member or close relative, one first is challenged to recognize and accept this unbelievable fact, which is not easy. Some people refuse to accept the agonizing news, others take a long time before they actually accept the death of a family member, as pointed out by Raphael (1986). Accepting the fact of death in spite of all psychological repulsions—which is most essential if a person is to overcome and recover from the grief—requires confrontation with indisputable and powerful evidence. Confrontation with the remains of the dead achieves this better than anything else. The essential thing is a prompt search for and recovery of the remains, thus allowing the bereaved to confront the fact of death quickly.

(2) Bidding Farewell

Seeing the remains is essential for lessening “lingering hope and regret” which the bereaved otherwise may harbor. Because the death was unexpected, the bereaved must have parted casual-

ly with the dead person. Some people may not even have had a chance to see or talk with the person who died. As is evident from the fact that bidding "a last farewell" or taking "a last look" is an important element in the leave-taking rite even for death caused by sickness, "regret" is a natural and universal feeling. It is only natural that the bereaved should strongly wish to have the remains searched for and recovered promptly, however badly the body might be damaged. Utmost efforts are expected to be exerted, and the bereaved would become infuriated if the individuals and organizations who (according to bereaved's view) are responsible should fail to do so. It is therefore essential to make the greatest possible effort in searching for and recovering the remains and to make this effort known to the bereaved. The mobilization of the Self Defense Force to carry out relief activities at the time of large scale disasters appears to give a strong, positive impression that the utmost efforts are being made.

### (3) Discharging, Converting and Sharing Grief

Violent emotions need to be discharged. Because the cause of grief cannot be eliminated, people associated with the bereaved should accept the necessity of "discharging grief" and help the bereaved to reach catharsis. Securing a place or an opportunity, however brief, for the bereaved to be alone and to discharge grief without reserve or to have undisturbed sleep, or offering the company of family members or close friends with whom the bereaved need not feel reserve also is of great help.

On the other hand, the bereaved may, at least temporarily, "forget sorrow" by trying to carry out his/her expected role. A number of social functions such as keeping vigil, attending the funeral and memorial services would exhaust the mental energy of the bereaved and thus alleviate, if only temporarily, the person's grief. This is known as "conversion of grief". According to the observation of a Buddhist priest we interviewed, the bereaved performed their roles as expected, suppressing grief. Other activities which call for prompt action, such as taking care of surviving family members, also may offset sorrow when it is at its height. This mechanism appears to be close to the "replacement" and "escape to reality" factors seen in psychoanalysis.

Seeing other people grieve may aggravate or increase sorrow, but it also can be very soothing to realize "I am not alone" or "there are people like myself". This is an example of "sharing", a feeling that someone else is carrying a portion of one's burden. It is of great help therefore if as many people as possible come to assist, show compassion and give condolences. Listening attentively to what the bereaved have to say, understanding their bitterness and accepting it also gives them support. The foregoing probably have the effect of talking through as well as sharing. A joint memorial service, which is often held for a large number of victims of a single disaster, should have the same effect as when many people who have had similar traumatic experiences gather and share their sorrow. Assistance from friends and acquaintances of the dead with whom the bereaved person was not directly familiar is particularly effective as it expands the circle of people who share the grief. Contributions, supplies and letters of condolence and encouragement from unknown persons have a similar effect.

The bereaved are angered and become resentful if such discharge and replacement or sharing of grief fails or is interfered with. Our survey indicates that if few people attended the funeral, or if close acquaintances failed to attend, the bereaved felt greatly neglected.

Extremely useful as they are, sympathy and support from neighbors often are received ambivalently. For the "replacement and sharing of grief", neighbors gathering around the bereaved may "help greatly", but this can be potentially "annoying" and interfere with the "discharging of grief".

Particular care must be taken regarding the ambivalent emotions of the bereaved toward the mass media. The bereaved feel strong resentment against mass media coverage and reporting at the time of the disaster. They particularly disapprove of the rude and imprudent manners of reporters; the wearing of casual clothes, a growing beard and untidy long hair, rough speaking, careless stepping over of the remains, and climbing on cenotaphs to take photographs. Local re-

porters in the vicinity of the disaster site point out that rude manners are more common among those dispatched from the main office. There is, however a positive element as well, the emotions of the bereaved toward the mass media are not completely negative. They recognize the function of the mass media and its role in evoking the interest and sympathy of the public by reporting the disaster (or the death of the bereaved's close relative). In other words, a certain "sharing of grief" occurs. In reporting, sufficient care must be taken not to cause feelings of inequality among the bereaved; e.g., that the coverage of last years' disaster in the next town was more extensive or that some deaths are reported with less detail than others even though the persons died in the same disaster.

#### (4) Compensating for "Target Loss"

Family constitutes an important element in the cognitive system of a person, and is firmly incorporated in that system in a stable position. Loss by death is the "target loss" mentioned earlier. The higher the "centrality" and "salience" of a cognitive element, the more strongly the target loss is felt. This explains the observation made by Nakae et al (1986) in their epidemiological study that the effect on the bereaved of parting by death is closely related to the closeness of the blood relation, intense target loss being felt by parents who have lost a closely cared for child. Similarly, target loss is strongly felt by a person who has lost his/her only close family member or his/her only child, no alternative target being available.

The cognitive system of a person gradually overcomes target loss by various mechanisms. Finding an alternative target sometimes may effectively compensate for such a loss. The subsequent target may be another person, an animal, a belief, religion, a sport or hobby, or social activities such as volunteer activity that can substitute for the dead person for whom the bereaved had cared very much. Objects left by the dead: mementos, a grave or cenotaph may serve a similar function. In this regard, attempts to invite the bereaved to various events in the community are appropriate. Instead of relying on the fading of memory or a spontaneous decrease of centrality and salience with time, people associated with the bereaved should support them in finding alternatives for the lost target.

#### (5) Reducing the Emotional Loading Caused by Recognition of the "Death of a Family Member(s)"

Confronted with a sudden death in the family, the bereaved must form a cognition concerning the fact of death or reconfirm that the death has occurred. This cognition has various aspects, the main elements of which are expressed by the following four statements:

- 1) The beloved will never return
- 2) Life from now on will be different
- 3) The death was a cruel one
- 4) The death is illogical

These four component elements generate intensely negative emotional loading, causing psychological pain and grief. Theoretically, psychological pain and grief may be alleviated by denying these four statements or by reducing the emotional loading they produce.

These statements in reference to most deaths caused by natural disasters are based on objective facts; therefore, it is difficult to use manipulation. For example, statement 1) is based on an undeniable fact which can never be altered, therefore it cannot be eliminated from cognizance. It is also very difficult to reduce the emotional loading of the statement by means of ordinary logical discussion. Guiding a person to accept the death of the beloved falls within the realm of religion, and the clergy are expected to have a significant role in this respect. Those who are close to the bereaved can support them by trying to reduce the negative emotional loading caused by bereavement by the use of such literary or conventional expressions as "the dead will live forever in your heart", "the dead person is watching over you and wishing you happiness from another world", or "you will meet the dead again in another world." To reduce as much negative emotional loading as possible, one should listen attentively to bereaved persons, allowing them to

mourn over the death and letting them discharge their grief by encouraging "talking through". Alternatively, people associated with the bereaved can assist them to realize a virtual communication with the dead; for instance, by encouraging them to visit the grave or to offer prayers, thereby helping to mitigate the blow to the bereaved. The "conversion of grief" discussed above also helps decrease salience. Our survey clearly indicates that "taking care of a grandchild(ren)" and participating in community activities are effective means of "conversion".

As for statement 1), it is possible to resort to measures related to one's thoughts about "the beloved" rather than thoughts of "death". There are two logical alternatives: One is to negate the positive aspects of the dead person and to decrease his/her value by thinking "I didn't really like him/her from the beginning" or "he/she always caused trouble to people around him/her" so as to alleviate one's mental pain and grief. Obviously, this is applicable in a very limited number of cases. It is not a universal means to be resorted to by those who are associated with the bereaved.

Conversely, one can highly esteem the dead person. This overestimating of the loss might seem to augment mental pain and grief when viewed in terms of a simple psychological model. But, to enhance the value of whoever a person identifies himself/herself with may be satisfying because knowing that the life of the dead person, brief as it was, was as fulfilling as anybody else's, and to have shared a life with the dead person could create positive feelings which, in turn, would alleviate the bereaved's mental pain and grief and promote the process of "resignation". Praise by others of the achievements of the dead, particularly by those with high social status, the holding of large-scale religious rituals, and the expression of social interest in the dead are effective means of increasing the value of the dead person. Funeral addresses by or letters of condolence from the mayor, members of parliament and other leading figures, joint memorial services, erection of a monument, public acknowledgement and the conferring of a decoration for martyrdom (if the death was of that nature), and extensive coverage by the mass media are all effective in that they function as a means of "sharing grief".

As for statement 3), if the facts are particularly cruel and are known to the bereaved (e.g., the bereaved has been confronted with the battered remains of a child washed away by a tsunami) virtually nothing can be done. Although we should see to it that bereaved persons face the facts in the least cruel manner wherever and whenever possible, at best salience can be decreased by "conversion" or by consoling the bereaved by reference to more shattering cases.

As for statement 2), if anxiety is related to "financial problems", providing the bereaved with or informing them of what external support is can be effective. This is where the administration, employers and relatives can contribute the most. In doing so, it is extremely important to emphasize the social notion that economic aid, however extensive, could never sufficiently compensate for the death of the loved one(s) nor heal the trauma of the bereaved. The bereaved have strong resistance to relating the death of a family member with monetary gain. As discussed later, malicious comments concerning such matters by people associated with the bereaved give great hurt.

If the anxiety felt by the bereaved is fear of living a "solitary life", he/she must be made aware of the presence of other family members, of friends and acquaintances and the possible future widening of these groups. Keeping in contact with other victims or the forming an organization of the bereaved also is effective. Communal visits to the grave and periodic reunions with other bereaved persons at joint memorial services also provide comforting experiences. Listening to the bereaved and showing compassion for their grievances (talking through) helps to reassure them that they are not alone. Occasional visits by a Buddhist priest from the neighborhood temple (or other clergymen) often are welcomed.

The bereaved may also harbor "anxiety for lack of social knowledge", feeling inadequate because of not having sufficient social knowledge and common sense and finding it difficult to get along with the rest of the society. These feelings are particularly common to those who have lost the head of the household and who presumably have depended heavily on the dead person at

times of social activities (e.g., funerals, weddings) or for completing various administrative procedures and who may therefore be ignorant of how to proceed in such matters. In such a case, family members would be totally at a loss from the day of bereavement and would experience grave anxiety for the future. Outside support and advice should be extended immediately after the disaster, and a system should be established so that the bereaved need contact only one person to obtain administrative assistance or advice.

Statement 4) relates to cognitive reactions: "...cannot understand the death," or "...cannot accept the death", and includes such feelings as "were it not for the disaster, he/she would have lived long", "why, of all people, should my family member(s) have had to die", and "we have done nothing wrong to deserve such a disaster."

In times of natural disasters, there are four ways in which the bereaved try to overcome this feeling of absurdity or illogicalness. First is "blaming others", by claiming the administration or private enterprise to be responsible. Second is "blaming themselves", regretting that "if only I had stopped him/her from going to work that day", "if only we had carried out our plan and had moved to a different place", or "I was so near him/her, but I could not save him/her". Third is "blaming the dead", accusations such as "I stopped him/her, but he/she didn't listen, or "he/she was careless". Fourth, there is "being resigned to fate" considering the disaster as "bad luck", or "an act of God".

In the case of "blaming others", the bereaved would blame persons or administrative organs to be responsible if the person(s) or organ is clearly known, and people associated with the bereaved would concur. The bereaved thereby provides a logical explanation for the death of the family member, and may alleviate mental pain and despair by "conversion". In most cases, as it is difficult to pinpoint just who is responsible for a natural disaster, this technique cannot be used in a planned manner because the effect of having a scapegoat, if available, is very brief. It therefore would be necessary to allow time to pass until the bereaved's feeling shifts to "being resigned to fate".

"Self-blame by the bereaved" and "blaming the dead" are the most serious psychologically. In natural disasters, neither the bereaved nor the dead are usually held responsible for the death; but, it is very difficult to have this fact accepted logically. It may help to point this out to the bereaved if the responsible party or organ is evident. Otherwise, one can only talk to the bereaved with patience and encourage that person to think differently and to "become resigned to fate". Advice from counsellors may be required in this case.

That the bereaved cannot accept the cause of the death of the family member and that the death is felt to be absurd means that they seek logical explanations that can be accepted. Such explanations should be given. When the responsible party or organ is known, this can be pointed out. If not, the bereaved must be persuaded that it was a "natural disaster".

For the bereaved to accept that it was an extraordinary event (so extraordinary that they must be resigned to fate), they must realize that everyone else around them holds this view. Special priorities and options should be provided such as establishing ad hoc organizations and systems both at the administrative level (relief headquarters, a consulting and information service section for the victims, special loans) and at the private level (flexible working hours and a special leave of absence offered by the company, provision of free services by religious organizations, permits to use various facilities in other geographical areas). Such measures, which are beyond the scope of conventional institutions and practices, are not only materially useful but help the bereaved to understand that the disaster was, indeed, an extraordinary event. Such preferential treatment is very effective as it also functions as a means of praising and highly evaluating the dead.

Securing a time and place within the community to allow the bereaved to fully mourn the dead [Hirayama, 1985] or providing the victims of similar bereavements the opportunity to talk to each other may function as a means of discharging grief. Such means therefore should be readily employed. It is also necessary to provide counselors who need not necessarily be specialists:

social welfare commissioners, priests, teachers, medical doctors and public health nurses can form an ad hoc counseling network.

(6) Eliminating Factors Which May Augment Psychological Pain and Grief

Factors may exist or arise which augment the psychological pain and grief of the bereaved. Eliminating such undesirable factors is essential in helping the bereaved to recover from mental despair.

This is the other side of the coin in terms of what has been discussed above. It means the elimination of things and matters that obstruct efforts to alleviate psychological pain and grief. It therefore may overlap what already has been discussed. Of particular importance are:

- (1) Avoidance of giving an impression that the efforts made in searching for the remains are inadequate--avoidance of very long breaks being taken during the search, callous speeches, laughter, etc. Extra care must be taken when the bereaved are watching the search activities. Even when recovery of the remains is obviously impossible, calling off the search one-sidedly would hurt the feelings of the bereaved. It is important to show that the utmost effort has been taken and to provide satisfactory explanations, thereby winning approval.
- (2) Letting the bereaved view the remains at any cost. No obstructions in this regard should be permitted, provided that when the bodily damage is severe, utmost care is taken in advance (by repairing the damage, etc.).
- (3) Prevention of importunate media coverage immediately following the disaster and excessive protective care by associates of the bereaved as these may obstruct the discharge of grief.
- (4) The funeral should not be avoided if the bereaved is/are capable of holding the rites because to play one's prescribed role in a funeral and similar memorial rites functions is a means of discharging grief.
- (5) Opportunities to show the bereaved that many people are grieving and sympathizing with them should not be overlooked. Such opportunities function as a means of sharing grief. For example, company executives should not object to employees attending or helping with the funeral or memorial services. The mass media should report as much as possible on the disaster. (Emotional coverage often the subject of criticism, is desirable in this instance).
- (6) Actions and events intended to compensate for the "emptiness of mind" felt by the bereaved should not be prevented or criticized unless such behavior causes them harm.
- (7) Rumors of anything the deceased had said or done when he/she was alive and which might debase the dead person must be squelched. This is a matter of social education. The mass media should take care that there is no behavior by reporters at funerals that could be regarded as slighting the dead. The amount and substance of coverage should not leave the impression of inequality among the bereaved.
- (8) Contributions, financial aid and insurance payments should be distributed equally. Insensitive rumors regarding such contingent income should be prevented. This also is a matter of social education.
- (9) Journalists should make reports of deaths which occurred in an excessively cruel or bizarre manner with concern for the feelings of the bereaved.
- (10) Malicious rumors that cause of death was related to the action of the bereaved or the dead person must be denied vehemently and stopped. This again is a matter of social education.
- (11) Lack of information needed to overcome post-disaster confusion may augment the grief of the bereaved. (They would, for example, feel that "everything would have gone smoothly if only my husband were alive"). Those associated with the bereaved or the administration must do their best to provide the bereaved with sufficient knowledge

and information about the natural disaster.

The eleven points described above follow the chronological process of grieving (1) (search efforts) to (4) (attendance at the funeral) which must be implemented immediately after death. The other points are of importance from after the funeral to the early period of recovery.

Most of our subjects reported that recovery from grief took three to seven years after bereavement. A wide range of individual differences were found; therefore, these points must be considered along with individual differences.

We have listed various measures to be taken for support extended by people associated with the bereaved, and now discuss the factors that function to enhance or diminish such measures. These factors are predetermined conditions and cannot be manipulated by those offering aid.

First are cultural factors, not only in macroscopic terms as at the continental or national level, but in terms of the local community. Differences in the "disaster culture" (including the concept of death and what constitutes disaster) are naturally manifested in the way people react to the death of a family member and the way in which they react to the support extended them from associates and officials.

Second, differences in community structure produce differences in the support activities offered by associates and officials, as well as in the expectations and reactions of the bereaved to such support activities.

Third, the beliefs and value systems of the bereaved themselves are important. Our survey showed that whether or not the bereaved had a set of values and firm beliefs on which to rely in critical situations had a significant effect on the process of overcoming grief.

Fourth, the characteristic features of the disasters themselves have an important role. There are differences in the psychological pain and grief of the bereaved and in process of recovery depending on whether an entire community or only part of it suffered the disaster.

Finally, we want to point out some of the methodological problems inherent in conducting such a survey. This survey was conducted approximately 10 years after both disasters. The passage of 10 years might have changed the memories the subjects had of the events; therefore, a retrospective report may lack reliability. In contrast, the emotional impact of close kinship bereavement, which would have colored interviews conducted immediately after death event, is absent. Rather, after the passage of some years, interviewees would have come to terms with their grief, enabling them to view their experiences objectively.

A second problem is sampling bias. We conducted interviews even with subjects who showed reluctance. Therefore, there was no volunteer bias. But, as people who had experienced extreme grief may have refused to participate in the interviews, the survey may not be entirely without bias.

In relation to this, one must take into account that the features of different types of disaster produce different grief removal processes. Our results show that the type of disaster and type of community produce distinct processes of coming to terms with grief. Follow up studies are necessary in order to make generalizations. In particular, subjects who experienced different types of disaster losses must be surveyed.

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