

Cultural Roles and Coping Processes Among the Survivors of the Hanshin-Awaji (Kobe) Earthquake, January 17, 1995: An Ethnographic Approach*

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INTRODUCTION

The Hanshin-Awaji (Kobe) Earthquake brought tremendous damages into the lives of the people in the cities that border Osaka Bay and the northern portion of Awaji Island in Japan (“Kobe port and business,” 1996). The earthquake, which struck the city of 1.5 million people at 5:46 in the morning on January 17, 1995, killed more than 5,000 people in the first 24 hours, set much of the city on fire, and nearly destroyed the world’s fifth largest port (“One year after,” 1996). According to the Asahi Newspaper of January 16, 1996, one year after the earthquake, the death toll had risen to 6,308 and two people were still missing (“The process of recovery,” 1996). In addition, a total of 38,495 people had been injured and the number of severely damaged homes and buildings had risen to 250,000. Mass media sources emphasize that this 7.2 magnitude earthquake was the strongest one which ever struck an industrialized urban city in the world.

Studies of the long-term psychological effect of disasters, including earthquakes, have emerged in the United States since the late 1980s. Quarantelli (1985) and other authors pointed out that these studies, however, include two different positions with regard to the psychological effect of disasters (Aptekar, 1994; Norris & Uhl, 1993; Quarantelli, 1985). One is the position that natural disasters have negative and chronic psychological effects (Glesser, Green, & Winget, 1981; Green et al., 1990; Lifton & Olson, 1976; Melick, 1978; Norris & Uhl, 1993; Shore et al., 1989). Another is that psychological symptoms following disasters are transient and do not have a last-longing effect (Derabek & Key, 1984; 1976; Smith, et al., 1986).

With regard to the two opposing positions, Quarantelli (1985) also discussed that there are two different research approaches that have dominated the post-disaster psychological studies. One is called a “social sponge approach” studied mainly by sociologists, and the other is the “individual trauma approach” conducted by mental health professions. Most of the findings in the social sponge approach showed that the mental health problems among disaster victims were characterized as transient symptoms and did not support the long-term effect of disasters. On the other hand, the studies by the individual trauma approach found negative and long-term psychological effects of disasters. Quarantelli (1985) concluded that the differences in the findings between these positions were due to different professional objectives, conceptions of disasters, basic models, research targets, and data gathering design.

Lack of cross-cultural inquiry on the mental health effects and coping mechanism of natural disaster victims should also be addressed. Kawanishi (1995) clearly pointed out that “coping mechanisms are closely connected to beliefs and assumptions about distress, which are the product not only of personal experiences but also of the culture in which the individual has been socialized” (p. 49). There are, however, quite a few disaster studies which include the assumption that human responses to disaster have linked patterns of response to collective values and cultural orientation (Lystad, 1990). There has also been little attention paid to the unique aspects of cultural roles in-

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cluding subcultural factors in any Japanese disaster mental health studies. Furthermore, de Silva (1993) discussed the impact of culture on the incidence and characteristics of post-traumatic stress disorder (PTSD) and recommended that future disaster research should treat cultural variables as factors in determining an individuals' reactions to stressful situations and influencing recovery from PTSD. In this sense, the past research methodologies and findings in the United States should be reexamined in the light of Japanese culture to conduct post-disaster studies of the Kobe earthquake.

THE PURPOSE OF STUDY

The purpose of this study is to investigate the cultural roles and coping strategies that positively or negatively influence the mental health status among the survivors of the Hanshin-Awaji (Kobe) Earthquake. First, the research aims to review the studies regarding two aspects: 1) the influence of cultural factors on the long-term adaptation process, and 2) coping mechanism among the survivors. Next, culturally-framed coping processes among the Kobe survivors are clarified and examined in the light of mental health effects. The study applied inductive qualitative research methods to explore the specific psychosocial factors and coping strategies that might influence the long-term relationship between disaster induced stressors and mental health status among the survivors. The findings will be utilized to develop more culturally sensitive social work practice which can better address the needs of the survivors.

LITERATURE REVIEW

Importance of cross-cultural disaster study

Cross-cultural research with regard to the socio-cultural roles in the adaptation process has been scarce. Marsella et al. (1996) suggested that "cultural factors may be important determinants of vulnerability to trauma, personal social resources for dealing with traumas, early childhood experiences, exposure to multiple trauma; premorbid personality; disease profiles, and treatment options" (p. 121). However, it is still at the beginning stage to formulate a theoretical model for the cultural influences upon the course of adjustment to sudden disruption and extreme stress. Here, five cultural issues that may impact on the adjustment process are reviewed.

The first issue is related to the subcultural aspects in Japanese culture. Subculture is defined as "a segment of society which shares a distinctive pattern of mores, folkways, and values which differ from the pattern of the larger society" (Schaefer & Lamm, 1997: 45). In a sense, subcultures may be based on common age, region, ethnic heritage, occupation, or beliefs. From the perspective of political science, Flanagan & Richardson (1977) argued that several Japanese subcultures such as region (rural or urban), ethnicity, religion, and job (Agrarian or Industrial) may significantly differentiate the voting patterns among Japanese. However, there has not been a consensus on subcultural aspects that may have an impact on mental health as well as the coping process among traumatized people. Japanese subcultures, therefore, need to be clarified in order to identify the multi-dimensional effects of cultural roles on the adaptation process of Kobe survivors.

Secondly, cross-cultural perspectives are important in disasters because the meaning of a disaster differs by cultural background. The meaning of a disaster includes survivors' unique connotations regarding the causes and effects of a disaster. Different connotations may substantially impact on the course of adaptation to sudden disruption. Some Japanese Buddhists, for instance, believe that the degree of damage from a disaster is determined by the number of good deeds that the ancestors of each victim did in the past. They assume that the more good things the ancestors did, the less descendants would face serious damages. Other Japanese, whose religious belief is in "Shinto," believe that an earthquake occurs as a result of "Tatari" (anger of god). In this case, the god usually

means “Susano,” a Japanese god that is believed to control all Japanese land (Kato, 1988). In addition to the belief system, cultural practices for dealing with extreme stress are also varied. Cultural practices including various rituals give a general meaning to traumatic events and cognitive frameworks (Kleber & Brom, 1992). In this sense, no disaster study can ignore the survivors’ different meanings of a disaster as well as the various cultural practices in conducting a culturally sensitive study.

Thirdly, it should be of concern that there has been a lack of cross-cultural studies for the diagnosis of Post Traumatic Stress Disorder (PTSD). Marsella et al. (1996) noted that “the measurement of PTSD remains a serious problem because the existing instruments often do not include indigenous idioms of distress and causal conceptions of PTSD and related disorders” (p. 121). Green (1996) also warned that certain symptoms may have an entirely different meaning in one culture than in another culture. Patients in non-western cultures, for instance, complain of a variety of diffuse physical symptoms, such as vague pains, headache, dizziness, and general somatic complaints (Kleber & Brom, 1992; Kinzie, 1981; Lee, 1988). Thus, it should be noted that “merely translating an instrument does not ensure measurement of equivalent syndromes” (Green, 1996: 343).

As the fourth issue, the social reception and political climate given to Kobe survivors should be emphasized in order to conduct a culturally sensitive study regarding long-term mental health effects of Kobe survivors. Kleber & Brom (1992) suggested that the impact of society on the traumatized people would significantly influence the course of psychological problems such as depression and PTSD. For instance, they pointed out that the psychological atmosphere in society after the Vietnam veterans returned was clearly traumatic and the social climate intensively impacted the psychological problems among them. They also cited the study of Ewalt (1981) and proved that “seventy percent of World War II veterans felt that they were well received upon their return; less than 50% of the Vietnam veterans had this impression” (p. 179).

In fact, feelings of detachment and isolation from Japanese society have also been reported by Kobe survivors. For instance, some of my colleagues informed that many people in Kobe complained of the fact that most mass media sources suddenly shifted their attention from the recovery issues of Kobe to the terrorism of the Aum cult group. The first terrorism by Aum group that killed 11 subway commuters in Tokyo by using Sarin gas happened on March 19, 1995, about three months after the earthquake. The article argued that the Kobe people felt isolated from Japanese society because mass media sources were no longer paying attention to their hardship. Moreover, people in Kobe whose houses are located in the land readjustment areas have revealed much frustration because they were forced to give up some portion of their own land by the order of the Japanese government (“Without consensus of residents,” 1996). Thus, the social climate surrounding Kobe survivors needs to be examined as the determinant in the intensity of psychological disturbance after extreme stress.

Coping mechanisms and disaster victims

Although few researchers have specifically investigated coping strategies in disaster studies, Gibbs (1989) discussed coping style differences and their influences on mental health of disaster victims in a literature review. According to his work, four aspects of the coping process should be considered to investigate their correlation with the degree of long-term mental health effects. These are 1) locus of control, 2) avoidance/denial vs. intrusion style, 3) active coping, and 4) religious mode

Locus of control refers the degree of victims’ belief in a predictable and controllable world. The breakdown in this belief is the major issue in the disaster experience among victims (Gibbs, 1989). In general, those victims who feel able to handle the outcomes of disaster would be less likely to be affected by a disaster than victims “who never believe that they could control outcomes, or lost this belief” (Gibbs, 1989: 503). Continuous confrontation with uncontrollable circumstances would also lead to a pattern of helplessness, loss of interest, emotional numbness, anxieties (Kleber & Brom,

1992). The pattern of helplessness has been well investigated by the research on “learned helplessness” (Coyne, Aldwin, & Lazarus, 1981; Seligman, 1975). That is, a continuous uncontrollable situation prevents people from taking in active coping process. Rather, passive and dependent reactions are generalized to other situation.

A cycle of denial and intrusion of traumatic memories is considered as a normal coping process among people who experience a traumatic event (Horowitz, 1987). Most of disaster victims are initially overwhelmed by the catastrophe but it is not rare that their cognitive process is finally able to adapt the outcome of disaster. Some victims are, however, obliged to stay in the condition of an emotional fluctuation between extensive denial and uncontrollable intrusion of traumatic memories. As a result, this fluctuation would prevent further cognitive processing of traumatic memories. Those memories eventually remain as active ones and continuously force victims to reexperience the traumatic event. This pattern is characterized as a flashback which is a typical symptom of PTSD. It is, therefore, crucial to pay attention to the pattern of denial or avoidance and intrusive thoughts in order to investigate the long-term mental health effects among disaster victims.

In general, active coping strategy, direct confrontation of the stressor and constructive efforts, “is more likely to change the situation, to lead to feeling of competence and effectiveness, and to generalize to later stress experiences” (Gibbs, 1989: 504). Gibbs (1989) clarified the value of active coping strategies by reviewing several empirical disaster studies. Those studies basically concluded that the victims who applied active coping styles such as reestablishing their property, attending community meetings, and engaging in social activity, have been less likely to be negatively affected by the crisis and keep better personal efficacy. Concerning disaster studies, it should be noted that active coping style has not been clearly defined, rather it could be varied in terms of the type of disaster, social resources, and cultural beliefs. In the Kobe case, it is beneficial to capture a variety of active coping styles and explore the factors which might significantly influence the application and effectiveness of active coping strategies among victims.

The use of religious belief as a coping strategy has been paid little attention. Kroll-Smith & Couch (1987) discussed that technological disasters are less relevant to perception as “acts of God” and that religion is less effective in coping with such disasters. There is not, however, any empirical research which specifically focuses on the effect of religious belief on mental health among disaster victims.

METHODOLOGY AND PROCEDURE

Sampling

A total of 20 adults (20 years old or older) were selected from Higashinada and Nagata area in Kobe city, where the most serious damages were brought about by the earthquake. The damages included intensive fire, a number of collapsed buildings, and the highest death toll (“One year after,” 1996). All subjects lived in either the Higashinada or Nagata area at the moment of the quake. All subjects also experienced the collapse of their residences that forced them to evacuate.

Stratified non-probability sampling, including availability sampling and snowball sampling procedures were employed in this study. These sampling procedures were chosen because the objective of this study is not to collect data from a large sample size but to investigate the prolonged psychological effect of the Kobe disaster by an ethnographic approach and face to face in-depth interviews. These 20 subjects were stratified by each of the following four factors: 1) gender (male/female), 2) housing condition (temporary housing/other housing conditions), and 3) family loss (family loss/none). However, an equal number of subjects was not obtained for each strata of these factors due to the lack of availability.

Subjects were recruited by the help of social networks and agencies such as Kobe Baptist Church, Kobe YMCA, Kwansai Gakuin University, Temporary Housing Care Center, Higashinada-

ku Mental Health Center, and Kobe Cooperative Association.

Characteristics of subjects

The mean age of all subjects was 60.6 (range 26–89 years). The mean age was relatively high because 13 subjects (65%) were recruited from the residents in temporary housing units, where 60% of all residents were retired elderly people. The ratio of gender difference was 65% of female (n=13) and 35% of male (n=7). Other characteristics including marital status, employment, housing status, injury, family death, duration of evacuation, and evacuation style are summarized in Table 1.

Method

This study employed an ethnographic approach with in-depth semi-structured interviews. This methodology was utilized in order to inquire into the long-term mental health effects of the Kobe Earthquake. An ethnographic approach was well suited for this study because the mediating variables which might impact the victims' psychological aspects are varied. The approach explores the cultural roles that impact the long-term mental health effects and stress-coping mechanisms that have been understudied in the disaster mental health field.

Table 1. Characteristics of subjects

Subject	Gender	Age	Marital Status	Employment	Housing	Housing	Injury	Family Death	Evacuation	Evacuation	Buried alive
	F=Female M=Male		M=Married S=Single W=widow	U=unemployment E=employment R=Retired	(Current)	(Before disaster)			Shelter (days)	Relative (days)	(hours)
#1	F	57	M	U	Rebuilt	Own	None		57	0	0
#2	M	71	M	E	Temporary	Rent	None		75	0	0
#3	F	25	M	U(lost)	Temporary	Own	None		1	91	0
#4	F	64	M	R	Temporary	Own	None		1	244	0
#5	M	73	W	U(lost)	Rent	Own	None	1(grandchild)	14	0	1
#6	F	61	M	U	Temporary	Rent	None		3	92	0
#7	M	58	M	U(lost)	Rent	Own	Serious	1(son)	0	0	0
#8	F	70	W	R	Rebuilt	Own	None		30	0	0
#9	M	78	M	R	Temporary	Own	Serious		0	0	5
#10	F	67	S	U(lost)	Temporary	Rent	None		56	0	3
#11	M	61	M	R	Temporary	Rent	None		217	0	0
#12	M	37	S	E(changed)	Rent	Own	Slight	1(father)	52	0	3
#13	F	68	M	R	Temporary	Rent	None		10	90	1
#14	F	80	W	R	Temporary	Rent	None		105	30	0
#15	F	33	W	E(changed)	Rent	Rent	Serious	1(husband)	0	575	4.5
#16	F	89	W	R	Temporary	Rent	None		55	38	1
#17	F	74	W	R	Temporary	Rent	None		107	0	0
#18	F	53	M	U(lost)	Temporary	Own	Slight	1(sister)	205	0	1
#19	F	73	W	R	Temporary	Rent	None	1(son)	68	0	0
#20	M	26	S	E(changed)	Rent	Rent	Slight	1(father)	60	0	0

Japanese nationals conducted the ethnographic approach through face to face semi-structured interviews, and the interviews were tape-recorded with the consent of the subjects. Data collection was carried out from August 1996 to March 1997. The interview took one hour and forty-five minutes on the average (range one-hour to two and half-hours). The recorded interviews were then transcribed for content analysis. A bilingual translator translated the results of the data analysis into English. The translated results were also checked by another bilingual social worker specializing in basic social work as well as a mental health perspective.

The specific questions were developed from past studies about the long-term psychological effect of natural disasters. They were also developed in conjunction with several survivors whom I met in Kobe. It should be noted that it was not a prior goal to ask and gather information about these questions. The questions were not meant to be rigidly adhered to. Rather, they were treated as a guide to explore the unique aspects of long-term mental health effects of the Kobe Earthquake. The subjects were allowed the flexibility to take the conversation where they wished, as long as it seemed to be relevant to the experience of victimization. By applying this methodology, this study aimed at validating whether those factors delineated by the questions were relevant to the prolonged mental health state, as well as finding out the unique coping processes significantly influencing the psychological state among survivors.

RESULTS

Based on the purpose of the study, the content analysis was conducted to delineate the long-term mental health effects and coping strategies among the 20 subjects. Unique coping strategies are specified by focusing on the following four aspects: 1) dynamics of coping process in post-disaster stage, 2) culturally-framed help-seeking behaviors, and 3) social comparison process. Each aspect is examined by the degree of effectiveness for the mental health well-being among the subjects.

1. Dynamics of coping process

Before reporting the findings about unique coping styles among the subjects, it is beneficial to note that coping processes of disaster victims need to be understood from the dynamics of two different factors; culturally-framed meaning attribution to an upheaval, and the locus of control. Lazarus & DeLongis (1983) summarized these factors as follows: “the meaning attribution to an upheaval” refers to victims’ unique perception of causes and effects of a disaster. “The locus of control,” on the other hand, means the degree of subjects’ belief in a controllable or predictable world.

The dynamics of the coping process is indicated in Figure 1. The dynamics include the complementary relationship between the locus of control and coping styles. For instance, it can be assumed that the less people can predict their daily life events, the less people try to apply active coping strategies. The opposite relation may also occur. In addition, the factor of meaning attribution is considered to play a mediator role for the complementary relationship. That is, it is considered that differences in victims’ perception to the cause and effects of a disaster may differ the coping process as well as the degree of controllability in the adaptation course.

The content analysis found several unique aspects of the dynamics that were profoundly influenced by Japanese culture. In the following section, the findings with regard to the dynamics of coping process are closely examined through cultural perspective.

Meaning attribution to the disaster —“Fatalism and Karma”

The analysis revealed that several aspects of meaning attribution can better be understood through cultural perspective. First, the analysis delineated a patterned relationship between Unmei

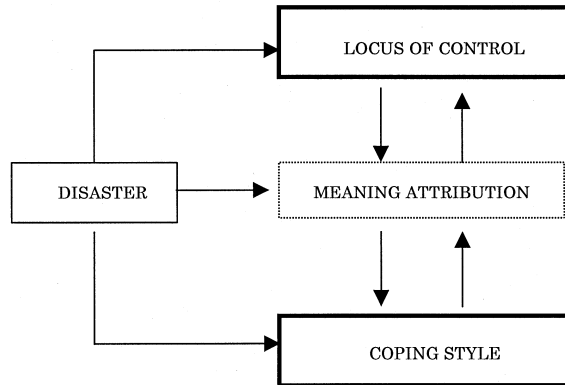


FIGURE 1. The dynamics of coping process among disaster survivors

(a fate) as a meaning attribution to the disaster and Akirame (obedience to the fate) as a coping strategy. In the interview, 90% of the subjects (N=18) attributed the meaning of the earthquake to a fate, and subsequently emphasized the virtue of obedience to the fate. Fatalism has often been described by the Japanese idiom, “Tenmei,” which refers to the virtue of patience to wait for a response from God, without fighting or controlling the adversity that happened in one’s life. In Japanese culture, fatalism is profoundly derived from Japanese Shintoinism in which all natural objects and phenomena are worshipped and considered as being gods (Kato, 1988; Earhart, 1982). In Shintoinism, people cannot control any fate but worship the gods surrounding them. This view, associated with the worship of the Emperor as descendent of the gods, developed into a feudal system founded in seventeen century in Japan (Davis, 1992; Kitagawa, 1990).

Mr. Yoshioka, age 78, also talked about fate as the meaning attribution to the disaster. He had been buried alive for 5 hours in debris and his family finally dug him out. He had also been hospitalized for two months because of multiple injuries. He expressed the fatalism in the following way:

I know a young girl who was killed by the first shock. A television hit her head and then, you know, she died. Her brother, however, was not injured at all, although he was in the same room. How could it happen to them? The only thing I can say is, “it was her fate.” I don’t know other words. Many people said that this kind of earthquake may happen once in a thousand years. We cannot predict one’s fate, so we cannot do anything but accept the fate... That’s only thing what we can do. Only god knows everything but we can do nothing.

Secondly, 60% of the subjects (N=12) attributed the meaning of the disaster to the concepts that are derived from Buddhist philosophy. The analysis indicated that the Buddhist philosophy mainly reflected the belief of karma. That means, “what happens now is a consequence of choices each individual has made in life up until this time” (Kagawa-Singer, 1993: 299). In Karma, for instance, it is assumed that people who have been keeping an adequate filial respect of their parents would have good luck and should be protected by their ancestors (Kitagawa, 1990; Kiyota et al., 1987). On the contrary, people who have not paid attention to the filial respect of their parents or relatives would be punished. The concept of Karma can also be broadened to the intergenerational perspective. Buddhists believe that any fate or luck should be determined by the manners of their ancestors. Consequently, any adversities may happen due to the bad manners of one’s ancestors when they were alive in this world.

Mrs. Nakanishi, age 61, lost most of her properties from the sudden disturbance. In addition, her husband was forced to abandon his construction business due to the loss of his equipment. In

the interview, she seemed to cope with her hardship by attributing the adversity to the concept of Karma. She described her connotation about the disruption as follows:

You know, our fate is already determined by our ancestors. What the grandparents did in the past determines the parent's life. Our life is also determined by our parent's behaviors. In a sense, our life is dependent upon what our grandparents did for their family and other people. I lost my house, and my husband also lost his business. We lost everything. But we survived, right? Not even injured. That means our ancestors did good things when they were alive.

Meanwhile, Mr. Moriyama, age 71, revealed the concept of Karma in a different way. He experienced the earthquake on his apartment which completely collapsed after the first impact. He referred to the Karma from the philosophy of reincarnation. He said:

In China, people say that our fate is reincarnated once every sixty-one years. If you want to live to 80 years old, then you have to think about what happened to you when you were 20 years old. I am now 61 and my fate has made just one cycle. Then I experienced the earthquake. When I was born, I had nothing, right? My current life is the same thing. I lost everything and have nothing left, like when I was born. But it is all right because my fate cycled once. That makes sense, right? You know it is my fate. There is nothing to worry about. Just obeying my fate. That's only my task to live here.

In addition to these comments, a total of 15 subjects (75%) used the words such as obeying our fate, accepting our destiny, waiting for a response from God, and holding a mass for our ancestors as the meaning attribution to the traumatic event.

The locus of control — "Helplessness"

Besides the aspect of meaning attribution, locus of control should also be taken into account as a significant factor which may impact the coping processes among disaster victims. As indicated earlier, the locus of control refers to the degree to which people can predict and control the circumstances following a disaster.

In this study, 95% of the subjects (N=19) showed the feeling of helplessness as the locus of control in their adaptation process. They expressed a variety of lost feelings that were associated with unexpected long-term changes. Those changes were related to employment status, community ties, family relationships, relationships to a friend, and housing styles. The analysis revealed that those lost feelings were not successfully coped with, rather they were more convinced of the fact that "there is no hope." 85% of the subjects (N=17) also presented intense anxiety about their future, including the issue of income, new housing style, resettlement process, unknown community, unemployment status, age, and "Toshi Kaihatsu Keikaku" (a city renewal plan). The feeling of helplessness was particularly obvious among the elderly subjects (60 years old or more) in temporary housing units (N=10).

Ms. Kitamura, age 74, confessed her desperate feeling with the comment that: "I should have died by the impact of the earthquake to avoid the current hardship." She lost her son (41 years old) as a direct result of the earthquake. She does not have any other family members or relatives whom she can depend upon in her future life. She talked about her hopelessness as follows:

I always say to myself, "why I didn't die by the earthquake?" You know, nobody care about old people like me. If I was crushed at that time, I shouldn't have faced this ordeal. It is "sesshou" (merciless). I will probably go to a public nursing home and then die there. That's fine. I don't expect anything. I just want to die.

Mrs. Kinjo, age 74, who was living in a temporary housing unit, clearly presented her helplessness regarding the future public housing facility. She said that her future would only be determined by the lottery for the assignment of public housing. She mentioned:

Everything was gone, my house, neighbors, and my town. What I can do is just to await the lottery for the public housing. But how can I live in the public housing? You know, it is going to be a high building, 10 or 11 floors. Before the quake, my neighbors were coming in and out, and I never felt loneliness. I didn't even lock the door of my house. So, I am scared to live in that kind of high building. In the building, once I close the door, nobody will come and talk to me. I am really scared but there is no way. I cannot choose any options because my income is just by Nenkin (social security). I am scared, indeed...

These comments of helplessness presented by elderly subjects should be viewed as a contradiction to the Japanese cultural norm that “family and community should respect elderly people and provide adequate care for them.” In fact, the public assistance program has been only focusing on the construction of public housing. There are only a few services that take into account the lost feelings as well as the quality of life among elderly victims. In this situation, the cultural norm has been tarnished through an artificial concept of the rebuilding process.

Overall coping styles – “Passive/emotional-focused style”

“*Shikata ga nai...*” 80% of the subjects in this study (N=16) used this phrase when they talked about their damages or future recovery process. “*Shikata ga nai*” refers to the feeling that: “there is nothing to do actively to deal with an adversity but just accept what happened to people.” The analysis found that the overall coping behaviors among the subjects to adapt to their damages and the following long-term changes clearly reflected the phrase, “*Shikata ga nai*,” passive / emotional-focused coping style. Mr. Yokota (61 years old), for instance, repeated the phrase “*Shikata ga nai*” and seemed to avoid taking any active actions for his adjustment. He talked about his depressive mood in the following way:

You know, whatever we say, “Shikata ga nai desho?” (Nothing to do, right?). Nobody can control the disaster. Many politicians said that they will do something for us but I don't believe anything. I cannot blame anybody, it's just Shikata ga nai....

In this study, four subjects (20%) reported that they used at least one of active/problem-focused coping strategies such as engaging in a volunteer activity, seeking a job opportunity, and participating in a community event. On the other hand, the 80% of subjects (N=16), including the 10 elderly subjects who can only depend upon the public assistance for their future life showed only emotional-focused coping strategies such as denial, avoidance, endurance, and reconciliation in the overall interviews. Moreover, the seven subjects who lost one of their family members also applied only emotional-focused coping styles such as denial, endurance, and avoidance to deal with the unexpected sudden death of family.

Based on the findings regarding the meaning attribution to the disaster, the locus of control, and coping style among the subjects, the analysis described the unique dynamics of those three factors as shown in Figure 2.

The result suggested that the dynamics of coping processes should be examined by the course of mental health effects. It should be noted that the dynamics of passive coping processes eventually brought about isolation issues for the subjects. It limited their accessibility to available social support networks as well as deprived them of the opportunities to cope with various traumas and psy-

chological disturbances. The isolation issue may also lead to negative mental health episodes among the subjects, such as loss of interests, poor appetite, low energy, hopelessness, numbing experience, nightmares, flashbacks, and depersonalization, which were described in the previous section. In the following, the dynamics of coping process is thoroughly evaluated in light of culturally-framed help-seeking behaviors.

2. Coping style and help-seeking patterns

The passive/emotional-focused coping processes can further be examined from the help-seeking perspective. The results show that those passive coping styles were well understood within Japanese cultural frameworks such as rigid family boundaries, the importance of self-sacrifice, and the virtue of endurance. The findings about culturally-framed coping styles are reported as follows.

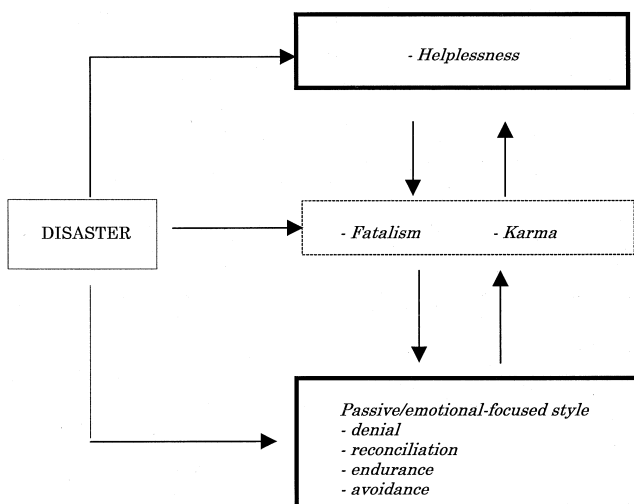


Figure 2. The dynamics of three factors: the locus of control, meaning attribution, and Passive/emotional-focused coping style

Rigid family boundary

First aspect is related to the boundary issue surrounding a family system. 55% of the subjects (N=11) mentioned that they somewhat hesitate in seeking assistance from outside of their family. In Japanese culture, a strong sense of belonging to groups is basically required, and in many cases their members identify themselves with the group or organization (DeMente, 1987; Hume, 1995). The importance of group conformity eventually brings about an emotional discrepancy between “uchi” (within the group) and “soto” (outside of the group). The preference for group conformity can also be applied to understand Japanese family relationships. Most Japanese assume that any support or care should be provided within the family, mainly by female members such as mother and wife (Fukutake, 1981; Kagawa-Singer, 1993). Asking assistance from outside the family is culturally inappropriate, even shameful for some Japanese. In this cultural framework, it is considered that those survivors who cannot receive adequate support from their family, tend to easily abandon coping with the impact of long-term changes without seeking adequate assistance from outside of the family.

Mrs. Maeda, age 80, who was living in a temporary housing unit, responded to the interview saying that she does not want to make herself nuisance to others by seeking a help, although she

complained a variety of physical problems such as headache, backache, and knee problems. She said that she has nothing to do but watch a television everyday. She lost her own house and was waiting for the lottery of public housing. In her responses, many episodes of dysthymic or depressive disorder such as chronic fatigue, hopelessness, and recurrent suicidal thoughts were also found. She described her hopeless situation in the following way:

I am already 80 and don't have any family. I sometimes feel so sad and become even angry at the quake, but whatever I say, "Shikata ga nai" (nothing to do). What I can do is just to give up everything. I am old enough and just want to die without making myself nuisance to others. How can I, an old woman, get support from "tanin sama" (unknown people)?

Self-sacrifice

"Kenshin" (self-sacrifice) was also found in the analysis as a significant coping strategy among 8 subjects (45%) who were all elderly (more than 60 years old). Kenshin is acknowledged as a virtue of Japanese culture, which is strongly derived from family-centered human relationship (Fukutake, 1981). In Japanese culture, people are basically expected to fulfill their responsibility in their group and family, rather than expressing their emotions and/or complaints (Hume, 1995). Even in a stressful situation, this tendency would be maintained in order to buffer the impact of an unexpected threat from outside and keep the harmony of belonging to the group and family.

Mr. Yoshida, age 58, lost his son (34 years old), by the collapse of his house. He also lost his job because of Asthma, which was induced by the tremendous dust from debris. He recollected the family relationship in the chaotic situation of the upheaval as follows:

I was indeed devastated, of course, by the sudden death of my son. When I found his dead body, I could not hold myself, you know, the shock was, well, I cannot explain... We, however, had to deal with many things, such as setting up a funeral, finding a shelter, and you know, just managing a lot of things. If I was down, then my wife would be down. I wanted to die at that time, but I had to face the damage because I have my family, my wife, and second son. Just do it, right? I have been trying to switch my attention from sad things to my family. Even now, I don't want to complain, rather I wish to keep my chin up. I don't cry and I don't want to complain anymore.

This comment clearly indicated that Mr. Yoshida has attempted to keep the responsibility as a father or a husband for protecting his family from the negative impact of the tragic event including the sudden death of his son. It can also be assumed that denial and avoidance are used in his coping process in order to maintain the harmony of family relationships after the sudden disturbance.

His mental health status, on the other hand, needs to be carefully evaluated. He reported an increased use of alcohol and sleep disturbance since the earthquake. He repeatedly blamed himself because he could not work for his family. He was even ashamed because he cannot fulfill his roles as the head of the household. He was also suffering from the intrusion of ruminative traumatic memories that were always related to the scene of his son's dead body. Based on this information, we must concern with his psychological problems such as somatic reactions, substance abuse, depression, and PTSD, in order to support his adaptation process to the disruption.

Relating to the self-sacrifice issue, Mr. Ishida, age 64, revealed an intensive guilt feeling regarding the death of his granddaughter (9 years old.). He was sleeping in the same house as she at the time of the earthquake. He was buried alive for a while until neighbors finally rescued him. Although there was no way to save her at that chaotic moment, he repeatedly expressed his guilt feelings with the comment that: "I could not save her life." He has been blaming himself while refusing to seek any psychological support. His guilt feelings are presented in the following comment:

I couldn't save her (granddaughter's) life. I still think about how I could have helped her at that time. You know, I was her grandfather, but I couldn't save her. I know it was impossible to rescue her but I should have done something for her. I should have died instead of her. I should have died, you know, I am already 64. She was just 9 years old! I am still so sorry, why I couldn't help her.... All I can do now is just to pray for her and die without making nuisance of myself to my family and others.

The results suggested that the guilt feelings and the self-blaming pattern significantly affected his depressive mental health status. He has lost about 15 pounds since the disruption, and has reported chronic fatigue while repeatedly saying, "I don't want to do anything." His mental health status therefore needs to be closely assessed by taking into account the diagnosis of depressive disorder and other affective disorders.

Endurance

"*Gaman*" or "*Nintai*" (endurance) should also be paid attention to as an emotional-focused coping strategy. Indeed, 70% of the subjects (N=14) used the word, "*Gaman*" or "*Nintai*," for coping with their lost feelings and the subsequent long-term changes in their current circumstances. It is assumed that both American and Japanese cultures require that "men be stoic and moderate their emotions with stern self-control" (Kagawa-Singer, 1993: 297). In Japan, however, endurance has specifically been acknowledged as the virtue of a mature adult for both men and women. "*Yamato Damashii*," "*Samurai Damashii*," and "*Nintai*" are all Japanese idioms which refer to the virtue of endurance (Kagawa-Singer, 1993; Hume, 1995).

The comments of Mrs. Nakanishi (61 years old) clearly indicated the endurance as a coping strategy. The analysis of her response, however, implies that her strategy may lead to various complaints such as chronic headache and fatigue, that have emerged since she moved to the temporary housing unit. She revealed her hardship in the following way:

I don't want to depend on others. I cannot blame others, right?. The damage is tremendous but I know the war (World War II). We lost everything at that time. We Japanese have built up here and we can do it again. Just endure and wait. I don't want to complain about anything but just endure it. Then, I believe some chances are coming to us...

These culturally-framed coping patterns, such as rigid family boundary, self-sacrifice, and endurance, would basically be accepted by most of Japanese people as culturally appropriate attitude in a stressful situation. This study, however, found that these coping patterns did not work effectively for the long-term adaptation process, rather they brought about an isolation pattern by preventing the subjects from taking active help-seeking behaviors. As a result, the coping patterns made it difficult for them to access to adequate social resources and eventually deprived them the opportunities to ventilate their traumas.

3. Social comparison process

The most important finding in this study is about the process of social comparison among the subjects. Social comparison theory, originally formulated by Festinger (1954), has been investigated by many laboratory studies during last three decades. Social comparison has also been acknowledged as an important coping process particularly for people who face stressful events (Taylor et al., 1990). The basic assumption in the social comparison theory is described as: "people prefer to evaluate themselves using objective and nonsocial standards, but if such information is unavailable to them, they will compare themselves using social information, namely other people" (Taylor et al.,

1990: 82).

Social comparison generally includes two different processes such as upward comparison and downward comparison. Upward comparison refers to the process where people tend to compare themselves with others whose situations or abilities are slightly better. On the other hand, people sometimes compare themselves with others less fortunate. This comparison process is called as downward comparison. Taylor et al. (1990) indicated that an upward comparison provides people with two different types of information, one is the positive aspect; “it is possible for you to be better off than you are at present” (p. 83), and the other is the negative aspect; “you are not as well off as everyone” (p. 83). Those who focus on the positive aspect of upward comparison can feel better about themselves, but those who only see the negative aspect may feel worse. In the same way, a downward comparison provides people with two different information, one is the positive aspect; “you are not as bad off as everyone” (p. 83), and the other is the negative aspect; “it is possible for you to become worse off than others” (p. 83). Those who focus on the positive aspect of downward comparison can feel better, but those who only pay attention to the negative aspect may keep more negative feelings about themselves. Thus, emotional responses by both upward comparison and downward comparison processes may be determined by “which aspect of the information one focuses on” (Taylor et al., 1990: 83).

The relationship between the type of social comparison (downward or upward) and the effects of emotional reaction (positive or negative) is summarized in Figure 3. The content analysis found that most of the subjects revealed both upward and downward comparison as their coping strategies. The comparison process can also be examined from a cultural perspective. Detailed results are indicated in the following section.

		Social Comparison	
		Upward	Downward
Emotional Reactions	Positive	<i>It is possible to be better off than you are.</i>	<i>You are not as bad off as everyone is.</i>
	Negative	<i>You are not as well off as everyone.</i>	<i>It is possible for you to become worse off than others.</i>

Figure 3. The relationship between the type of social comparison and emotional reaction. Formulated based on the content of Taylor, S. E., Buunk, B. P., & Aspinwall, L. G. (1990). Social comparison, stress, and coping. *Personality and Social Psychology Bulletin*, 16 (1), 83.

Downward comparison

85% of the subjects in this study (N=17) used a downward comparison as a coping strategy for adapting to the disaster-induced life changes such as unemployment, property loss, bankruptcy, and family loss. The content analysis found that all of the 7 subjects who lost one of their family members also applied the downward comparison process to cope with their feelings of loss. Moreover, it should be noted that none of these 17 subjects revealed the negative aspect of the downward comparison. In other words, none of them expressed any fear or anxiety they would become worse off than other people who were less fortunate. Rather, those subjects seemed to use a downward comparison for positive purposes, such as self-evaluation—evaluating the appropriateness of their emotional reactions, and self-enhancement—regulating their emotional reactions to negative circumstances.

Mr. Yoshida (58 years old), who lost his son, used the downward comparison in order to regulate his emotional arousal. He clearly commented in the interview as follows:

...I always think that our situation is still better than other people who met more serious hardship. You know, we lost my son, and that devastated my family and me, but I feel lucky because my son was cremated just two days after the earthquake. Some people could not cremate their family members because of the chaotic situation. Others just died from the fire. Their families could not find even a piece of bone. We have to appreciate our luck....

Mr. Suzuki (64 years old) also used downward comparison to deal with the loss of his granddaughter: He responded to the interview in the following way:

.... When I went to the cemetery, I was surprised that there were so many graves of people who died on January 17, 1995. Some tombs indicated three or four names each. You know, three people died in a family... Thinking about that, I have to say we are still lucky compared to those people...

The results clearly illustrated that the downward comparison was used to control subjects' emotional arousal after talking about their hardship as well as traumatic experiences in the interviews. In fact, these comment of downward comparison were functioning to summarize or reconnotate their recollections. As a result, the downward comparison could effectively control their emotional reactions as well as make it possible to further proceed with their retrospection process. This finding corresponded with the results of several laboratory studies that showed the positive effects of downward comparison on the regulation of emotional disturbances.

Upward comparison

Similar to the downward comparison, upward comparison was also found as a coping process among 70% of the subjects (N=14) in this study. 86% of them (12/14), however, only revealed the negative aspect of upward comparison. That is, they denied the possibility to be better off than their current situation; rather they tended to express various negative feelings such as anger, disappointment, and envy of other people whose circumstances were better off than their total damages. The analysis found that those negative feelings were revealed toward the following four groups: 1) the people who did not experienced the earthquake, 2) the people in the city of Osaka or Tokyo, 3) the people in Kobe metropolitan area who received no damage, and 4) the people who received only minor damage.

The analysis of upward comparison process is specifically reported by focusing on the following three aspects: 1) anger to non-damaged people, 2) emotional discrepancy between different social classes in Kobe, 3) emotional gap between the subjects and non-damaged or minor-damaged people, and 4) isolation issues among the subjects.

First, 11 subjects (55%) clearly revealed their anger toward people who did not experience the earthquake. Mrs. Arita (89 years old) who lived in a temporary housing unit lost all of her belongings. The following comment of Mrs. Arita presented an unreasonable anger toward the non-damaged people who live in other cities:

I feel angry with people in Osaka. Why only Kobe was damaged? They didn't get any damage. You know they are walking around as if there was not the earthquake. I really want them to experience an earthquake once. Then they would be able to understand us.

Secondly, the results pointed out that the negative aspect of upward comparison was more obvious among eight subjects (40%) who were living in "Shitamachi" (downtown area) of Kobe. They were furious with the people in "Yamanote" (uptown area) who were damaged little by the disruption. Indeed, the earthquake discriminately brought tremendous damages into only Shitamachi. Electric service around Yamanote, for instance, was restored within 24 hours after the earthquake

hit; in contrast, it took more than three months for the full-recovery of electric service in Shitamachi. Death toll and fire damage were also localized in the Shitamachi area. Mr. Aikawa revealed his anger toward the people in Yamanote as follows:

I'll never forget the night view of Yamanote on the evening of the earthquake. It was, well, like heaven and hell. We were indeed in the hell without food, water, or any life lines. It was unfair; you know, we, working class, were totally damaged and sleeping in a shelter, but the rich guys were just staying at their homes watching television!

As expressed in the comment, the negative upward comparison process was also associated with social class. “Yamanote” is characterized as upper-middle or white color district, and “Shitamachi” as lower-middle or blue color area. In addition, most of the segregated communities, named “Buraku” are located in “Shitamachi.” In general, there are several differences in community ties, relationships with neighbors, behavioral patterns, boundaries of each household, types of jobs, and the ratio of welfare dependency between these two areas. In the course of the adjustment process, it should be of concern that the upward comparison may accelerate the emotional discrepancy between these two groups in the context of potential differences in subculture and social class.

Thirdly, 12 subjects (60%) pointed out an emotional gap which can hardly be spanned between damaged people and non-damaged or minor-damaged people. In some cases, the emotional gap was revealed in a covert way. Mr. Misaki (67 years old) expressed an irrational emotional gap with those people who did not experience the earthquake as follows:

One day, my colleague who lives in Tokyo came to my place. He just said, “Kobe is a very clean city, isn't it?” I was shocked by the comment and then realized that for strangers, Kobe looks like a clean and beautiful city because many houses and buildings have already been rebuilt. But for me, as you know, this is not our Kobe. It's not my home town anymore. I felt very lonely when I heard the comment. I now realize that they can never understand our feelings of loss...

Mrs. Nomura, age 53, was furious with a variety of misunderstandings about her situation expressed by other people. She was deeply disappointed by the following comment of her co-worker:

One of my co-workers who lives in Osaka asked me like, “Are you still living in a temporary housing unit?” That hurt me. Really hurt me. You know, it takes just 30 minutes to go to Osaka, but the reality is totally different. For them (people in Osaka), the disaster is just a past event. They don't care about our life. They are never ever able to understand our situation.

Mrs. Tsuda also expressed her furious feelings toward minor-damaged people. She was 33 years old and lost her husband by the earthquake. She was with him in the same room during the sudden disruption. Her husband was, however, killed by a traumatic head injury. She also sustained a serious back injury. She was eventually hospitalized for almost three months. She revealed the emotional gap with minor-damaged people as follows:

One of my friends said to me, “If I were you, I could not do anything except be in deep sorrow. You are doing great.” I was so embarrassed by that comment. I was almost screaming that “you don't know my sorrow simply because your husband is still alive. I am doing many things for my kids but it is just because I have to do so. You have your husband! You'll never understand me!”

As the fourth aspect of upward comparison, 12 subjects (60%) reported that they intend to avoid contact with those non-damaged or minor-damaged people because of the emotional gap. Mr.

Yokota (61 years old) who lived in a temporary housing unit said that he just gave up sharing his emotions with other people who do not have the same experiences. He said:

It is just in vain. It is no longer possible to share our hardship with those people who didn't experience the earthquake. You know, it's impossible. The more I try to explain my experience, the more I am disappointed simply because they don't get it. I don't want to talk about it anymore....

Based on the analysis of these four aspects, the process of upward comparison can be summarized in Figure 4. This process made it difficult for the subjects to open up their emotional reactions to a variety of adaptation tasks, and prohibited them from talking about their hardship. It is apparent that this upward coping style played a significant role in facilitating the feeling of isolation, "akirame" (reconciliation), and hopelessness, all of which might lead to the negative mental health episodes of depressive disorder, affective disorder, somatoform disorder and other psychological disturbances.

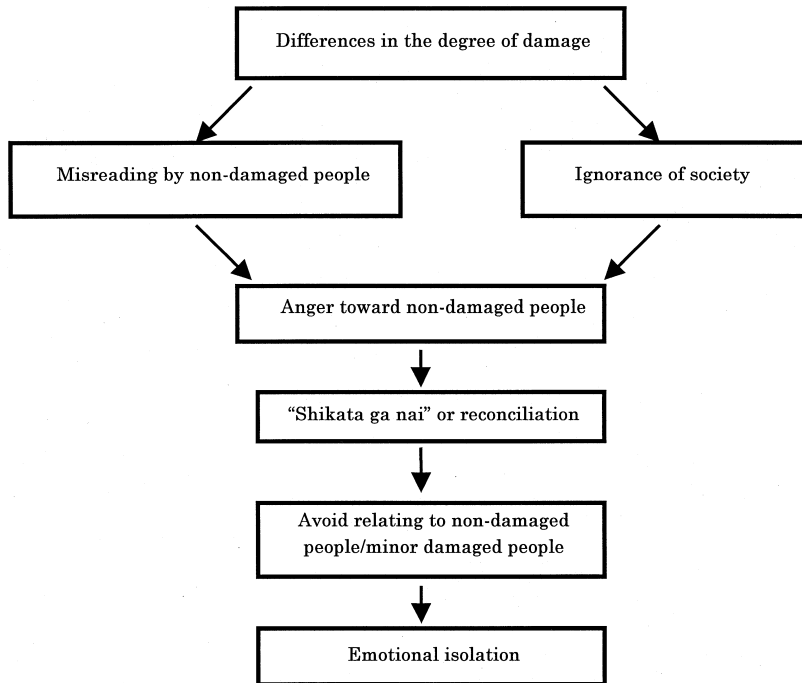


Figure 4. Negative pattern of upward comparison among the subjects

DISCUSSION

It is important to emphasize here that this study applied an ethnographic approach based on inductive research paradigm in order to explore the cultural factors that may influence the adaptation process and the long-term mental health effects among Kobe survivors. This study, therefore, did not aim at addressing the issues of variability and generalizability with regard to the mental health state among survivors. In addition, since this study does not allow us to test the results on representative samples of a population, the results may not be convincing enough to impact policy makers to act on them. Rather, the value of the findings in this study should be viewed as an initial step in the development of more culturally-informed studies as well as social work methodologies

that might facilitate positive adaptation processes among survivors. In this section, several implications derived from this study are summarized by discussing the following two aspects: 1) implications for future research on long-term mental health effects and 2) implications for social work practice.

Implications for future research

The narrative findings in this study should be utilized as a means of gaining socio-cultural insights to be incorporated into future research design and instruments. Concretely, the following three aspects are identified to facilitate further research on the long-term mental health issues among Kobe survivors.

First, the effectiveness of the coping styles delineated in this study should thoroughly be investigated in the light of the mental health status among the survivors. That is, future research needs to be designed to examine the degree of correlation between culturally-informed coping mechanisms and mental health status. To facilitate the research, it is beneficial to utilize the findings in this study in order to develop culturally-sensitive instruments. Specifically, the findings suggest that the following cultural and contextual issues should be taken into account to formulate the instruments: 1) religious meanings to the disaster including fatalism and Karma, 2) sense of control in the new community including the issues of neighbors relations, new housing style, income, city renewal plan, employment status, and the aging process, 3) self-sacrifice or self-blaming pattern, 4) family relationships including responsibility issues, and 5) the virtue of endurance.

Secondly, this study remains to clarify the relationship between denial coping style and PTSD level among survivors who lost a family member. It cannot be assumed that a cycle of denial and intrusion automatically brings about pathological outcomes, rather it is normal to be initially overwhelmed by the intensive impact of disaster and to attempt to keep thoughts of the event out of awareness (Horowitz, 1987). The results of this study, however, revealed that all of the seven subjects who lost one of their family members revealed a pattern of denial and intrusion. Some subjects even showed extreme fluctuation between extensive denial and uncontrollable intrusion of traumatic loss to their family in the long-term adaptation process. The findings, therefore, imply that further research needs to be conducted to study the association between PTSD level and denial coping style, particularly among the survivors who experienced the loss of a family member.

Thirdly, the results indicate the importance of focusing on the effects of the social comparison process on the mental health status among survivors. In fact, social comparison has been given little attention as an adaptation process in disaster studies. Although social comparison theory, as initially formulated by Festinger (1954) and later investigated by many other researchers, has provided useful information for understanding the adaptation process of social comparison, most of those studies were based on laboratory investigations, not on field studies. As Taylor et al. (1990) emphasized, laboratory and field studies of social comparison processes have differed from each other in numerous ways that influence the nature of their respective findings. In addition, laboratory studies are different from field studies in “how social comparison is operationalized, what attributes are evaluated, how ambiguous the comparison environment is, whether or not target individuals are available for comparison, and exactly which kinds of comparative activities are undertaken (e.g., self-evaluation vs. self-enhancement)” (Taylor et al., 1990: 86).

The findings regarding the upward comparison process pointed out that some survivors may reveal negative feelings toward less damaged people. In addition, some of them may also tend to isolate themselves from relating with those less damaged people in order to avoid facing an emotional gap that prevents them from sharing their hardship and emotional difficulties. Furthermore, the mental health effects of downward comparison process should be investigated as only a few laboratory studies have focused on the effectiveness of the downward comparison under threatening conditions (Wills, 1981; 1987). The future research, therefore, needs to examine how both downward com-

parison and upward comparison mechanisms affect the course of mental health effects in long-term stressful circumstances among the survivors. The research also needs to closely look at other variables, such as the degree of damage, family loss, social-economic status, community, and other demographic factors including age and gender differences, which might significantly influence the social comparison process.

Implications for social work practice

This study indicates several implications for future social work practice on the behalf of the long-term adjustment for Kobe survivors. Many disaster studies have already suggested that a key factor in post-disaster reactions is to help survivors find some kind of meaning and sense of control in a world that has proved unpredictable and uncontrollable (Gibbs, 1989). In this perspective, active coping styles need to be more emphasized to deal with various changes caused by the sudden trauma. One key issue in social work practice, however, should be emphasized here that is: social workers need to respect an individual's coping styles based on their cultural framework. As the findings indicated, the meaning attribution to the disaster and the following coping styles were profoundly related to survivors' cultural beliefs. Only encouraging the survivors to apply active coping strategies would, therefore, result in an artificial approach that is merely based on the stereotyped assumption that problem-focused coping style is somehow more effective in dealing with adversities than emotional-focused coping style. Rather, the findings in this study should be utilized to help social workers be aware of cultural factors that may influence the adaptation process of survivors. This attitude will eventually lead to the culturally-sensitive social work services that can include comprehensive cultural aspects including religious connotations, role expectations, group dynamics, family relationship, and other value systems.

Besides the importance of a culturally sensitive approach, this study also suggests two practical issues that might facilitate more effective social work services. The first is that the out-reach style needs to emphasize more to work with elderly survivors in temporary housing units. The findings warn that many of the uncontrollable issues surrounding them may cause a pattern of "learned helplessness," in which survivors tend to lose their interests and avoid seeking any support, even though valuable resources are available for them. In this situation, out-reach programs should be encouraged as a primary approach for social work practice. Case management should also be included in the programs because it can help survivors access useful social networks as well as realize the possibility of regaining a sense of control in the long-term adjustment process.

Secondly, social workers need to seek opportunities to formulate various self-help groups that can provide debriefing experience. From the findings about the negative effects of upward comparison process, it is assumed that some survivors may tend to suppress their emotions and eventually isolate themselves from the recovery process. In order to change the negative pattern, the cohesive relationship in a self-help group might help those survivors break through the fear of emotional gap and provide a valuable opportunity to share their feelings of loss with each other.

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ABSTRACT

The purpose of this study is to explore the cultural influences on the long-term adaptation process, as well as the mental health status among the survivors of the Hanshin-Awaji (Kobe) Earthquake which occurred on the 17th of January, 1995. Based upon the inductive research perspective, an ethnographic approach with in-depth semi-structured interviews was employed in this study. Two years after the natural disaster, face-to-face interviews by Japanese nationals were conducted with 20 survivors, who received serious damages such as family death, collapse of residence, and loss of property. The results found several unique cultural roles that might impact on the survivors' coping strategies and adjustment processes. These cultural roles include: fatalism, the concept of Karma, rigid family boundary, self-sacrifice, endurance, and social comparison processes. These factors also played a significant role for the process of meaning attribution to the disaster and the survivors' help-seeking patterns. This study also summarized the future research implications as well as clinical implications in order to develop more culturally-sensitive social work methodologies to support the long-term adjustment process of the survivors.