



Social Workers Involvement in Taiwan's 1999 Earthquake Disaster Aid: Implications for Social Work Education

Yueh-Ching Chou, Soochow University Taiwan

On September 21, 1999, a strong earthquake devastated Taiwan's central areas and claimed more than two thousand casualties. Social work roles in the disaster aid were surveyed with standardized questionnaires six months after the earthquake; in addition, interviews of the key informants, documental research, focus groups and open-ended questionnaires were utilized to collect qualitative data. The study found that social workers had significant roles and functions in both rescue and recovery stages especially in linking the victims' needs with resources. Social workers, including from public and private sectors as well as from campuses including the faculties and students of social work departments, have been deeply involved in helping the victims. Regrettably, most Taiwanese social workers participated in the rescue aid with limited training in disaster aid; social work practice in disaster aid is not included in current curriculums of college level. This means that social work roles and functions in the disaster aid process have not been fully realized by Taiwan's society and professional education.

In the early morning of September 21, 1999, the 23 million inhabitants of Taiwan were devastated by the strongest earthquake to strick the island in this decade. The earthquake measured 7.6 on the Richter scale. The epicenter of the earthquake was located in this mountainous central region of the island near the town of Chi-Chi in Nantou County, approximately 90 miles south of Taipei. Taichung and Nantou counties were devastated, while areas of Taipei City, Taipei County, Miaoli County, Taichung City, Changhua County, Yunlin County, and other counties and cities also suffered severe property damage and heavy human casualties. The earthquake was named "Taiwan's Chi-Chi/Ji-Ji Earthquake" in English (Wu, Meyer and Chen 1999) while local people in Taiwan called it "the 921 Disaster".

According to the latest official data released by the Minister of Interior of Taiwan on October 11, 1999, 2,321 were dead, 8,739 were hospitalized, 39 were missing, 40 were buried under the debris, 4,965 buildings and 11,388 households were completely destroyed. The earthquake also caused more than 600,000 people to become homeless or to live in damaged houses. Damage was estimated at 14 billion U.S. dollars (Ministry of Interior, 2000; Department of Interior, U.S. Geological Survey (USGS), 2003). Facing such a catastrophe, helping professionals including social workers devoted themselves to the rescue efforts. Yet, questions, such as how have Taiwanese social workers responded and what implication does this event have for future social work education, are yet to be answered. This paper investigates social workers' involvement in the disaster relief and explores social work roles and functions in the rescue and recovery stages of the earthquake. The implications, from the findings, for social work education in dealing with disaster crisis and relief services will be explored.

Social workers joined the rescue effort as rescue team workers when a devastating earthquake hit Taiwan on September 21st. In the immediate aftermath, social workers, coming from all cities and counties throughout the island and from the both public and private sectors, accompanied the victims waiting for their family members to be rescued from collapsed buildings, digging out corpses from under debris, conducting funerals for the dead, searching for shelters and transportation between the temporary shelters and the wreckage, collecting and distributing food and supplies to the victims. Social workers further responded with consolation of the injured and families of the dead, restoration of transportation, collection of disaster information, seeking out vulnerable populations, linking victims' needs with resources, empowering other volunteers during the period of emergency (Family Well-beings Association, R.O.C.1999). For instance, after the earthquake hit at 1:47 a.m., some social workers who worked in local authorities such as in Taipei City began arriving around 4:00 in the morning at the stricken areas and joined the military, fire departments and private relief organizations (Chang and Lin 1999). Besides, social workers were representing the government to take charge in delivering the services such as "delivering cash disbursements", "temporary housing for the victims", "mortgage loans for those displaced" and counseling to prevent the victims committing suicide (Nantou County Government 2001; The 921 Earthquake Post-Disaster Recovery Commission, Executive Yuan 2000; the Taiwan Association of Social Workers 2001). Six months after the earthquake, social workers from both public and private sectors have added to their existing roles, functions and service programs which fall into two phases. The first phase is rescue and resettlement; and the second is reconstruction. In this study, social workers further identify their difficulties during the disaster aid services and their experiences with other rescue teams.

The researcher of this study, herself, also went into the stricken areas to assist in linking social services with the needs of the people during the emergency phase. In the recovery response, quite a number of resettlement and reconstruction measures were formulated. The researcher would like to take this opportunity to further explain what the social workers have done.

Dodds and Nuehring (1996), Webster (1995) and Banerjee and Gillespie (1994) have identified that social workers are an important part of all phases of the disaster management cycle, such as formulating and/or implementing preparedness plans, response plans, recovery plans and mitigation. Social workers can assist organizations that serve clients in the community to establish preparedness and mitigation plans. They can address the special needs of clients and carry major responsibility for the relief needs of vulnerable groups including individual persons and families living either in the community or in temporary shelters during the response period (Zakour1996; Cherry and Cherry 1996; Webster 1995; Shahar 1993; Phifer and Norris 1989; Seroka, Knapp, Knight, Siemon and Starbuck 1986). Furthermore, social workers are an important part of disaster recovery plans, including at the micro, mezzo, and macro levels, such as organizing a community's recovery, searching out benefit programs, writing grants, and advocating for government programs, etc. (Sundet & Mermelstein 1996; Dodds and Nuehring 1996; Cooke 1993; Dufka 1988).

According to the above literature, social work functions in disaster aid can be summarized as follows:

1. Support for individuals and families;
2. Link individual's needs and resources and help the clients to access resources;

3. Prevent severe physical and mental problems;
4. Prevent individuals, families, groups, organizations, communities from breaking down;
5. Intervene to change micro and macro systems to improve clients' well-beings.

Taiwan lies in a quake zone. The last century, except for the earthquake on September 21, 1999, the ten biggest quakes measured 5.8 to 7.3 on the Richter scale; and they have caused between 54 to 3,276 fatalities (Taipei Times, September 22, 1999). Unfortunately, social work education programs and practice have not created a specialty focus on disaster programming. Doubtlessly, social workers have important roles in all phases of the disaster management phases including the emergency relief and the recovery, preparedness and mitigation plans. The results of this study would, therefore, be important for social workers to know what is the extent of the assistance programs that they have delivered in disaster aid. In addition, the findings would be useful to improve social work education, practices and research on disaster aid in Taiwan.

Methods

Social work roles and functions in the disaster aid were surveyed from March to April in 2000 with standardized questionnaires, six months after the earthquake. A random sample was drawn from a sampling frame based on the registered members of the two largest social workers' associations in Taiwan, the Taiwanese National Association of Social Workers (TASW) and the National Association of Medical Social Workers (NAMSW). Social workers received the questionnaires approximately 6 months after the earthquake. The questionnaire covered demographic data of social workers including the characteristics of her/his working settings, gender, age, professional background, the length of working experiences, their start date and the number of working days of her/his involvement in the disaster aid. Established measures were utilized to examine the roles, functions, services programs that social workers administered in the rescue and reconstruction stages of the earthquake. The remaining items required the participants to indicate on a 4-point visual analogue scale what they experienced with other service workers and the difficulties that they met during the two phases. Lastly, there was an open-ended question to explore what the respondents identify that social work can do in the preparedness and mitigation plans.

A 20 percent sample of the 2,116 social workers in the frame were selected, and a total of 423 social workers were invited to participate in the mail survey. After a follow-up mailing with a new copy of the survey questionnaires, this mail survey had a 48.2 percent response which gave a total number of 204. The sample included 39.7 percent from public sectors and 60.3 percent from private sectors, such as nonprofit organizations, private medical centers, religious organizations, and educational institutions. The respondents were from all cities and counties throughout Taiwan; and almost 30 percent (29.5%, n=59) of social workers were from Taipei city. 40.9 percent of the respondents had been working for 0 to 5 years, while 27.1 percent had been working for 6 to 10 years. The sample was 82.3 percent female (n=167) and 17.7 percent male (n=36). 41.7 percent (n= 85) of the sample were from age of 30 to 39, while 27.5 percent were from 40 to 49. For this study, 70.9 percent of the sample reported having had a social work professional degree and 64.2 percent of the sample had completed a college level of education. Before the September 21st, only 10.8 percent of the sample had been involved in disaster aid services such as flood or air-crash. On the contrary, 89.2 percent of the sample had never participated in disaster relief. Before the earthquake, only 6.4 percent

had been trained to work on disaster aid services while 93.6 percent of the sample had never been trained (see Table 1).

Table 1: Participants' Demographic Characteristics

Characteristics	n	P(%)
1. Work settings (N=204)		
(1) Public sector	81	39.7
(2) Private sector	110	53.9
(3) Others	13	6.4
2. Location (county/city) of work settings (N=204)		
Taichung City	16	8.0
Taichung County	9	4.5
Taipei City	59	29.5
Taipei County	18	9.0
Taitung County	2	1.0
Tainan City	11	5.5
Tainan County	6	3.0
Ilan County	8	4.0
Hualian County	5	2.5
Nantou County	5	2.5
Pingtung County	5	2.5
Miaoli County	2	1.0
Taoyuan County	8	4.0
Kaohsiung City	14	7.0
Kaohsiung County	8	4.0
Tunlin County	7	3.5
Hsinghu County	4	2.0

Chiayi City	2	1.0
Chiayi County	3	1.5
Changhua County	8	4.0
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3. Length of employment (N=203)		
(1) 0 –5 years	83	40.9
(2) 6-10 years	55	27.1
(3) 11-15 years	22	10.8
(4) 16-20 years	25	12.3
(5) 21-25 years	16	7.9
(6) 26-30 years	2	1.0
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4. Gender (N=203)		
(1) Male	36	17.7
(2) Female	167	82.3
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5. Age (N=204)		
(1) 29 years & younger	53	26.0
(2) 30-39 years	85	41.7
(3) 40-49 years	56	27.5
(4) 50 years & older	10	4.9
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6. Professional background (N=203)		
(1) Social work	144	70.9
(2) Social work related, e.g., Sociology, Psychology, Education, etc.	47	23.2
(3) Others	12	5.9
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7. Highest educational degree (N=204)		
(1) under bachelor	16	7.8
(2) Bachelor	131	64.2
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(3) Master	43	21.1
(4) Doctor	11	5.4
(5) Others	3	1.5
8. Before 921 earthquake, involved in disaster aid services (N=204)		
(1) No	182	89.2
(2) Yes	22	10.8
9. Regarding disaster aid services training/courses, have been experienced before 921 earthquake (N=204)		
(1) No	190	93.6
(2) Yes	13	6.4
10. Whether have been involved in this disaster aid (921 earthquake) ? (N=202)		
(1) No	84	41.2
(2) Yes	120	58.8

In addition, from October 1999 to April 2001 interviews of the key informants, documental research, focus groups and open-ended questionnaires were conducted in order to collect qualitative data. The participants included social workers, supervisors, the directors of social affairs department in the local authorities, and social work educators from universities which have been involved in the disaster aid (see Table 2).

Table 2: The Methods, Persons and Date and Time of Data Collection of the Study

Methods of data collection	Participants of the study	Date and Time of data collection
Mailing Survey	Members of the TASW and NAMSU	the March-April 2000
Documentary Research	Recordings or written documents related Conferences/Symposiums	of March-December 2000
Interview with Informants	Key Key persons /social workers /educators involved in the disaster aids	September 2000- January 2001

Focus Group	Supervisors/social workers involved in December 2000 the disaster aids
Open-ended Questionnaires	Supervisors/social workers involved in March 2001 the disaster aids

Results

Based on the results of the survey, most Taiwanese social workers participated in the rescue aid with limited training in disaster aid. 58.8 percent (n=120) of the respondents were involved in the aftermath of the disaster aid services. 43.3 percent (n=52) of these social workers were from the public sector and 53.3 percent (n=64) were from the private sector. These 120 social workers came throughout the island, with a majority of 28.0 percent (n=33) from Taipei City. Only 14.2 percent of the social workers had been previously involved in disaster aid services while 7.6 percent had received training on disaster aid (see Table 3).

Table 3: Demographic Characteristics of Social Workers Who Were Involved in the Disaster Aid of the "921" Earthquake

Characteristics	N	P (%)
1. Working settings (N=120)		
(1) Public sector	52	43.3
(2) Private sector	64	53.3
(3) Others	4	3.3
2. Location (county/city) of working settings (N=118)		
Taichung City	11	9.3
Taichung County	8	6.8
Taipei City	33	28.0
Taipei County	7	5.9
Taitung County	1	0.8
Tainan City	4	3.4
Tainan County	6	5.1
Ilan County	2	1.7
Hualian County	2	1.7
Nantou County	4	3.4

Pingtung County	1	0.8
Miaoli County	2	1.7
Taoyuan County	6	5.1
Kaohsiung City	9	7.6
Kaohsiung County	6	5.1
Tunlin County	5	4.2
Hsinghu County	2	1.7
Chiayi City	1	0.8
Chiayi County	1	0.8
Changhua County	7	5.9
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3. Length of employment (N=119)		
(1) 0 –5 years	40	33.6
(2) 6-10 years	35	29.4
(3) 11-15 years	12	10.1
(4) 16-20 years	20	16.8
(5) 21-25 years	11	9.2
(6) 26-30 years	1	0.8
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4. Gender (N=120)		
(1) Male	20	16.8
(2) Female	99	83.2
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5. Age (N=120)		
(1) 29 years & younger	25	20.8
(2) 30-39 years	50	41.7
(3) 40-49 years	40	33.3
(4) 50 years & older	5	4.2
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6. Professional background (N=120)		
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(1) Social work	84	70.0
(2) Social work related, e.g., Sociology, Psychology, Education	32	26.7
(3) Others	4	3.3
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7.Highest Educational Degree (N=120)		
(1) under bachelor	7	5.8
(2) Bachelor	77	64.2
(3) Master	30	25.0
(4) Doctor	6	5.0
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8. Regarding disaster aid services training/courses, have had experience before 921 earthquake (N=120)		
(1) No	103	85.8
(2) Yes	17	14.2
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9. Regarding disaster aid services training/courses, have had experience before 921 earthquake (N=119)		
(1) No	110	92.4
(2) Yes	9	7.6
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Most social workers were involved in the rescue aid in the first week. Regarding the timing of the social workers' involvement in the disaster aid, 17.5 percent of the sample involved started immediately on September 21st, 19.2 percent of the sample were involved one day after the disaster; inclusively, 65.8 percent of the sample were involved during the first week of aftermath, 79.2 percent of the sample were involved within two weeks, and 94.2 percent of the sample were involved within three weeks. As regards the length of involvement, 17.0 percent of them worked for three days, 9.8 percent of them worked for four days or 10 days, 10 percent of them were involved for 2 to 3 weeks and 19.6 percent were involved for over three weeks (see Table 4).

Table 4: Time of Beginning, Length, "Channel", and Willingness of Social Workers' Involvement in the Disaster aid of the 921 Earthquake

Variables	N (N=120)	P (%)
1. Regarding your involvement in the disaster aid of the 921 earthquake, the time of beginning		
(1) First day of the 921 earthquake	21	17.5
(2) One day after the 921 earthquake	23	19.2
(3) Two days after the 921 earthquake	13	10.8
(4) Three days to one week after the 921 earthquake	22	18.3
(5) One week to two weeks after the 921 earthquake	16	13.3
(6) Two weeks to three weeks after the 921 earthquake	18	15.0
(7) Others	7	5.8
2. The total number of days you were involved in the disaster aid of the 921 earthquake		
(1) One day	4	3.6
(2) Two days	9	8.0
(3) Three days	19	17.0
(4) Four days	11	9.8
(5) Five days	9	8.0
(6) Six days	5	4.5
(7) Seven days	9	8.0
(8) Eight days	2	1.8
(9) Ten days	11	9.8
(10) Two weeks-three weeks (14 - 21days)	11	9.8
(11) Over three weeks	22	19.6
3. The channels of social workers' involvement in the disaster aid of the 921 earthquake		

(1) By own self	3	2.5
(2) With personal company	3	2.5
(3) Arranged by working settings	82	68.3
(4) Arranged by the organizations/groups related to social work or social welfare	13	10.8
(5) Arranged by other kinds of organizations/groups	15	12.5
(6) Others	4	3.3
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4. Why were you involved in the disaster aid of the 921 earthquake		
(1) Voluntary	50	42.4
(2) Required by work setting	68	57.6

Social work roles, functions and service programs in the rescue phase

During the rescue phase, 80.3 percent of the social workers' roles were direct supporters to individuals and families, 74.4 percent of the social workers provided information to the clients, 55.6 percent of the social workers were the client's needs assessors while the least percent of social workers worked on advocacy (6.8%) or as groups/communities organizers (13.7%). 116 social workers identified their functions that were carried out during the rescue period were "support for individuals and families" (86.2%) and "linking the clients' needs with resources" (74.1%). The least functions were "intervene to change macro systems" (14.7%), "intervene to change micro systems" (26.7%) and "prevent the individuals and families from breaking down" (29.3%) (see Table 5).

Regarding the services that social workers delivered in the emergency response stage, within three weeks after the earthquake, "providing information" was the highest percentage of use (76.1%), followed by "listening to the victims and accompany the victims" (73.5%) and "linking the victims' needs with resources/referral services" (62.4%). The lowest percentage of available services that social worker provided was "employment assistance" (5.1%) and "applying for temporary shelters/ prefab housing" (7.7%). 105 social workers identified the most useful services that they provided for the victims were to "listen to and accompany the victims" (26.7%), "link the victims' needs with resources/referral services" (17.1%), "collect/deliver food and supplies" (10.5%), "distribute relief and consolation payments" (9.5%) and "provide information" (8.6%). The most useless services for the victims that social workers have provided were "reporting the victims' needs to the governments" (22.6%), "providing information" (11.3%) and "identifying and confirming the corpses from the debris for the families" (9.4%) (see Table 6).

Table 5: The Variety of Social Work **Roles & Functions** that Social Workers' Involvement in the **Rescue Stage**

Variables (multiple choices)	n	P (%)
1. Social Work Roles (N=117)		
(1) Crisis intervener	48	41.0
(2) Supporter	94	80.3
(3) Needs assessor	65	55.6
(4) Counselor	52	44.4
(5) Educator	22	18.8
(6) Facilitator/empowering the victims	22	18.8
(7) Information provider	87	74.4
(8) Coordinator	45	38.5
(9) Group/community organizer	16	13.7
(10) Administrator	45	38.5
(11) Advocate/spokesperson of the victims	8	6.8
(12) Others	3	2.6
2. Social Work Functions (N=116)		
(1) Support individual and family	100	86.2
(2) Link the client's needs with resource/make the resources more accessible to the victims	86	74.1
(3) For the victims, prevent serious physical & mental health consequences	61	52.6
(4) Prevent the individual, family, organization & community disruption	34	29.3
(5) Change micro systems to improve the victim's well-being	31	26.7
(6) Change macro systems to improve the victim's well-being	17	14.7
(7) Others	3	2.6

Table 6: The Variety of Services that Social Workers Provided in the **Rescue Stage**

Variables (multiple choices)	n (N=117)	P (%)
(1) Identify and confirm the corpses dug out from the debris	11	9.4
(2) Help the family carry out the funeral	15	12.8
(3) Listen to/ accompany the victims	86	73.5
(4) Collect/distribute food & supplies	59	50.4
(5) Arrange temporary shelters for the victims	33	28.2
(6) Release the victim's complaint	55	47.0
(7) Information provided/clarify the victim's concerns	89	76.1
(8) Distribute relief & consolation payment	35	29.9
(9) Survey the victim's needs/search vulnerable population	46	39.3
(10) Help the victim apply for temporary housing	9	7.7
(11) Help the victim apply for "employment instead of outright grant"	6	5.1
(12) Help the victim apply for emergency assistance	22	18.8
(13) Link the victim's needs and resources/referral services	73	62.4
(14) Respond the victim's needs to the governments & NGO	57	48.7
(15) Organize the voluntary organizations and separate their functions	35	29.9
(16) Survey community resources and file up	28	23.9
(17) Others	10	8.5

Social work roles, functions and service programs in the reconstruction phase

During the reconstruction phase, 62.9 percent of the social workers' roles were "information provider" for the victims, 53.9 percent of the social workers were "counselor", compared to the least percent of the social workers working on groups/communities organizers (16.9%) and advocate (19.1%). 90 social workers identified their functions that could be carried out in the recovery period were "supporting individuals and families" (67.8%) and "linking the clients' needs with resources" (58.9%); on the contrary, the least functions were "preventing the individuals and families from breaking down" (15.6%) and "intervening to change macro systems" (16.7%) (see Table 7).

Regarding the services that 88 social workers provided in the recovery stage, three weeks after the earthquake, “counseling” was the highest percentage of availability (51.1%) and “continue needs assessment and develop service programs for the victims” (51.1%), followed by “build multi-professionals coalition” (37.5%) and “case management” (33.0%). The lowest percentage of available services which social workers provided was “occupational training and employment assistance” (9.1%) and “build the victims’ groups coalition” (10.2%) and “advocate to change governmental programs” (13.5%). 76 social workers identified the most useful services that they provided for the victims were “counseling” (30.3%). The most “useless” services for the victims that the social workers provided were “advocacy to change the governments’ programs” (28.0%) and “continue needs assessment and develop service programs for the victims” (16.0%) (see Table 8).

Table 7: The Variety of Social Work Roles & Functions that Social Workers’ Involvement in the Recovery Stage

Variables (multiple choices)	n	P (%)
1. Social Work Roles (N=89)		
(1) Counselor	48	53.9
(2) Educator	25	28.1
(3) Facilitator/empowering the victims	29	32.6
(4) Information provider	56	62.9
(5) Case manager	30	33.7
(6) Group/community organizer	15	16.9
(7) Administrator	34	38.2
(8) Advocate /spokesperson of the victims	17	19.1
(9) Others	3	3.4
2. Social Work Functions (N=90)		
(1) Support individual and family	61	67.8
(2) Link the client’s needs and resource/make the resources more accessible to the victims	53	58.9
(3) For the victims, prevent serious physical &mental health consequences	46	51.1
(4) Prevent the individual and family’s from breaking down	36	40.0
(5) Prevent the group, organization & community disruption	14	15.6

(6) Change micro systems to improve the victim's well-being	20	22.2
(7) Change macro systems to improve the victim's well-being	15	16.7
(8) Others	17	7.8

Table 8: The Variety of Services that Social Workers Provided in the **Recovery Stage**

Variables (Multiple choices)	n (N=88)	P(%)
(1) Child, youth, woman & elderly protection	21	23.9
(2) Counseling	45	51.1
(3) Case management	29	33.0
(4) Continue assessing the victims' needs and developing service programs	45	51.1
(5) Community care services	20	22.7
(6) Occupational training/employment guidance	8	9.1
(7) Community reconstructed/ community rebuilt	18	20.5
(8) Build multi-professions coalitions	33	37.5
(9) Developing volunteer services	22	25.0
(10) Build the victim's groups coalition	9	10.2
(11) Policy advocate	12	13.6
(12) Others	6	6.8

The difficulties that social workers experienced most in disaster relief included “the lack of integration between the systems” (74.2%), “conflicted loyalty to their original settings meant that social workers could not concentrate solely on the disaster relief services” (65.8%) and “inconsistent policies and rules for disaster aid from the governments” (60.0%). The professions most frequently contacted by social workers included “administrators from social welfare agencies” (79.5%), “voluntary organizations” (73.2%), “religious groups and personnel” (68.4%), “professional counselors” (68.3%), and medical workers (68.5%).

Depending on the data analysis from interview with key informants and focus groups, all social workers, working at the Department of Social Affairs in the local authorities (Taipei City, Taipei County, Taichung City, Taichung County and Nantou County), were involved in the disaster relief on the first day, or within three days, of aftermath. They were representatives of the local governments working with the survivors and families of the

victims on the front line; thus, they also became targets whom the victims' families blamed. In the rescue stage, these social workers, from local authorities, "did whatever they could do" for the survivors and families of the victims and stood by 24 hours, including providing emotional support, identifying and confirming the corpses from the debris, finding bags and ice cabinets for the corpses or remains, helping the families to arrange for funerals, building tents, developing food and supply distribution centers, collecting donations, collecting and delivering food and supplies, visiting homes and interviewing families of the victims, organizing volunteers, searching and linking resources, distributing relief and consolation payments, examining collapsed houses, organizing the victims' information for the central government or their superiors.

According to the data from the open-ended questionnaires interviews, social workers in both public and private sectors described that the services, provided to the survivors and families of the victims in the emergency stage also included: welfare information consultation and searching, emergency subsidy application, orphanage placement, debriefing services for the other rescue team members, being translators for overseas rescue personnel. The participants of the open-ended questionnaires in the recovery stage were involved in providing services, such as: program development and implementation for the vulnerable people, home interviews, follow-up services, providing group activities, community organization and community interviews, post-disaster counseling, organizing volunteers, developing resources lists and seminars. The recovery plans that have been utilized included "Family Support Center", "Life Reconstruction Service Center", "Shih Kan Assistance Plan", "Life Reconstruction Care Five Year Plan". Programs that have been utilized included: school age children's educational guidance, friendly visiting, life assistance for dependent children or children of single parents, part-time job searching for students who are from victim families, loan for housing purchase, occupational training for adults, transportation assistance for going to hospitals, life assistance for people staying in the shelters, disabled and elderly people care plan, family support and motivating the victims to join the activities, etc.

As to the manner of the interview with the educators teaching in University social work departments and the analysis of written documents, first of all, the educators from the Tung-Hei University, located in the central Taiwan, were involved in the disaster aid on the second day of the aftermath—they organized related agencies and groups to develop a "Social Work Consultation Hot Line" and "Social Work Service Team" for disaster aid on the third day of the aftermath. Cooperating with local authorities such as Taichung County and Nantou County, they organized and mobilized social workers and social work students from other cities and counties. Group by group, every four days a group kept going to the victim counties to provide crisis intervention services to the victims. Secondly, the second day after the earthquake, educators from the Fu-Jen Catholic University located in Taipei County actively contacted the Taipei County Government whether they could join their disaster relief team to help the victims. Under the Taipei County Government's directions, the faculties including those from Fu-Jen University and Taiwan University and students of social work department of the universities carried out a needs survey of the victims with standardized questionnaires for two weeks. Thirdly, also on the second day after the earthquake, the faculties and students of the social work department of Soochow University telephoned the Taipei City Government to present their willingness to be volunteers to help the victims on the front line of the collapsed buildings. The services of their involvement were: identification and confirmation of the corpses or remains from the debris, accompanying families going around to hospitals and funeral parlors. Additionally, the educators also joined other social service teams in the

rescue stage individually including being supervisors or consultants to social workers. Fourthly, the faculties and the students of the social work department of the Tainan Theology College were involved in the recovery stage. The students went to Nantou County for their practicum for seven months. They joined the “Spiritual Reconstruction” projects and were supervised by local churches and authorities; and they learned how to utilize case and group work methods for working with children and families of the victims.

Along with the participants of this study, the disaster aid services should be part of social worker’s responsibilities; thus, in the preparedness stage, social workers need to obtain knowledge related to disaster aid and rescue services. As a result, in the preparedness stage, social workers’ roles include educators and broadcasters of disaster intelligence, organizers of volunteers and community work, network builders, implementers of disaster rehearsal, planners of programs. The tasks that social workers need to carry out in this stage are: (1) obtaining all sorts of disaster relief systems and resources, including the headquarters, administrative systems and resources from public and voluntary systems, related policies and welfare services, and mass media; (2) becoming acquainted with local communities and culture, including non-governmental organizations, and know how to integrate these disaster aid organizations and how to build good relationships with them; (3) recognizing related knowledge including natural disaster and its causes, crisis intervention, disaster stages, management procedures, victims supporters, food and supplies management, death and technology and tasks distribution, and data collection skills; (4) direct services--psychological counseling, crisis intervention, emotional support, grief counseling, and PTSD; and indirect—resources development and integration, policy and legislations advocacy, crisis information, volunteers management, community work; (5) the routine practices of rescue and disaster aid, disaster relief education programs, seminars, and building social work services procedures for disaster aid.

Implications for Social Work Education

Based on the findings of this study, social workers have worked in the front line during the emergency response to the 921 earthquake. They were not only government representatives, accompanying families waiting for the survivors from the debris; but also they provided emotional support for families in the shelters and helped the families arrange funeral ceremonies. The majority of both administrators and front line social workers had a social work background. They did what they could and were capable to do. Social workers became substitutes for the government during the emergency relief; and the governments could then carry out their responsibilities based on what the social workers were doing. Social workers were playing the key roles in the “Chi-Chi” (921) earthquake relief services; their roles and functions went beyond the central and local governments’ written response codes (The Rules and Guidelines of Emergency Response to Disaster in Taipei City, 1998; The Rules of Rescue & Recovery Responses to Natural Disaster in Taipei City, 1999).

What were the roles of social workers during the recovery stage? Based on the regulations, “Post-disaster Reconstruction Plan & Guidelines” and “Temporary Rules of the 921 Disaster Reconstruction” of the central governments, the central governments set up the priorities “Social assistance and welfare services and residents life recovery in the impact areas”, and the performances of the priorities belong to social workers (the Executive Yuan, the Committee of Promoting Disaster Reconstruction, 1999, 2000). According to the content of the regulations, social workers need to “help settle vulnerable people, including daily life arrangement, guidance, grief therapy and counseling, life care, integration non-governmental resources, improving community cohesion, rebuilding families and communities” (Chen

2000). Under these circumstances, social work roles in the recovery stage of the disaster relief are as the same as the services and programs that they provide in the social affairs department of the local authorities.

Social work training focuses on service users' needs; as a result, social workers' involvement in disaster aid can be as the agents of the victims and families to react to their needs. On the other hand, they also can be government representatives to provide all related resources for meeting the victims' needs. It makes no difference whether social workers are from the public or voluntary agencies, they become the front line workers in the rescue and recovery stages; and they also play the role of brokers between the government and the victims. But the difficulties they faced during the 921 earthquake disaster included the uncertainty of their roles and also becoming the targets of victims who are not satisfied with what the government has done for them. The dilemma is: Should social workers be the agents of the clients or of the governments, especially those social workers or administrators who work in governmental settings.

For the social workers working in governmental settings, their disaster aid services focus on information and resources collection and integration, and how to unify and coordinate the volunteers during the emergency and distribute their tasks into all sorts of aid services such as working in the shelters, material and food supplies, distribution of cash disbursement, funeral ceremony procedures, temporary housing arrangement, needs survey, emotional support and comfort for families. Assisting volunteers from the NGOs to accompany the families waiting for the survivors from the debris. For those social workers from voluntary agencies or students and faculties from academia, they have to contact the local government first; for the purpose is to link with public social workers first and integrate with their aid services.

Based on the above discussions, social workers need to know how to deal with crisis intervention including information and resources integration, volunteers organization and distribution, material, food and Monetary compensation distribution, death and funeral management, needs survey, vulnerable people identification and discovery, housing arrangements, etc. However, the difficulties that social workers had in the procedures included the lack of system integration, leadership uncertainty and their instructions, the ambiguity of policies and rules, chaotic rescue bases, their own uncertain roles, limited concentration of aid services due to mishandling, overlapping of resources, the inflexibility of related legislations. As a result, how social workers overcome these obstacles would be the key issues in future disaster relief. Doubtlessly, emphasis on macro practices in the social work education has to be developed, including how to deal with political issues coming from local politicians and decision makers, particularly in the recovery stage. Besides, social workers in the governmental settings need to face the dilemma—are they governmental officials or they are the agents of the clients? For the social workers from the private agencies, they also need to identify who are the agents of the clients and who are the program executors funded by the government? When conflicts arise between the client's needs and governmental instructions, how social workers respond and how they balance their professional commitment to ethics and their career responsibilities from the bureaucracies becomes a key issue. There should be related training courses, symposiums or round tables to discuss these ethical issues.

Generally, during the 921 disaster aid services, social workers were not so clear as to what their roles should be and what their position should be. Should they side with the government or the victims? Social workers who were involved in the disaster aid were doing what the

upper managers wanted them to do; even if the social workers had no chance to clarify what their roles and tasks should be.

Social work has been utilized as a human service profession in Taiwan since the 1950's; 16 universities offer bachelor program and 12 universities provide master programs of social work. In 1997, social work licensing was enacted, making social work a socially identified profession. Currently the curriculum of related disaster aid services and practices are seldom presented in social work departments of the universities in Taiwan. However, natural disasters such as typhoon, flooding, earthquakes happen frequently and are even getting worse. Taiwanese social work professionals including their educators need to face and react to this reality, as future members of a team that will work on disaster relief. In the social work curriculum at the college level, course work includes case work, group work, community work, case management, social work working with children, families, elderly, women, disability, social assistance, death and hospice, etc. It is recommended that instructors have one or two sessions to discuss disaster response—how to integrate teaching content with disaster aid services, including how to work with victims and their families, communities, how to apply all sorts of resources for the victims, how to be helpful for the families when their family members are dead, and funeral ceremony procedures. Furthermore, the student's practicum designs also can emphasize this.

According to Wang (2001), in response to the emergency and recovery stages caused by the 921 earthquake, local governments had significant differences in their actions and consequences resulting from their political, societal, economical forces, and the perception of policy makers. Social workers not only worked with the victims, families, organizations, and communities, they also dealt with politicians. As the participants of the study have recommended, the experiences in this disaster demonstrate the need for social workers to recognize a long overlooked role, advocacy and community organizer. Disaster relief forces social workers to play the roles of advocate in forming national legislations, program development in local governments and as spokespersons for the communities. These experiences will enrich the scope and diversity of social work knowledge to respond to new challenges of social work education in Taiwan.

Social work, as a helping profession, needs to develop its capacity of structural analysis in order to be better equipped to improve the inferior structural status of the earthquake victims. According to the qualitative data of this study, the participants recommended that social work education in disaster aid needs to be improved including the following aspects: macro and ecological perspectives; community work—organizing the victims and groups and community education; knowledge of natural disasters and management; related policies and legislations; advocacy skills, persuasion and interaction with mass media; understanding the victim's deep psycho-social state, death and survival; different religious funeral arrangements; crisis intervention; post-trauma counseling; higher self awareness; professional commitment and the student's practicum in disaster aid.

The roles and tasks of social workers involvement in the disaster aid in the emergency, recovery and preparedness stages and its applications to social work education is summarized in Table 9.

Table 9: Social Workers' Roles and Tasks and Social Work Education in the Involvement of Disaster Aid

Stage of Response	Social Worker's Involvement in the Emergency Response	Social Worker's Involvement in the Recovery Response	Social Worker's Involvement in the Preparedness Response
Social Workers' Roles & Tasks 1. Public sector 2. voluntary agencies 3. Faculties 4. Students	1. Identifying the chief commanders and communication systems - manage resources, organizations and information; integration and allocation; setting up single emergency rescue center. 2. Clarifying team work and cooperation - building up rescue division and practice. 3. Development and identification of the tasks distribution. 4. Compiling the victim data. 5. Outreach services - emotional support and counseling for the victims and families. 6. Material and monetary compensation delivery.	1. Cultural sensitivity and respect in the local areas. 2. Organizing local resources - integrating rescue resources. 3. Viewing the village as a whole for intervention. 4. Don't label 'victim of disaster' on persons - assess the victim's needs and develop programs for meeting their needs. 5. Concerns on both employment, finding new jobs and economic assistance. 6. Focus on providing services to the disadvantaged people and policy advocate. 7. Knowledge of death and funeral and its data organization. 8. Organizing the relief experiences of the 921 disaster.	I. Roles 1. Educators - strengthening related intelligence of disaster and education. 2. Organizers - volunteers and communities, emergency response rehearsal. 3. Program planners. 4. Coordinators - networks. II. Tasks : 1. In charge with all sorts of related systems, resources, acts and welfare policies. 2. Awareness of local communities such as culture, people and politics and be able to build good relationships. 3. Related disaster theories, knowledge and skills on crisis intervention- emergency response, disaster stages, disaster management, rescue, resources, thanatology, technology, task allocation and data collection. 4. Techniques on direct and indirect services. 5. Formal practices on disaster rescue and services.
Social Work Education and Training	1. Community work and practice -macro and ecological perspectives such as human and geographical sensitivity, community organization including victims organization, advocacy, resources integration and coordination. 2. Local methods managing death and grief. 3. Crisis intervention and practice. 4. Trauma guidance, knowledge of PTSD. 5. Intelligence of natural disaster and legislations related to compensation for death, injuries and for those whose homes are destroyed. 6. Improving self awareness, self adjustment, professional commitment, promotion of stress coping. 7. Developing practicum areas in the disaster village. 8. Developing new teaching curriculum on disaster relief services. 9. Integration of the issues regarding disaster aid practice with related courses in the teaching sessions such as case work, group work, community work, case management, elderly polices and services, disability polices and services, children and families, etc.		

Discussions

During the Taiwan 921 earthquake, almost 60 percent of social workers were involved in the disaster aid; and nearly 70 percent of these were involved in the immediate aftermath during the first week. Disappointingly, most Taiwanese social workers participated in the emergency response with limited training in disaster aid. Disaster aid is not included in the social work curriculum at the college level. This means that social work roles and functions during disasters have not been realized by society and professional educators in Taiwan. Furthermore, the number of social workers who had been trained was less than the number of social workers who were involved. Social work education programs have not yet created a special focus on disaster programming.

This study found that social workers have significant roles and functions in both rescue and recovery stages especially in linking the victims' needs and resources. Social workers also have unique disaster mandates to support vulnerable groups such as people with disabilities, children, and elderly people; help the agencies and organizations for effective responses; provide therapeutic interventions to survivors; and organize recovery programs that improve the community's ability to address their own unmet needs. Social workers also worked with many professionals and organizations that were active in disaster aid services. Thus the coordination or case management skills of social work can be applied to disaster aid procedures (Wenger 1978; Gillespie 1991).

The roles and services that social workers provided in this disaster are once that they have performed in their practice and for which they have been trained in their social work curriculum. For example, theories and practices that social workers apply in the disasters, such as crisis theory, resources linking, needs assessment, searching for vulnerable people and providing support and post-disaster counseling to people are exactly those that social workers utilize in their intervention skills in their various employment fields. Moreover, social workers under critical and changing phenomena during emergencies will stimulate their learning, creative thinking, innovation, and productive activities during the rescue stage. Individual social workers have to strengthen their knowledge of the impact on the victims and the community responses of the post-disaster period (Shahar 1993).

The September 21 earthquake on was especially devastating, causing death and destruction to hundreds families in Taiwan. Social workers from both public and voluntary sectors, as well as from the campuses, were deeply involved in helping the victims. At present, during the second phase of work, the “recovery stage”, social workers from both public and voluntary sectors who work in the “Life Reconstruction Centers” provide many kinds of social services to the victims for the long-term development of the disaster areas.

Due to its geographic location, Taiwan is a place with frequent natural disasters- such as earthquakes, typhoons, floods, and continental shifts—which are becoming more unruly. After the earthquake of September 21, 1999 and over the past two to three years, Taiwan has been hit by a few serious typhoons; and these floods and continental shifts have devastated houses, public facilities and caused over a hundred people’s deaths and injuries. Both the climate and geological processes (associated with earthquakes, rainfall and floods) appear to be changing significantly. Recent casualties are rising faster than ever before in Taiwan. According to Webster (1995), social workers are an important part of the disaster-response community; and emergency relief has historically been an important function of the social work profession. Doubtlessly, social workers have important roles in all phases of disaster management, including assisting governmental and voluntary organizations that serve clients in the community to establish preparedness plans (Gillespie and Banerjee 1993). Unfortunately, as the findings of this study suggest, both education and practice systems have not made disaster programming an important focus. Under these circumstances, Taiwanese social workers should be trained or properly equipped for this kind of disaster aid from the present training courses and curriculums.

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Author's Address:

Ass Prof Yueh-Ching Chou
Soochow University
Department of Social Work
Lin Chi Road, Shihlin
TW-Taipei
Taiwan
Email: choucy@ym.edu.tw

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