

**EARLY CHILDHOOD DEVELOPMENT (ECD) PROGRAMS AS PROTECTIVE  
ENVIRONMENTS FOR CHILDREN IN EMERGENCIES: A CASE OF DAYCARE  
CENTERS IN IWATE, JAPAN DURING THE 2011 EARTHQUAKE AND TSUNAMI  
DISASTER**

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**EARLY CHILDHOOD DEVELOPMENT (ECD) PROGRAMS AS PROTECTIVE ENVIRONMENTS FOR CHILDREN IN EMERGENCIES: A CASE OF DAYCARE CENTERS IN IWATE, JAPAN DURING THE 2011 EARTHQUAKE AND TSUNAMI DISASTER**

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University of Pittsburgh, 2014

The 2011 East Japan Earthquake and Tsunami suddenly took the homes, family members, friends, and familiar neighborhoods away from the children of Iwate. In the midst of this difficult situation, early childhood development (ECD) programs provided protective environments for the young children to access continuous care and development opportunities. This case study examines how these daycare centers in Iwate prepared for, responded to, and coped with the severe natural disaster, providing physical, cognitive, and psychosocial protections to these children.

The study re-affirmed that daycare centers in Iwate had integrated the national standards for disaster risk reduction (DRR). On the day of the disaster, personnel safely evacuated the children while practicing monthly drills. Despite the challenges, the daycare programs quickly re-established normalcy in children's lives, ensuring continuous access to care. Not only did daycare personnel act *in loco parentis* for these children, but also re-installed daycare programs during the recovery.

The study revealed that local governments also faced serious challenges in their leadership and coordination roles. Their response capacities had been severely affected by the disaster. Governments' appropriate and timely guidance was most beneficial for the daycare providers. Among other recommendations, I assert that in the future, local governments could take more active roles in coordinating the massive influx of humanitarian organizations.

This interpretivist research was based on my one-year fieldwork in Iwate immediately after the disaster, and employed a series of survey instruments (questionnaires and interviews). This case study contributes to the field of education and ECD in emergencies through the use of qualitative, ethnographic research. It also recognizes significant and complimentary contribution of qualitative inquiry methods, including on-site fieldwork, ethnographic analyses, and follow-up interviews, for better understanding of crisis situations.

While pre-school programs are not compulsory in Japan, the study calls attention to the valuable protection that they provide for both young children and their childhoods in emergencies. A recovery strategy that focuses on protective environments for children has great potential as a harmonizing approach, rather than as a parallel one, in the complex nature of humanitarian assistance.

**Keywords:** education in emergencies; early childhood development (ECD); disaster risk reduction (DRR); child protection; protective environments for children; mixed method case study.

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## LIST OF ACRONYMS

.amr	Adaptive Multi-Rate
CAQDAS	Computer assisted/aided qualitative data analysis
CCC	Core Commitments for Children
CFS	Child Friendly Space
CFS/E	Child Friendly Space/Environment
CGECCD	Consultative Group on Early Childhood Care and Development
CRC	Convention of the Rights of the Child
CWC-TCSW	Childcare Workers Committee of the Tokyo Council of Social Welfare
DC	Daycare center
DFID	Department for International Development
DRR	Disaster Risk Reduction
EAPRO	East Asia and Pacific Regional Office (of UNICEF)
ECD	Early Childhood Development
ECCD	Early Childhood Care and Development
ECCE	Early Childhood Care and Education
EFA	Education for All
EPO	Education Programme Officer
ERC	Emergency Relief Coordinator
FEMA	Federal Emergency Management Agency
HANDS	Health and Development Service
IASC	Inter-Agency Standing Committee
ICRC	International Committee of the Red Cross
IDPs	Internally Displaced Peoples
IFRC	International Federation of Red Cross and Red Crescent Societies
IIEP	International Institute for Education Planning
INEE	Interagency Network for Education in Emergencies
IPG	Iwate Prefecture Government
IRB	Institutional Review Board
JAPT	Japan Association for Play Therapy
JCN	Japan Civil Network for Disaster Relief in East Japan
JCU	Japan Committee for UNICEF

JOCA	Japan Overseas Cooperative Association
JPF	Japan Platform
JRCS	Japanese Red Cross Society
JSCE	Japan Society for Civil Engineers
JST	Japan Standard Time
LDCs	Least Developed Countries
MDGs	Millennium Development Goals
MEXT	Ministry of Education, Culture, Sports, Science and Technology
MHLW	Ministry of Health, Labour and Welfare
MIC	Middle Income Country
MLIT	Ministry of Land, Infrastructure, Transport and Tourism
NER	Net enrolment ratio
NGO	Non-governmental organization
NIPSSR	National Institute of Population and Social Security Research
NPA	National Police Agency
NPO	Non-profit organization
NRC	Norwegian Refugee Council
OCHA	Office for the Coordination of Humanitarian Affairs
OECD	Organisation for Economic Co-operation and Development
QDAS	Qualitative data analysis software
RALS	Rapid Assessment of Learning Spaces
SCHR	Steering Committee for Humanitarian Response
SCJ	Save the Children Japan
SZOP	School as Zones of Peace
TEPCO	Tokyo Electric Power Company
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNISDR	United Nations International Strategy for Disaster Reduction
UNSG	United Nations Secretary General
UPE	Universal Primary Education
WFP	World Food Programme
WHO	World Health Organization

## LIST OF TRANSLATIONS

<i>Translation in the document</i>	<i>Original in Japanese</i>
Ashinaga Ikuei Kai	あしなが育英会
baby hotel	ベビーホテル
Basic Act on Disaster Control Measures	災害対策基本法
Campaign for Children in Palestine	パレスチナ子どものキャンペーン
Care International Japan	ケア・インターナショナル・ジャパン
certified child care centers	認定こども園
certified daycare centers	認可保育所
Child Line Support Center	チャイルドライン支援センター
Child Welfare Act	児童福祉法
childcare support center	子育て支援センター
childcare worker	保育士
Childcare Workers Committee of the Tokyo Council of Social Welfare (CWC-TCSW)	東京都社会福祉協議会保育士協会
Children and Families Division of the Health and Welfare Department	(岩手県) 健康福祉部児童家庭課
Coordination Meeting of Affected Children Assistance Organizations and Groups	(岩手県) 被災児童支援団体連携会議
daycare centers	保育所 (保育園)
Development Bank of Japan	日本政策投資銀行
director	所長／園長／施設長
Disaster Emergency Countermeasure Headquarters	災害緊急対策本部
Disaster Volunteer Center	災害ボランティアセンター
East Japan Earthquake and Tsunami Disaster Children Support Network	東日本大震災子ども支援ネットワーク
employer-provided childcare services <sup>1</sup>	事業所内保育施設
estimated tsunami inundation areas	津波浸水想定区域
Fire and Disaster Management Agency	消防庁
Fire Service Act	消防法

<sup>1</sup> These employer-provided childcare facilities include “hospital-provided childcare facilities.”



Foundation for International Development/Relief	国際開発救援財団
Fukushima Dai-Ichi and Dai-Ni Nuclear Power Plants	福島第一・第二原子力発電所
Good Neighbors Japan	グッド・ネイバース・ジャパン
Great East Japan Earthquake	東日本大震災
Great East Japan Earthquake and Tsunami	東日本大震災津波
head childcare worker	主任保育士
hospital-provided childcare facilities	院内保育施設
Iwate Nippo	岩手日報
Iwate Prefectural Board of Education	岩手県教育委員会
Iwate Prefecture	岩手県
Japan Association for Play Therapy (JAPT)	日本プレイセラピー協会
Japan Civil Network for Disaster Relief in East Japan (JCN)	東日本大震災支援全国ネットワーク
Japan Committee for UNICEF (JCU)	日本ユニセフ協会
Japan Day Nursery Association	日本保育協会
Japan Meteorological Agency	気象庁
Japan Overseas Cooperative Association (JOCA)	日本青年海外協力隊
Japan Self-Defense Forces	自衛隊
Japan Society for Civil Engineers (JSCE)	土木学会
Japanese Red Cross Society (JRCS)	日本赤十字社
Kahoku Shinpo	河北新報
kindergartens	幼稚園
Kokkyo naki Kodomotachi, or Children without Borders	国境なき子どもたち
Law regarding the Promotion of the Holistic Provision of Education, Childcare and Others for Pre-school Age Children	就学前の子どもに関する教育、保育等の総合的な提供の推進に関する法律
Main Island (or Honshu)	本州
Ministry of Defense	防衛省
Ministry of Education, Science, Culture and Sports (MEXT)	文部科学省
Ministry of Health, Labour and Welfare (MHLW)	厚生労働省
Ministry of Internal Affairs and Communications	総務省
Ministry of Land, Infrastructure, Transport and Tourism (MLIT)	国土交通省
National Childcare Council	全国保育協議会
National Institute of Population and Social Security Research (NIPSSR)	国立社会保障・人口問題研究所

National Police Agency (NPA)	警察庁
Nippon International Cooperation for Community Development	日本国際民間協力会
non-certified childcare facilities	認可外保育施設 <sup>2</sup>
Northeastern Region (or Tohoku [Region])	東北地方
NPO Iwate Fukko Collaboration Center	いわて連携復興センター
Off the Pacific Coast of Tohoku Earthquake	東北地方太平洋沖地震
Peace Winds Japan	ピース・ウィングス・ジャパン
Reconstruction Agency	復興庁
Research and Statistics Division	(岩手県) 調査統計課
Rias coast	リアス式海岸
Save the Children Japan (SCJ)	セーブ・ザ・チルドレン・ジャパン
School Education Law	学校教育法
Shanti Volunteer Association	シャンティ国際ボランティア会
Social Welfare Council	社会福祉協議会
special childcare project	特別保育事業
Statistics Bureau	(総務省) 統計局
The Standards for the Equipment and Management of the Child Welfare Facilities	児童福祉施設の設備及び運営に関する基準
Tohoku Bullet Train Line	東北新幹線
Tohoku Expressway	東北自動車道
Tokyo Electric Power Company (TEPCO)	東京電力
wait-listed children	待機児童
World Vision Japan	ワールド・ビジョン・ジャパン

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<sup>2</sup> These non-registered childcare facilities include “baby hotels.”

## 1.0 INTRODUCTION

On March 11, 2011, there were about 26,000 young children attending 353 daycare centers in Iwate, Japan. At 14:46 Japan time, an enormous earthquake shook the entire eastern region of the country, followed by a giant tsunami. This massive disaster took thousands of lives and caused severe destruction in the region. Suddenly, children's daily normalcies were disrupted, their familiar environments were gone, and their promised safety and security were taken away.

The purpose of this dissertation study is to understand the roles of early childhood development (ECD) programs in protecting children and their childhood experiences in emergencies. The study is focused on the case of daycare centers, or *hoikusho* or *hoikuen* in Japanese,<sup>3</sup> in Iwate, Japan, which was one of the prefectures severely affected by the 2011 Great East Japan Earthquake and Tsunami<sup>4</sup>. In this dissertation, I investigate how these childcare and educational institutions prepared for, responded to, and coped with the challenges presented by the serious natural disaster to ensure the safety and security of young children in daycare centers. By focusing on the experiences in Iwate, the research also identifies and examines the critical relations of how relevant stakeholders (e.g., families, communities, humanitarian organizations, and governments) supported, or compromised, the protective capacities of these daycare centers

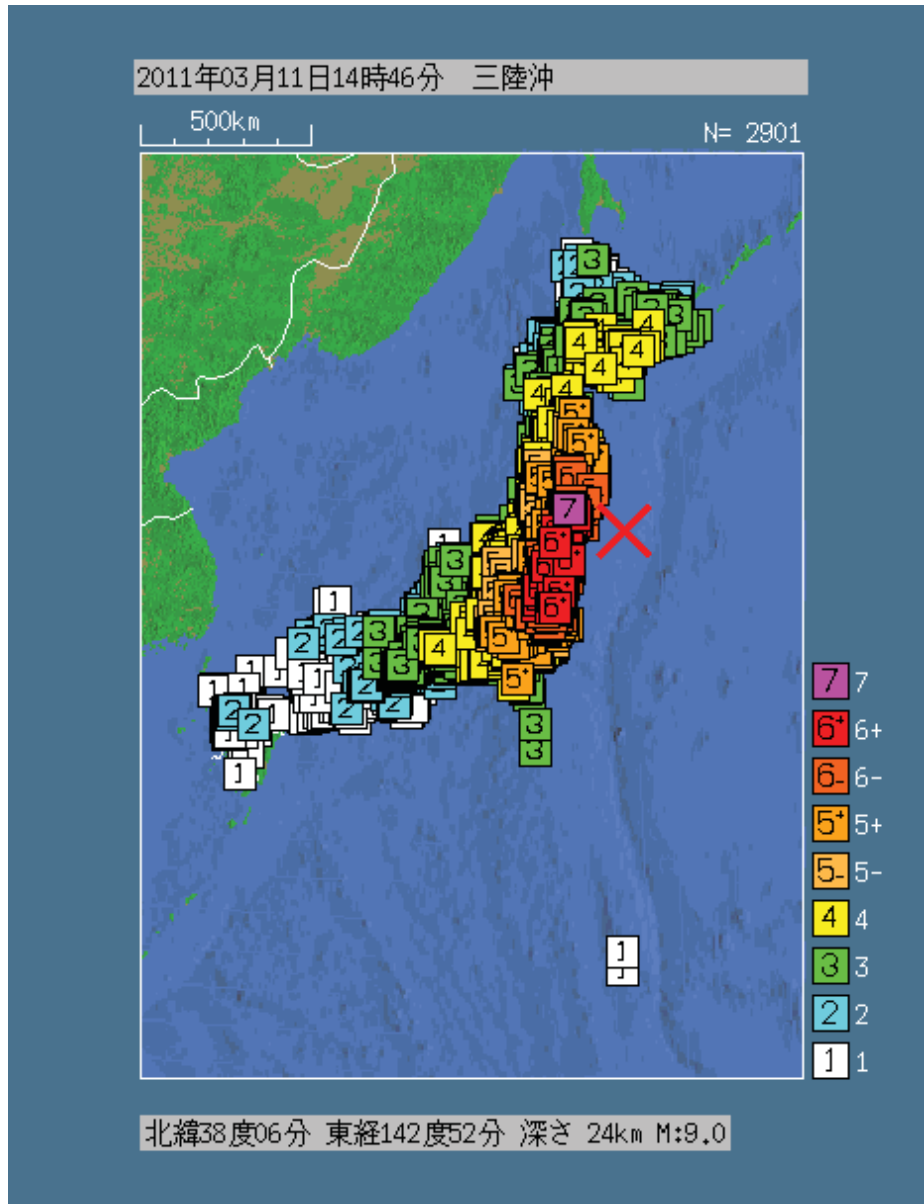
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<sup>3</sup> In this document, I will use the term daycare center to refer *hoikusho* (保育所) or *hoikuen* (保育園).

<sup>4</sup> The Japan Meteorological Agency officially named the earthquake that had occurred on March 11, 2011 at 14:46 in Japan time as the 2011 Off the Pacific Coast of Tohoku Earthquake (平成 23 年 [2011 年] 東北地方太平洋沖地震), and the Prime Minister and His Cabinet named the disaster caused by this earthquake, including the subsequent tsunami, fire outbreaks, damages to the nuclear plants and more, as the Great East Japan Earthquake (東日本大震災) (From the Emergency Natural Phenomenon Report issued by the National Meteorological Agency, on August 28, 2011). In addition, the Iwate Prefecture Government referred the disaster as the Great East Japan Earthquake and Tsunami (東日本大震災津波) (Iwate Prefecture, 2013).

in emergency situations. Lastly, it reviews how domestic and international policy frameworks and response structures reinforced, or undermined, local efforts to make tsunami-affected communities more (young-)child-friendly (or safe) and disaster resilient for generational survival and sustainability.

At the World Conference on Disaster Reduction in Hyogo, Japan in January 2005, the participant governments identified the priority areas for action, and one of them was to: “(u)se knowledge, innovation and education to build a culture of safety and resilience at all levels (UNISDR, 2005, p. 9).” The term “resilience” or “resiliency” is often used to describe about the ability to bounce back from or sustain through difficulties or adversities. This doctoral dissertation study analyzes how education and child protection issues are intertwined, especially at the time of a crisis. While many think of resiliency as a set of individual behaviors, it is also a broader social concept that encompasses larger problems of child development and education and national and international responsibilities for the protection of generations, and the generational resiliency of the society. Together, these individual and social frameworks help construct the childcare and educational institutions that can support the resilient communities necessary for the protection of both children and their childhoods.



**Figure 1.** Map of Japan with seismic intensities registered for the earthquake on March 11 2011 at 14:46 (JST) <sup>5</sup>

Adapted from “Search result of the seismic intensity between 1440 and 1449 on March 11, 2011,” by the Japan Metrological Agency, 2011, retrieved on July 23, 2013 from the seismic intensity database search webpage (<http://www.data.jma.go.jp/svd/eqdb/data/shindo/index.php>). Copyright 2013 by the Japan Metrological Agency.

<sup>5</sup> In Figure 1, the cross sign shows the epicenter of the earthquake, and the numbers indicate the Japanese scales of seismic intensity. Translations of the descriptions in Figure 1 are: [Upper] March 11<sup>th</sup> 2011, at 14:46 (JST – Japanese Standard Time); Off the Sanriku Area; and [Lower] Latitude 38°06’N Longitude 142°52’E; Depth: 24km; Magnitude: 9.0.

## 1.1 STUDY BACKGROUND

On March 11th 2011, at 14:46 (JST), a magnitude-9.0 earthquake occurred off the Pacific coast of the Tohoku region, northeastern part of the Honshu or Main Island of Japan. The massive earthquake was followed by a giant tsunami, which washed away vast areas of the coastal region, destroyed a few hundred thousand buildings, and took thousands of lives. The massive earthquake was so large that almost entire country registered some levels of seismic tremor (See Figure 1).

The calamity did not stop at the tsunami, but triggered secondary disasters. In Iwate and Miyagi, large fires broke out from ship fuels in the fishery communities (Iwate Prefecture, 2013). In Fukushima, while both Dai-Ichi and Dai-Ni Nuclear Power Plants were damaged by the earthquake and tsunami, massive damages to the Dai-Ichi Nuclear Power Plant resulted in a series of equipment failures, nuclear meltdowns and releases of radioactive materials. This not only caused a massive mandatory evacuation of the local populations in large surrounding areas (Government of Japan, 2011-[on-going]), but also led to power supply cuts, because this particular power plan supplied electricity throughout the Tokyo metropolitan area (Tokyo Electric Power Company [TEPCO], 2011).

The death toll from the East Japan Earthquake and Tsunami Disaster reached 15,883 and 2,671 were still missing as of June 10, 2013 (See Table 1). As for infrastructure, 126,458 buildings were completely destroyed and 272,191 partially destroyed. The impacts were spread from Hokkaido in the north, to Kanagawa in the south, and even one case of injury was reported in Kochi, which is 900 kilometer, or 560 miles, away from the epicenter.

**Table 1.** Casualties and damages of the 2011 East Japan Earthquake and Tsunami Disaster

Prefecture	Human Casualties (persons)		Infrastructure Damages (buildings)	
	Dead	Missing	Completely destroyed	Partially destroyed
Iwate	4,673	1,149	18,370	6,558
Miyagi	9,537	1,308	82,889	155,107
Fukushima	1,606	210	21,167	72,947
Others	67	4	4,032	37,579
Total	15,883	2,671	126,458	272,191

Source: National Police Agency (NPA), 2013

Immediately after the disaster occurred, the Japan Self-Defense Forces dispatched its rescue and recovery teams, deploying the grand total of 10,580,000 forces between March 11, 2011 and August 31, 2011 (with the maximum daily deployment of 107,000 forces per day) (Ministry of Defense, 2011). Tremendous support was also given by the international community, including: 29 countries, regions and internationals dispatched rescue teams; and 163 countries and regions as well as 43 international organizations offered assistance (Government of Japan, 2012). Overwhelming assistance, not only emergency supplies and goods, but also additional police forces, emergency response medical teams and volunteers, started arriving immediately after the disaster (Government of Japan, 2012; Iwate Prefecture, 2013). Evacuation centers were soon organized, daily supplies, such as blankets, clothes and other necessities, were distributed, and foods were provided.

The number of evacuees, at one point, increased up to some 470,000 people on the third day, 14 March 2011, of the disaster (Reconstruction Agency, 2012).<sup>6</sup> The prefecture governments of Iwate, Miyagi and Fukushima soon began the construction of temporary housing units, and a total of 53,537 units were been constructed in the tsunami affected prefectures and four other neighboring prefectures (See Table 2). In Iwate and Miyagi, all the evacuees moved

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<sup>6</sup> The data were originally cited from the reference materials of the Emergency Disaster Countermeasure Headquarter.

out of evacuation centers by October 7, 2011 and January 4, 2012 respectively (Iwate Prefecture, 2011f; Miyagi Prefecture, 2012). In addition to these temporary housing units, the prefecture governments contracted more than 72,000 rental properties and assigned public housing units as additional housing options for evacuees (Reconstruction Agency, 2012).<sup>7</sup> For example, the government of Fukushima contracted 24,102 rental or public housing properties for its evacuees (Fukushima Prefecture, 2013).

**Table 2.** Numbers of temporary housing units constructed by prefecture

Prefecture	Temporary Housing Units Completed as of April 1, 2013
Iwate	13,984
Miyagi	22,095
Fukushima	17,143
Others (Ibaragi, Chiba, Tochigi, Nagano)	315
Total	53,537

Source: Ministry of Land, Infrastructure, Transport and Tourism (MLIT), 2013

In terms of the situation of children, the casualties among children were small compared to the other age cohorts. According to the National Police Agency (NPA), the ratios of 0 to 9 and 10 to 19 years old among the total dead were 3.0% and 2.7% respectively (Fire and Disaster Management Agency, 2013). These numbers were evidently smaller than other age cohorts.<sup>8</sup> However, the disaster related information and data were fragmented, or not easily available to the public. This was also because, in Japan, the administration of institutional services for children is distributed to two ministries: 1) the Ministry of Education, Culture, Sports, Science and Technology (MEXT; or I will simply refer it as the Ministry of Education in the remaining of the document.) administers kindergartens (ages 3-5), elementary schools, lower and upper

<sup>7</sup> The data were originally cited from the Ministry of Health, Labour and Welfare.

<sup>8</sup> The same report showed: 3.3% for 20-29 years old; 5.5% for 30-39; 7.2% for 40-49; 12.3% for 50-59; 19.2% for 60-69; 24.7% for 70-79; and 22.1% for over 80.



secondary schools, (junior) colleges, universities and other specialized schools and colleges; and 2) the Ministry of Health, Labour and Welfare (MHLW) is in charge of daycare centers (or nurseries; ages 0-5) and after-school care centers (ages 6-12).

The Ministry of Education, for example, reported the information related to educational institutions, which included kindergartens, elementary, lower and upper secondary schools, (junior) colleges, universities, or other specialized schools and colleges. As of September 14, 2012, a total of 7,988 educational institutions in 22 prefectures were destroyed or damaged by the disaster, and 659 kindergarteners, pupils, students, teachers and staff died (See Table 3 for the detailed numbers) and 74 missing in three tsunami-affected prefectures (Iwate, Miyagi, and Fukushima) and Tokyo.

**Table 3.** Ministry of Education related casualties

Prefecture	Kindergarteners	Elementary pupils	Secondary school students	College and university students	Teachers and staff	Total
Iwate	10	17	63	11	9	110
Miyagi	70	167	158	41	24	460
Fukushima	4	24	50	6	3	87
Other (Tokyo)	-	-	-	-	2	2
Total	84	208	271	58	38	659

Source: Ministry of Education, Culture, Sports, Science and Technology [MEXT], 2012a

As for daycare centers, the disaster related information were often not consistent, nor easily accessible by the public. While the official data by the MHLW were not available, the regional newspaper reported the numbers of affected daycare centers and casualties among daycare children (See Table 4). The article indicated that totals of 43 and 35 daycare facilities in Iwate, Miyagi and Fukushima were completely or partially destroyed by the tsunami respectively. It also indicated that only three of the children who were with daycare personnel

lost their lives, although 111 children of those who had left daycare centers with their parents or had been absent on that day were dead or missing.

**Table 4.** Numbers of affected daycare centers and children (Regional newspaper’s report)

Prefecture	No of affected nurseries		No of daycare center children killed (missing)	
	Completely destroyed	Partially destroyed	Under care	Outside care
Iwate	13	4	0 (0)	25 (16)
Miyagi	27	22	3 (0)	53 (15)
Fukushima	3	9	0 (0)	2 (0)
Total	43	35	3 (0)	80 (31)

Source: Kahoku Shinpo, 2011<sup>9</sup>

To compare, the Iwate Prefectural Government’s report showed that 12 daycare centers were completely destroyed by the tsunami and 6 were partially destroyed in Iwate (Okudera, 2012 [See Table 5]).<sup>10</sup> There was no casualty among the children who had evacuated with daycare personnel in Iwate. However, 47 children were killed by the tsunami after they had been returned to their parents’ care. From these examples, the disaster related information and data available to the public were not always consistent or easily obtainable by the public. Nonetheless, all these information showed how the disaster impacted daycare centers and their children, but also indicated that the casualties among children were significantly small, considering the scale of the disaster.

<sup>9</sup> The article noted that these numbers were inclusive of government-certified, not-certified, and remote daycare centers (both public and private). However, it did not list the references from which they cited the data.

<sup>10</sup> The report did not specify whether these numbers included all government-certified, not-certified and remote daycare centers in Iwate or not.

**Table 5.** Numbers of affected daycare centers and children (Iwate Prefecture's report)

Prefecture	No of affected nurseries		No of daycare center children killed	
	Completely destroyed	Partially destroyed	Under care	Outside care
Iwate	12	6	0	47

Source: Okudera, 2012

As the devastation of the disaster was extensive, nevertheless, many educational institutions, like schools and kindergartens, as well as childcare institutions, like daycare centers and after-school care centers, in Iwate, Miyagi and Fukushima were severely affected by the disaster and had to close temporarily. Some schools were destroyed or damaged, and others had to accommodate large numbers of evacuees in their classrooms and gymnasium buildings. Even under such difficult conditions, however, all schools in Iwate, including those directly affected by the tsunami, managed to re-open during the month of April 2011, the first month of the new school year, just after four to six weeks of the disaster (Iwate Prefectural Board of Education, 2011).

Many affected private kindergartens and daycare centers, however, faced difficulties to resume their programs immediately, due to the direct damages to their infrastructure, difficulties to find alternative sites, lack of basic utility services, insufficient supply availability and many other reasons (Kondo, 2013). In addition, the local governments were heavily affected by the disaster, including the damages to the municipality buildings and loss of governmental personnel. Because early learning, or early childhood development (ECD), was not part of basic education, nor compulsory, assistance to the affected daycare centers and kindergartens was delayed, or not prioritized within the scope of initial governmental emergency responses (Japan Committee for UNICEF [JCU], 2011a).

From early days of the disaster, however, many private and non-governmental organizations (NGOs) started providing relief and recovery assistance supporting children in the affected communities. For example, the United Nations Children’s Fund (UNICEF) announced its emergency assistance in the disaster-affected region in partnership with the Japan Committee for UNICEF, which is a private foundation that supports UNICEF’s missions and work, three days after the disaster (JCU, 2011b). This included allocating and raising funds, procuring necessary supplies, deploying program specialists, providing technical guidance and more. UNICEF’s program areas were: 1) emergency supplies; 2) health and nutrition; 3) education; 4) psychosocial support; 5) child protection; and 6) child-friendly reconstruction plans (JCU, 2011c). For tsunami-affected daycare centers, UNICEF refurbished the damaged materials and equipment, supported the construction of temporary school buildings, and provided psychosocial support trainings and counseling to their personnel. In Iwate, more than a dozen organizations focused their relief operations specifically to assist children in the affected area.<sup>11</sup>

Even though enormous external assistance had been poured to the affected communities, the local populations had to face various post-disaster challenges, including:

- Loss of family members, belongings, properties, jobs (means to live/earn) and more;
- Temporary and/or long-term displacements (difficult living situations, such as congested evacuation centers as well as limited spaces and privacy in prefabricated temporary housing arrangements);

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<sup>11</sup> In addition to the Japan Committee for UNICEF (JCU), for example, the list of organizations that were participated in the Coordination Meeting of Affected Children Assistance Organizations and Groups, which was held on 27<sup>th</sup> September 2011, in Morioka, Iwate, included: Japan Association for Play Therapy; HANDS (Health and Development Service); Save the Children Japan (SCJ); Kokkyo naki Kodomotachi [or Children without Borders]; Good Neighbors Japan; Peace Winds Japan; Nippon International Cooperation for Community Development; Campaign for Children in Palestine; World Vision Japan; Care International Japan; Shanti Volunteer Association; Japanese Red Cross Society; Child Line Support Center; Foundation for International Development/Relief; Ashinaga; and local universities, associations, and other governmental (service) offices and councils.

- Damages to lifeline services, including electricity, water and sewage systems, gas, telephone and mobile systems;
- Damages and disruption in public and other service systems;
- Damages to local businesses, industries and transportation systems;
- Difficult access to the daily necessities, including food, household items, etc.;
- Destruction and damages to the local infrastructures, which left massive debris to clean up, creating a large amount of dust and environmentally hazard wastes;
- Large areas of the land, including cultivated fields, residential houses and other public buildings, were flooded with and damaged from sea water, caused soil liquefaction;
- Various problems from the damaged Fukushima Dai-Ichi Nuclear Power Plant; and
- Long years of reconstruction, and unknown future of the affected communities (Iwate Prefecture, 2013; Kondo, 2012).

These conditions also disrupted the lives of children in the affected communities. Some children directly experienced the horrific event, and lost their parents, siblings, family members or friends. Their familiar home and neighborhood environments were also gone. Whether they witnessed the tsunami or not, many children, even young ones, were affected by the disaster, such as bed wetting, nightmares, aggressive behaviors, or regression as acting back as babies (Heroman & Bilmes, 2005; Sato & Honda, 2011).

While the recovery and reconstruction from the disaster are expected to take years, children in the affected areas need to cope with their disaster experiences and post-disaster situations, including changes in their familiar environments. Under such challenging conditions, how did the affected communities rebuild and maintain protective environments for children to access their care and development needs, This dissertation project examines the roles of early

childhood development (ECD) programs, especially daycare centers, as protective environments for young children in emergencies. This study furthermore investigates how their protective capacities were supported, or compromised, by concerned stakeholders to ensure children's safety and security at the critical times before, during and after the disaster.

## **1.2 RESEARCH QUESTIONS AND STUDY STRUCTURE**

Once month after the giant tsunami hit the entire eastern shoreline of the Tohoku, or northeastern region of Japan, I was in Iwate and began working as Field Manager of the Japan Committee for UNICEF (JCU) for its emergency response program. This study was developed based on my one-year working experience as a humanitarian worker and focused data collection activities in the Iwate's disaster-affected areas.

In Chapter 2, I discuss the conceptual frameworks that provided the theoretical foundations to this study. Although the humanitarianism has its long history, education, and early childhood development (ECD), in emergencies is a relatively new field in both humanitarian assistance and international development education. While the international legal frameworks supported the compliance of the humanitarian principles and the protection of children and their rights in emergencies, to ensure children access educational and childcare needs is not only a child protection concern but also a generational security issue for the crisis-affected communities and nations (Aguilar & Retamal, 2009; McClure & Retamal, 2010; Vargas-Barón & McClure, 1998).

As for the research approach, I situate my ontological and epistemological perspective within the interpretivist research paradigm (Crotty, 1998). While using both qualitative and

quantitative data available to my dissertation project, I focus on the qualitative, or ethnographic, inquiry process that allows me to "strive for coherence, which provides the reader with a vivid picture of the essence of the meanings of what is under study (Piantanida & Garman, 1999, p.247)." With the process, I intend to provide better understanding of how the protection of children and their childhood experiences were fulfilled under the disaster-affected conditions. Chapter 3 offers the detailed methodological frameworks, including the detailed explanations of the research procedures, for this study.

Based on the above conceptual and methodological frameworks, I place the following overarching research question to achieve the purpose of my dissertation study:

*"How do childcare and educational institutions respond to and cope with a severe disaster and provide 'protection' to young children and their childhood experiences during crisis time?"*

To answer this broad question, furthermore, I propose the following sub-questions:

- To what extent had daycare centers been prepared for a natural disaster like the 2011 earthquake and tsunami?
- What challenges did daycare centers face and overcome to ensure the safety and security of daycare age children (0-5 years old) during and after the disaster?
- Throughout the emergency response, recovery, and reconstruction periods, what elements were highlighted as important for daycare centers in order to provide safe and secure environments for children?
- How was the concept of protecting children and their childhood experiences integrated in the recovery and reconstruction process?

- How were the international and national child protection policies and practices incorporated into the local childcare and education systems in the disaster-affected area?
- How did these policies and practices complement, or undermine, local resiliency, sustainability and development in the post-disaster settings?

In Chapter 4, I present the comprehensive research findings based on the qualitative and quantitative data thoroughly collected and analyzed. As a result, the study unveils the following specific subject matters and questions:

- 1) How did daycare centers in Iwate prepare for such a severe catastrophe in regards to their disaster risk reduction (DRR) standards and measures?
- 2) How did they respond to and cope with the disaster situations and overcome specific challenges to ensure the safety and security of children in difficult environments?
- 3) What were the critical contributions and collaborations that the concerned stakeholders made to reinforce the protective capacities of daycare programs in emergency situations?
- 4) What can be learned from the 2011 experiences to improve and strengthen national and international disaster and emergency response capacities?

In addition to its theoretical and methodological contributions in the field of education and ECD in emergencies, in the final chapter, I discuss how this study and its critical findings reflected on and contributed to the conceptual frameworks given to this study. The study concludes with the recommendations that to (re-)establish and maintain protective environments for (young) children should be a critical strategy for sustainable development and generational security of the emergency-affected communities in the context of Japan and beyond.



## 2.0 CONCEPTUAL FRAMEWORKS

In 2013, the United Nations (UN) estimated that at least 16 countries around the world were still in great need of humanitarian assistance from the international community, with 51 million people affected by crises like natural disasters and armed conflicts (UN, 2012a). According to the UN Office for Disaster Risk Reduction, between 2000 and 2012, 2.9 billion people were affected by disasters, like drought, earthquake, epidemic, extreme temperature, flood, and others (UNISDR, 2013). Such crises result in disruption of normal lives among local populations and communities, or even in extreme hardships that may continue for years even after the events. Government systems may not be functioning temporarily or for a long period of time, infrastructures be damaged, and law and order may collapse. Under such difficult environments, how can children survive and fulfill their childhood potentials? How can the safety and security of their life cycles be protected even in crisis situations?

Over the last few decades, education became part of ‘emergency responses’, or ‘international assistance’. While food and water, shelter, and medical care (including sanitary environment) were considered as the traditional relief areas, both field professionals and researchers together attempted to advance the Education Sector to be “the fourth pillar” of humanitarian assistance (Machel, 1996; Norwegian Refugee Council, Redd Barna, & UNHCR, 1999). (Re-)creating protective environments for children in crisis situations became a key strategy in providing quality education (Aguilar & Retamal, 2009). Moreover, it was considered

as an important conceptual framework for protection of children and generational sustainability (Aguilar & Retamal, 2009; McClure & Retamal, 2010; Vargas-Barón & McClure, 1998).

In this chapter, I present conceptual frameworks that support my dissertation research focus: *protection of children and their childhood experiences*, including educational opportunities, *in emergencies*. First, I start with a larger picture of the field of emergency response and humanitarian assistance, exploring what an emergency entails in the context of international cooperation. Second, I discuss how ‘humanitarianism’ and security strategy shifted in the post-Cold War period. Third, this shift leads to the next discussion on how the context of emergency has been adopted into the field of international and development education. Fourth, I describe the importance of protective environments frameworks in relation to early childhood development (ECD) in emergencies, which is my primary study focus area. This chapter as a whole provides conceptual frameworks on the protection of children and their childhood experiences in emergencies.

## **2.1 HUMANITARIAN EMERGENCIES IN RECENT DECADES**

In general, an *emergency* is described as “a serious, unexpected, and often dangerous situation requiring immediate action.”<sup>12</sup> In the field of international cooperation, the term ‘emergency’ is often referred as a situation where the international community is required to respond to humanitarian needs of the populations in a country or region affected by crises, such as natural disasters and armed conflicts (UN General Assembly, 1991). To start, here, I review the recent

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<sup>12</sup> NewOxford American Dictionary, (2nd edition), 2005 by Oxford University Press, Inc.

experiences of natural disasters and armed conflicts around the world, and how these catastrophic events affected people and countries.

### **2.1.1 Natural disasters and armed conflicts**

For the last two decades, the scale of damage and destruction from some natural disasters has been overwhelming. For example, notable earthquakes occurred in the countries like Turkey (1999), India (Gujarat, 2001), Iran (Bam, 2003), Pakistan (Kashmir, 2005), China (Sichuan, 2008), and Haiti (2010) in recent memory. In 2004, a 9.1 to 9.3-magnitude earthquake in the Indian Ocean caused giant tsunamis. This massive catastrophe affected the entire surrounding region, from Southeast Asia to Africa. Devastating tropical storms are common along the coastlines of Asia and other regions. For example, Cyclone Nargis hit politically isolated and economically vulnerable Myanmar's poorer communities in 2008. Floods and droughts were more frequently seen around the globe – particularly the recent floods devastated Pakistan, and flooding became a seasonable event in Africa.

Natural disasters also hit industrial countries. Japan is chronically prone to earthquakes, and its earthquake preparedness systems are well developed. However, a 2011 magnitude 9.0 earthquake and subsequent enormous tsunami brought massive destruction and damages to local communities and the region. Furthermore, this catastrophe led to a series of secondary disasters, including the nuclear meltdown in Fukushima. The US also experienced large-scale tropical storms in recent years. The Hurricane Katrina and the latest Hurricane Sandy caused not only vast infrastructural devastation but also huge economical losses in the major metropolitan areas.

In many countries, tropical storms<sup>13</sup> may not be massive; however small island countries like Dominica experienced these storms as chronic events and serious threats to their survival and sustainability (Serrant, 2013). As climate changes may becoming more evident, natural disasters continue impacting people's lives around the world (O'Brien, O'Keefe, Rose, & Wisner, 2006; Schipper & Pelling, 2006).

As of April 2014, the International Crisis Group were monitoring and reporting more than 90 country and regional cases of conflicts, instabilities, and other forms of threats around the world.<sup>14</sup> With the end of the colonial period in the South and later the end of the Cold War, the world witnessed more internal conflicts, or conflicts within territories, than wars across international borders. Both the colonization and the Cold War periods left imbalanced power opportunities and unequal access to resources among different social groups within those countries. Many of these countries were used to be under the control of the western countries or the two big powers, US and the Soviet Union. These groups were often divided by political, ethnic, tribal, religious, or secular differences. Many conflicts happened in developing nations, newly independent countries, or countries that experienced political or ideological transitions or dramatic regime changes. Some of these conflicts resulted in inhuman acts, such as the genocide in Rwanda, the ethnic cleansing in the Balkans, or the horrific atrocities and massive child soldiering in northern Uganda. Others were not necessarily sudden or intensive, but rather gradual, accumulated, or even quiet, and perhaps to be amplified or suddenly erupted by a small fracture of the problem if neglected for a prolonged time, such as the Democratic Republic of

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<sup>13</sup> The World Meteorological Organization (WMO) uses "tropical cyclone" and "tropical revolving storm" as the same term (from WMO's Manual on Codes, 1995 edition). The International Federation of Red Cross and Red Crescent Societies (IFRC) described the characteristics of such storm as "a large scale closed circulation system in the atmosphere which combines low pressure and strong winds... (IFRC, 2013)." Depending on where it occurs, a tropical storm or cyclone is named differently – a "cyclone" in the Indian Ocean and South Pacific, "hurricane" in the Western Atlantic and Eastern Pacific and "typhoon" in the Western Pacific. Here I use "tropical storm(s)" as a generic term for all the above.

<sup>14</sup> Periodic reports are available at: <http://www.crisisgroup.org/en.aspx>

Congo. A few of the conflicts that had begun in the corners of the countries transformed into the major political changes, like Timor-Leste, Nepal, and more.

### **2.1.2 Complex emergencies**

For the last two decades, the international community has often used the term of ‘complex emergencies’ to describe major emergencies. While no commonly used definition is given, the term ‘complex emergency’, or even ‘complex humanitarian emergency’, is also widely used to describe an armed conflict (Pigozzi, 1999; Sinclair, 2002). However, its use seems not limited to describe only armed conflict. The World Health Organization (WHO) explained:

The term complex emergencies is used to describe situations of disrupted livelihoods and threats to life produced by warfare, civil disturbance and large-scale movements of people, in which any emergency response has to be conducted in a difficult political and security environment. A combination of complex disasters and natural hazards (e.g. military and political problems combined with severe winter weather, coastal storms and flooding, drought and a cholera epidemic) was particularly devastating in the 1990s in such countries as Bosnia and Herzegovina, Iraq, Myanmar, Peru and Somalia (2002, pp.12-13).

Complex emergencies can be further exacerbated by natural disasters. Moreover, the Inter-agency Standing Committee (IASC) defined complex emergencies as “those [crisis situations] which exceed the mandate and/or capacity of any agency and are deemed to require a system-wide approach” and “often linked to natural calamities (1994, p. 2).” The Organisation for Economic Co-operation and Development (OECD) noted that the term ‘complex emergency’ was coined in Mozambique during the latter half of the 1980s. According to them, there “was the need for international aid agencies to acknowledge the ‘emergency aid’ or humanitarian assistance needs were being generated by armed conflict as well as by periodic ‘natural disaster’ events,” while it was too sensitive to use the “terms such as ‘war’, ‘civil war’ and ‘conflict’ ... in

the Mozambican context at the time (OECD, 1999, pp. 5-6).” They needed to create a different term to frame the newly challenging and complicated situations that could not be defined simply by either of emergency, natural disaster, or man-made crisis.

The term ‘complex emergencies’, nonetheless, is still more commonly used to describe armed conflicts or instabilities, whether or not natural calamities are to be added into the context. For example, the Office for the Coordination of Humanitarian Affairs (OCHA) (1999) listed the following characteristics of complex emergencies:

- extensive violence and loss of life;
- massive displacements of people;
- widespread damage to societies and economies;
- the need for large-scale, multi-faceted humanitarian assistance;
- the hindrance or prevention of humanitarian assistance by political and military constraints; and
- significant security risks for humanitarian relief workers in some areas.

As for another example, OECD (1999) described that the situations of complex emergencies entailed the following:

- intra-state rather than inter-state conflict;
- difficulty in differentiating combatants and civilians;
- violence directed towards civilians and civil structures;
- fluidity of the situation on the ground;
- lack or absence of normal accountability mechanisms;
- the potential and actual development of war economies;
- the potential for humanitarian assistance to prolong the conflict; and
- a multiplicity of actors.

Recent conflicts in Afghanistan, Iraq, Somalia, Syria and many others consisted the characteristics of ‘complex emergencies,’ and the situations were extremely complicated and challenging for the humanitarian agencies to respond. These observations suggest that complex emergencies present further challenges that require: a) careful analysis of complicated local situations; and b) cautious planning and execution of humanitarian interventions.

### 2.1.3 Impacts on people and governments

The crises described above can heavily impact people's lives, including the loss of lives and mass displacements either within the countries (i.e., Internally Displaced Populations [IDPs]<sup>15</sup>) or beyond international borders (i.e., refugees). These emergency situations disrupt people's normal pace of living, or force them into extreme hardships for a long period of time. They may be affected by loss of lives, homes, belongings and livelihoods; and inadequate access to medical care, food sources, safe water and sanitation facilities, and education and other essential services. The impacts on children can be devastating: physical harm; displacement; separation from their families; psychological distress; or lack of access to health, nutritious and educational services. Children may be specifically targeted in violence, including direct attacks in conflicts, forced recruitment in military forces, or sexual and gender-based violence. Some of these impacts may become causes of: malnutrition; health problems; or disruption to normal physical and cognitive development with long-term consequences.

These crises also severely affect the countries themselves. Government structures may be damaged extensively, with losses of material, financial and human resources paralyzing their governing systems. The disasters may also impact, or even regress, these countries' economic development. For example, the Maldives 'graduated' from the list of Least Developed Countries (LDCs)<sup>16</sup> on December 20, 2004, just 6 days before the tsunami disaster hit the country. Later the decision to graduate Maldives from the list of LDCs was reconsidered (Ministry of Planning

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<sup>15</sup> IDP is defined as "internally displaced persons are persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized State border" (UN Commission on Human Rights, 1998)

<sup>16</sup> For the criteria to be added to the list of Least Developed Countries (LDC) and to qualify for graduation, see the *Criteria for the Identification of the LDCs* published by the UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States at: <http://www.un.org/special-rep/ohrlls/lde/lde%20criteria.htm>

and National Development, 2006). Only in 2011, the country finally graduated from the LDC list to become a Middle Income Country (MIC) (Ministry of Foreign Affairs, 2011).

When disasters happen, the affected governments are often overwhelmed, and sometimes unable to solely respond to the massive and unexpected humanitarian needs of their populations. In next section, I discuss how humanitarian assistance has been approached as part of the international cooperation.

## **2.2 NEW HUMANITARIANISM AND HUMAN SECURITY**

*“Do unto others as you would have them do unto you.”*

The UN headquarters in New York displays a mosaic work of Norman Rockwell’s painting “The Golden Rule,” which was given by Mrs. Nancy Reagan, the then First Lady, on behalf of the United States (UN, 2001). The painting contains the above inscription, which can be clearly associated with the mission of UN. The Golden Rule represents the idea of humanitarianism and its *shift* in the last two decades or so.

In this section, I first lay out the humanitarian principles as basis for all humanitarian actions, which include education. Then, I discuss how humanitarianism has shifted, coinciding with changes in security concerns from national to individual, or ‘human security.’ Based on these contexts, lastly, I review what challenges affected states and the international community faced and what efforts they made to ensure delivery of humanitarian assistance to the affected.



### 2.2.1 Humanitarian principles

According to the International Committee of the Red Cross (ICRC), the battle of Solferino in northern Italy in mid 1859 was “a pivotal moment in the evolution of modern humanitarianism,” where Henry Dunant, its founder, led local female volunteers to care for and treat the wounded and dying equally “regardless of what side they had fought on (2010).” Similar to the creation of the ICRC and the National Red Cross and Red Crescent Societies, humanitarian assistance became one of the central missions of the UN to assist the people affected by wars and armed conflicts as well as natural disasters around the world.

The 1991 General Assembly Resolution (A/RES/46/182), which was agreed by the UN member states, clearly stated that:

- 1) humanitarian assistance is of cardinal importance for the victims of natural disasters and other emergencies; and that
- 2) humanitarian assistance must be provided in accordance with the principles of *humanity* (or *humanitarian imperative* as often referred), *neutrality* and *impartiality* (UN General Assembly, 1991).

The above resolution also affirmed the establishment of the United Nations Office for the Coordination of Humanitarian Affairs (OCHA) as well as the Inter-Agency Standing Committee (IASC) to support and strengthen the state capacities to respond to emergency situations. These bodies were to coordinate with UN and other humanitarian organizations and to ensure the listed humanitarian principles to be shared and respected by all actors of the humanitarian community.

Some humanitarian organizations have incorporated additional values to the above principles. For example, UNICEF adopted a *human rights-based* programming approach, *gender equality* programming, and the ‘*Do No Harm*’ principle in its emergency response frameworks (UNICEF, 2010). These clearly defined and agreed humanitarian principles also influenced the understanding of humanitarian assistance. Traditionally, humanitarian assistance was seen as the

provision of basic survival needs, such as access to food and water, shelter and medical care. After the end of the colonial period and of the Cold War, humanitarian relief efforts became a major part of the international cooperation enterprise, and the field of humanitarian assistance gradually involved the protection of “survival, livelihood and dignity (Amouyel, 2006, p. 16)” in the affected communities. Greenaway (2000) noted this shift as “inevitably, it has not gone unnoticed that more might be done, and needs to be done, ... than simply providing *relief* [italics added].” This expansion of humanitarian assistance coincided with the shifting focus from national security to human security, and, in the following, I explore the concept of security in relation to how the security of the crisis-affected populations affect their overall development, and vice versa.

### **2.2.2 From national security to human security**

At about the same time, after the end of the Cold War, the concept of ‘security’ was also expanded from *territorial*, national security, to include *individual* security, or “human security” as the United Nations Development Programme (UNDP) reported (1994). While a few exceptions had remained (e.g., Israeli and Palestinian disputes), the nature of wars and armed conflicts in the 1990s changed from across national borders to within state’s territories, or between groups with political, ethnic, tribal, religious, or secular differences. These shifts led to giving more attention to personal protection, or security for individuals (or individual groups), from national collective protection of territories and resources. This change occurred during the last decade(s) of the 20th century, as the international community started more focusing on human rights-based approaches to their development as well as humanitarian assistance programmes (Early Years, 2010; UNICEF & UNESCO, 2007).

Although the definition of *human security* remained debatable (Amouyel, 2006; Jolly & Ray, 2007), the University of British Columbia's report suggested two (2) characterizations of human security as follows:

- 1) a *narrow* definition that focuses on the protection of communities and individuals from violence; and
- 2) a *broader* formulation of human security agenda that encompasses even economic insecurity, threats to human dignity, and "hunger, disease and natural disasters which in reality kill far more people than war, genocide and terrorism combined" (2005).

Even the definitions of 'violence' could be varied. For example, Galtung (1969) argued the following two definitions of violence:

- 1) *personal* and *direct* violence refers to physical and psychological violence;
- 2) *indirect* and *structural* violence indicates the situations where people are oppressed by and/or suffer from certain sociopolitical and economic systems.

He used the following example of tuberculosis as 'indirect and structural violence':

[I]f a person died from tuberculosis in the eighteenth century it would be hard to conceive of this as violence since it might have been quite unavoidable, but if he dies from it today, despite all the medical resources in the world, then violence is present according to our definition (Galtung, 1969, p. 168).

UNDP, nonetheless, explained that economic, food, health, environmental, personal, community and political securities could become threats to human security, and suggested that human security should be achievable through sustainable *human development* could should be considered (1994). It defined (human) development as follows:

Human Development is ... about creating an environment in which people can develop their full potential and lead productive, creative lives in accord with their needs and interests. ... Development is thus about expanding the choices people have to lead lives that they value. (UNDP, 2009)

UNDP further characterized the difference between human security and human development as follows:

*Human development is a broader concept --- as a process of widening the range of people's choices. Human security means that people can exercise these choices safely and freely --- and that they can be relatively confident that the opportunities they have today are not totally lost tomorrow.* [italics added] (1994, p. 23)

In other words, safety and freedom of choice should be prerequisite and relatively sustainable, or promised, in order to enjoy increasing opportunities for human development. However, this presents a question of which should come first, *development* or *security*. In fact, human development and human security are mutually inclusive phenomenon that: if there is no human security, it may not be possible to achieve *sustainable* human development; and if there is no prospect for sustainable human development, it may become threat to human security, which may even become national security threat.

In regards to the relations of human security and education, Williams chose the *broader* concept of human security to discuss the relation of education and human survival, and described that human security was to seek for peaceful human co-survival where education could be impacted by and influence: development (human needs); environment (resource limits); and violence (conflicts) (2000). Davies also pointed out that education could contribute to human security in four interlinked areas: economic, national, political, and personal security (2006).

Whether security threats became the causes of crisis situations or emergencies further created security hazards, humanitarian responses should be focused on security, national or human, or in the broad or narrow definition (Rêve, 2006). Next, I review humanitarian responsibilities by outlining the existing humanitarian response capacities within the states as well as in the international community.

### **2.2.3 Humanitarian responsibilities**

Some of the actors involved in humanitarian assistance are specialized in relief programs, and others are those that operate in both development and humanitarian. In the recent decades, there are hundreds, if not thousands, of organizations worldwide involved in the field of humanitarian assistance to support the host governments and crisis-affected communities. These include: community-based, national and international non-governmental organizations (NGOs), or non-profit organizations (NPOs); inter- or quasi-governmental organizations, and bi- and multi-lateral donor agencies. Because of the demanding nature of crisis situations, furthermore, expectations and requirements in humanitarian assistance have created critical mechanisms and dynamics at all levels. As a result, the field of humanitarian assistance has become complex both situationally and operationally. In the following, I highlight such actors and systems to respond to the humanitarian assistance needs of the crisis-affected populations on the ground.

#### **2.2.3.1 (Affected) governments and communities**

The 1991 General Assembly Resolution (A/RES/46/182) clearly stated:

Each State has the responsibility first and foremost to take care of the victims of natural disasters and other emergencies occurring on its territory. Hence, the affected State has the primary role in the initiation, organization, coordination, and implementation of humanitarian assistance within its territory (UN General Assembly, 1991).

The industrialized countries like Japan or US should be able to generate their existing systems and own resources and capacities to respond to humanitarian needs of the crisis affected populations. In Japan, for example, the law called “Basic Act on Disaster Control Measures” ensures the immediate establishment of disaster countermeasure headquarters, or *saigai-taisaku-honbu*, within the governments to manage all disaster responses (“Basic Act on Disaster Control

Measures," 1961). In the US, the Federal Emergency Management Agency (FEMA) is responsible for coordinating government-wide relief efforts (FEMA, 2014). However, there are many countries, like Afghanistan, Haiti, Pakistan, Uganda and others, that may not have the structures, resources or capacities (or even *willingness*) to “take care of the victims of ... emergencies occurring on its territory (UN General Assembly, 1991),” and require external assistance. Yet, according to the above resolution, the affected nation should be responsible for and lead the humanitarian response processes, and the availability of external humanitarian assistance should be based on the consent of and an appeal by the host country.

A few literature and reports highlighted that many governments and communities that were affected by crises like disaster and conflicts often did not have the capacities to respond to the needs of their populations (Department for International Development [DFID], 2005; Kirk, 2007; Rose & Greeley, 2006). Often governing systems were heavily damaged or dysfunctional after crises. In armed conflicts, governments themselves might become central targets of violence. When their capacities were weak, or weakened by the crises, the host governments could be sometimes sidelined by the international community, which might take over the operation and coordination of assistance on the ground. Nevertheless, governments should hold the primary ‘human security’ responsibility for their own people, and the focus of the international community should be given to maintaining and reinforcing such governmental capacities in humanitarian assistance.

As for the roles of affected communities themselves, community participation, or community involvement, was often encouraged in the processes of assessment, planning, implementation, and monitoring and evaluation of humanitarian assistance programs (INEE, 2010; Sphere Project, 2004). Furthermore, as government systems and structures were often

collapsed or not adequately responsive in emergencies, humanitarian agencies, especially NGOs, tended to directly deliver aid to or work with the communities. Burde (2004b), however, criticized their over-reliance on community participation in the absence of strong democratic state structures, especially in the context of (post-)conflict. She described that it might 1) undermine) the social contract between citizen and state; and 2) aggravate rather than assuage the social divisions that are particularly dangerous and pronounced after a conflict. She continued: “participation may provide a patchwork solution to systemic problems, veiling more profound and contentious issues of structural change and political representation (Burde, 2004b, p. 73).” Humanitarian intervention should never go as far as “(revising) the relationship of the state to its citizens (Ibid.).” It should be carried out with understanding of and respect to the roles and responsibilities of the state in relation to its people and communities.

In regards to the effectiveness of external assistance, a few academics were concerned of the reliance on best practice approaches, which might overlook historical relations and local capacities of the affected communities. Referring to the US post-conflict intervention strategy in education reform, Sobe pointed out the importance of “(having) a better historical understanding of the linkages between education reform and post-conflict peace building (2009, p.13).” He further criticized that technical solutions based on best practice research, which was often used by aid agencies from western countries, would stay as partial. Burde (2004b) also concurred as common NGOs’ usage of best practice approach might not be resulted in best outcomes, unless focusing on the local capacities of governments and the communities.

In emergency and post-crisis situations, where the local response capacities are limited, the international community could, and should, step in to meet the urgent humanitarian needs of the affected populations. However, the local relevance of emergency, recovery and

reconstruction assistance and social contracts of their relations need to be respected by all actors. For most sustainable impacts of humanitarian assistance, the international community should largely support and strengthen the essential roles of and relations between governments and communities so that they could help themselves to care their own populations.

#### **2.2.3.2 Humanitarian community and coordination**

The United Nations Children's Fund (UNICEF), for example, was established in December 1946, and its initial founding mission was humanitarian assistance to provide food, clothing and health care to European children who were facing famine and disease after World War II (UNICEF, 2003). The agency was originally called as the United Nations International Children's Emergency Fund, or U-N-I-C-E-F, and its acronym has remained till today. Along with UNICEF, many other UN agencies are specialized in humanitarian assistance, and each organization operates based on its own specific mandate. As UNICEF is specialized in the protection and promotion of children's rights, for example, the World Health Organisation (WHO) focuses on health and medical care, the World Food Programme (WFP) on food security and distribution, and the UN High Commissioner for Refugees (UNHCR) specialized in the protection of displaced populations, including refugees and IDPs. They closely work and coordinate with host governments and non-governmental organizations (NGOs) in delivering aid to the affected.

The field of humanitarian assistance is chronically under-funded against the assessed requirements and appeals presented to the international community. Some of the above organizations raise funds through their own structures. In addition, donor communities, bilateral and multilateral, contribute financially to the relief operations on the ground. While they focused on different foreign assistance agendas, such as ensuring human and national security or building

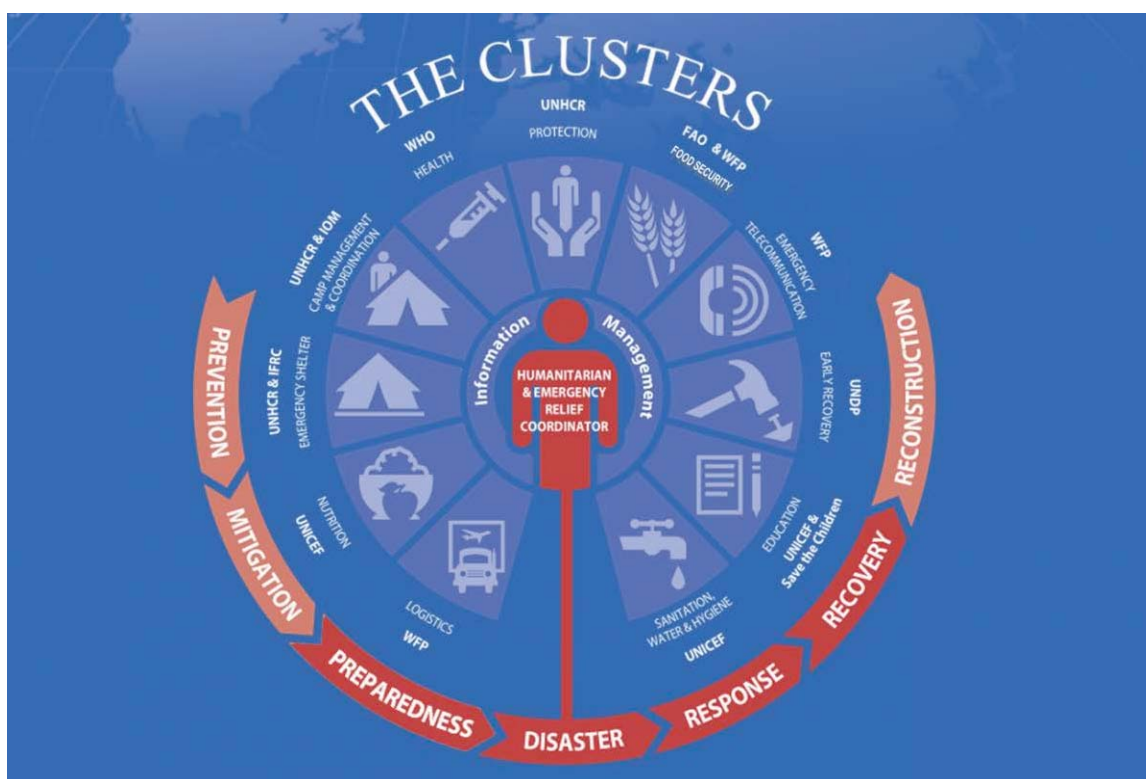


governmental capacities, these donors came together to make the aid better “harmonized” and more “effective” (High Level Forum, 2005). Furthermore, the private sectors’ contributions and partnerships, both corporations and individuals, also increased in recent years. Rieth (2009) explained that this might be due to the growing realization of “(corporate) social responsibility”. The recent advanced development of information technology and media outreach might also help the interest and contributions from the private sectors.

Focusing on human security and expanding traditional humanitarianism certainly opened the door for many non-traditional relief organizations, both UNs and NGOs, to re-discover themselves in humanitarian assistance. For example, after the fall of Taliban, there were massive influxes of NGOs in Afghanistan to prepare for the repatriations of Afghan refugees. The 2004 Indian Ocean Tsunami required larger numbers of organizations, which could be quickly deployed with the substantial operational capacities to the widespread countries in the Southeast and South Asian, and even East African, regions. As a result, these emergency operations created opportunities for the organizations to extend their reach – from development to humanitarian assistance, from non-education to education services, or from one geographical area to another (e.g., from Afghanistan to Pakistan, from Aceh to Haiti). Consequently, the situations often became chaotic, creating challenges to the coordination of numerous agencies with different capacities, mandates, and backgrounds (UNICEF, 2005a).

Coordination is always an issue in humanitarian assistance. This is especially true where governments in the developing world lack the capacity to orchestrate external aid organizations to respond to the overwhelming humanitarian needs of the crisis-affected communities. In response to the coordination problem, the UN, specifically the Office for the Coordination of Humanitarian Affairs (OCHA) and the Inter-Agency Standing Committee (IASC), implemented

the humanitarian aid reform. One of the three main reform areas was the introduction of *Cluster Approach* into the UN's humanitarian assistance programmes in 2006. According to the then UN Under-Secretary General for Humanitarian Affairs and Emergency Relief Coordinator (ERC), the Cluster Approach consisted “raising *standards*; and ensuring greater *predictability*, *accountability* and *partnership* in all sectors [italics added] (Holmes, 2007, p. 4).” As shown in Figure 2, eleven Clusters were established, including: 1) logistics; 2) nutrition; 3) emergency shelter; 4) camp management and coordination; 5) health; 6) protection; 7) food security; 8) emergency telecommunication; 9) early recovery; 10) education; 11) sanitation, water and hygiene (OCHA, 2013).



**Figure 2.** Cluster coordination - "How the cluster system works"

Adapted from “How the cluster system works,” by OCHA, 2013. Copyright 2013 by the UN Office for the Coordination of Humanitarian Affairs.

Each Cluster was assigned with a Cluster Lead agency, or Co-Leads at both global and country levels. UNICEF and Save the Children are currently appointed as Co-Leads of the Education Cluster. The terms of reference for Cluster Leads were clearly defined, as Country and global Cluster Leads are:

- 1) to be accountable to the Humanitarian and Emergency Relief Coordinators respectively;
- 2) to play the role of facilitator in each Cluster group to coordinate the activities by different actors;
- 3) to set the standards of their services; and
- 4) to become the provider of “last resort” (IASC, 2006).

For the third point, the following guidelines were the results of ‘standard settings’ for the humanitarian community and their assistance:

- *The Code of Conduct for the International Red Cross and Red Crescent Movement and NGOs in Disaster Relief*, developed by the Steering Committee for Humanitarian Response (SCHR) in 1994; and
- *The Sphere standards – Humanitarian Charters and Minimum Standards in Disaster Response*, issued in 1998 (Sphere Project, 2004).

These principles became the essential guidelines for the humanitarian agencies to respect and follow as the rules and standards in the provision of quality relief assistances. For the last point for the Cluster Leads “to become the provider of last resort,” IASC explained:

Where there are critical gaps in humanitarian response, it is the responsibility of cluster leads to call on all relevant humanitarian partners to address these. If this fails, then depending on the urgency, the cluster lead as ‘provider of last resort’ may need to commit itself to filling the gap. If, however, funds are not forthcoming for these activities, the cluster lead cannot be expected to implement these activities, but should continue to work with the Humanitarian Coordinator and donors to mobilize the necessary resources. (2008, p. 1)

In the Education Sector, the Inter-agency Network for Education in Emergencies (INEE) has played the role of facilitator and information resource provider for education professionals

and academics working in emergencies. As its efforts to make education as the fourth pillar of humanitarian assistance, INEE followed the above Sphere model, and developed the *Minimum Standards for Education in Emergencies, Chronic Crises and Early Reconstruction* (INEE, 2004, 2010). While its development and consultation process of the standards was initially questioned (Andina, 2007), INEE suggested that the minimum standards need to be flexible and adaptable based on each field situation. As part of the cluster approach to “ensuring greater *predictability*,” it is important to have standards or guidelines to quickly respond to an emergency, but it is also necessary to be aware that in reality, including cluster use “(w)hat works in one emergency might not work so well in another (Haiplik, 2007, p. 42).”

Natural disasters and armed conflicts devastated both local populations and governmental capacities. As relief and security needs of the affected are to be more inclusive to achieve sustainable human development and survival, humanitarian assistance has become a complex enterprise. As Greenaway described, “(the) point of the ‘new humanitarianism’ is ... to acknowledge that ‘complex emergencies’ need ‘complex response[s]’ (2000).” To maneuver such demanding and complex dynamics, it seems to be important for the humanitarian community to balance between: the rapid response capacity through predictable scenarios and models, clearly-set roles and responsibilities, and already-established partnerships; and the ability to recognize and adjust based on the local knowledge and context.

### **2.3 EDUCATION IN EMERGENCIES**

Education ... gives shape and structure to children’s lives and can instil community values, promote justice and respect for human rights and enhance peace, stability and interdependence (Machel, 1996, p. 54).

In 1996, Graça Machel, the third wife of Nelson Mandela and the widow of the former Mozambique's president, was commissioned to lead a landmark study called *The Impact of Armed Conflict on Children*, and presented it to the UN General Assembly. While the report thoroughly and vividly portrayed children's sufferings, risks, and vulnerabilities in the time of armed conflict, she stressed the importance of schooling, or educational activities, even in the difficult time because it would represent a state of normalcy for children and hope for the community (IASC, 2002; Machel, 1996).

In this section, I review the key frameworks and perspectives that supported protection of children's rights to education in crisis situations. Then, I examined critical roles and risks of education that would affect children's safety and security in emergencies.

### **2.3.1 International legal frameworks and global commitments**

Everyone has the right to education (UN General Assembly, 1948).

The right to education was promised in Article 26 of the 1948 Universal Declaration of Human Rights (UN General Assembly, 1948), and, later, the 1989 Conventions on the Rights of the Child specified the education right for children in Article 28 and 29 (UN General Assembly, 1989) (See the relevant Articles in APPENDIX A). Both of these international legal frameworks affirmed that basic education should be free and compulsory. In 1990, national governments came together at the World Conference on Education for All (EFA) in Jomtien and promised to achieve universal access to basic education for all children worldwide (UNESCO, 1990). This commitment was re-affirmed at both the 2000 Dakar World Education Forum (UNESCO, 2000) and the 2000 Millennium Summit (UN General Assembly, 2000b). Eight Millennium

Development Goals (MDGs) were set for 2015, and two of them reflected the goals in education as follows:

- MDG Goal 2 [Achieve universal primary education] Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling; and
- MDG Goal 3 [Promote gender equality and empower women] Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015 (UN, 2008).

These listed key frameworks and targets were adopted and incorporated by the national governments in their national development and educational planning. However, the global progress toward EFA seemed to have been struggled, as UNESCO reported:

The number of primary school age children out of school has fallen from 108 million to 61 million since 1999, but three-quarters of this reduction was achieved between 1999 and 2004. Between 2008 and 2010 progress stalled altogether (2012, p. 3).

These commitments, furthermore, did not exclude children affected by crises, like armed conflicts and natural disasters. At the 2000 Dakar World Education Forum, the subject of education in situations of emergency and crisis was discussed as one of the main thematic areas for the first time. The participating national governments agreed on the following strategic goals:

Meet the needs of education systems affected by conflict, natural calamities and instability, and conduct educational programmes in ways that promote mutual understanding, peace and tolerance, and that help to prevent violence and conflict (UNESCO, 2000, p. 19).

For the contexts of war and armed conflict, there were additional international legal frameworks that specifically supported the protection of children's rights, including education (ICRC, 1949; UN General Assembly, 2000a). The UN Security Council further recognized "attacks against schools or hospitals," places generally having a significant presence of children, as one of the "six grave violations against children (and their rights) during armed conflicts"

(UN, 2009).<sup>17</sup> These frameworks gave parties involved in conflicts, including non-state entities, the responsibilities to respect and protect children to access their educational rights.

As for natural disasters, the nation states and international community came together in 2005, resulted in the landmark Hyogo Framework for Action (UNISDR, 2005). They made the commitments to strengthen the disaster preparedness systems and capacities, including in the Education Sector, and make the world more resilient to hazards and crises (UN, 2012b).

These above frameworks and commitments indicated the international efforts to protect the rights of children, including their education rights, in emergencies. This was emphasized in the collective statement by the leading humanitarian agencies in education:

(D)elivering education in emergencies is ... about providing children with continued opportunities for formal and non-formal learning and development. ... Education must form part of all humanitarian responses from day one if children are to be protected, have their rights upheld and have an opportunity for a brighter future (Education Cluster Unit, 2009).

The international community, often led by the UN, urged that the nation states, and extended local communities (including non-state entities in conflicts), must be primarily responsible to ensure their children's education rights in any context. At the same time, it became the global responsibility for the international community to: 1) promote (re-)building of peaceful and resilient nations and democratic societies; and 2) support the nation states' efforts to ensure children access educational opportunities even in crisis situations.

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<sup>17</sup> According to the UN's Office of the Special Representative of the Secretary-General for Children and Armed Conflict (UN, 2009), the Six Grave Violations Against Children During Armed Conflict included: 1) killing or maiming of children; 2) recruitment or use of child soldiers; 3) rape and other forms of sexual violence against children; 4) abduction of children; 5) *attacks against schools or hospitals*; and 6) denial of humanitarian access to children; and its framework paper further explained that:

The *Rome Statute* (UN General Assembly, 1998) extends the criminal accountability for these actions (or failures to protect), providing the ICC (International Criminal Court) explicit jurisdiction to prosecute and punish those that intentionally target schools or hospitals during wartime. Such actions amount to war crimes regardless of whether they occur during an international or non-international armed conflict.

### 2.3.2 Complex frameworks of education in emergencies

Practitioners and researchers use the term ‘education in emergencies’ to describe this emerging sub-field of international development education. However, what is classified to be ‘education in emergencies’, has been varied, and it may not be necessarily associated with a conflict or natural disaster. For example, UNICEF included even “persistent poverty, the increasing number of children living on streets, and the HIV/AIDS pandemic” as “silent, chronic emergencies,” which all “have an adverse impact on education (Pigozzi, 1999, p. 1).”

Some multilateral and bilateral donors used the term of ‘fragile states’ to describe the nations with the governments that may not have capacities, or willingness, to aid fundamental, or urgent, needs of their populations (Bird, 2007; Brannelly, Ndaruhutse, & Rigaud, 2009; Kirk, 2007; Rose & Greeley, 2006; Save the Children, 2007). These countries experienced instabilities or insecurity within or across their borders. However, many of these states did not consider themselves nor wanted to be labeled as ‘fragile states’ (Mosselson, Wheaton, & Frisoli, 2009). The 1998 edited book *Education as a Humanitarian Response* offered early examples of how education could be situated as part of humanitarian assistance (Retamal & Aedo-Richmond, 1998b). At the 2000 EFA forum in Dakar, emergency education specialists and government officials concluded that the education systems affected by “*calamity, conflict and instability* [italics added]” required special measures to meet their needs (Sinclair, 2002; UNESCO, 2000).

While different terms were used to describe the field of education in emergencies, they all indicated the same or similar critical situations where: 1) children’s rights to education were denied or difficult to attain due to catastrophic events or dire conditions; and 2) urgent responses and special measures were required to fulfill their educational needs. Thus, the term of ‘education in emergencies’ is inclusive, and perhaps appropriate, to describe such diverse and



complicated conditions, in which educational opportunities should be protected. However, the next question is: Is education, or did it become, a relief activity in the traditional sense, where urgent ‘survival’ requirements of the affected need to be met? Or, should education be considered as a traditional development enterprise even in emergency situations? In the following, I review and compare both camps of education ‘as humanitarian assistance’ and ‘as a development activity’ to examine how these ideas were interrelated and co-existing.

### **2.3.2.1 Education as humanitarian assistance**

As discussed earlier, the shift to human security and increased focus on human rights-based approaches in international cooperation also gave *non-survival* sectors, such as education, an opportunity in humanitarian assistance. Aguilar and Retamal pointed out that the 1991 UN Resolution 46/182 gave the international community new guidelines to adjust their strategies in emergencies:

The new political framework faced by the Post-Cold War era has forced the international community to give priority in its agenda to a new strategy for peace-keeping and humanitarian assistance. As a response to this need, United Nations Resolution 46/182 created guidelines in order to ensure an international mandate that is able to provide ‘a continuum of action from early warning prevention and preparedness to humanitarian relief and the transition to rehabilitation and development’ (1998, p. 7).

They, however, noted that, in the cited UN Resolution, “no clear reference is made to the role education should play in complex emergencies (Ibid.)” In the mid 1990s, humanitarian education specialists began active advocacy within the international community to recognize education as the “fourth pillar of humanitarian assistance” (Machel, 1996; Norwegian Refugee Council et al., 1999). This was based on the recognition of education as one of the *fundamental* rights of children even in difficult circumstances like conflict or natural disaster. These specialists further emphasized that education should be the central element of all humanitarian

assistance programs (Bensalah, Sinclair, Nacer, Commisso, & Bokhari, 2001; Retamal & Aedo-Richmond, 1998a; Sinclair, 2002; Sommers, 2002; Talbot, 2002).

It has been, nevertheless, a great challenge for the education professional group to *situate* education within the humanitarian field. Education does not directly impact on basic survival of the affected populations. However, it has rather sustainable impacts on their lives in post-crisis periods. For a long time, education was not recognized or treated as a priority area in humanitarian assistance. Moreover, its funding was, and still is, chronically short (so as any other humanitarian fields have been) (Nicolai, 2007). Aguilar and Retamal described: “Usually, education is perceived as a *developmental* initiative. Thus, it is often excluded from the ‘emergency preparedness response’ [*italics added*] (1998, p. 8).”

In order to ‘fit in’ with the larger humanitarian culture, the education group needed to ‘package’ the educational interventions. In this way, education could be considered as part of emergency response activities. It was in Somalia in early 1990s, and later in Rwanda, Mozambique, Angola, and other places, that a few emergency education specialists developed the foundation of what are considered now as emergency education response programs. Aguilar and Retamal summarized those innovative program interventions and experiences in their publication *Rapid Educational Response in Complex Emergencies* (1998). This document included the following key elements of the emergency education programs: a) phase-wise programming; b) examples of education kits with essential teaching and learning materials; c) training needs of both new and existing teachers; and d) development of various emergency specific subject areas, such as landmine awareness education and psychosocial support activities.

Although the use of ‘kits’ was much debated (Sinclair, 2001; Sommers, 2002), these emergency education program components became relevant, feasible, and comprehensive

models among the humanitarian education actors. However, the focus was given to how to incorporate education in emergency operations, or how to make educational programs relevant in humanitarian assistance. In other words, it was rather for education programs to become like other emergency interventions.

Emergency education responses were focused on speedy delivery and minimum inputs to resume educational activities in the affected communities. Traditionally, one of the measures for successful relief operations was how many people's needs were how quickly met. Thus, the Education Sector was often expected to produce the same types of results as other relief activities, such as: how quickly educational activities were started, whereas how rapidly shelter tents were distributed; or how many children received learning materials, comparable to how many children received vaccines.

This exact perception also affected monitoring and evaluation of education programs as part of humanitarian assistance. It has been an obvious challenge that educational achievements cannot be simply measured in the same way as other sectors do. For example, how many children enrolled in educational programs does not instantly translate to how many children completed a school year or primary education, or to what kind of educational knowledge and skills they attained. Educational achievements cannot be measured overnight as often demanded in relief operations.

The nature of education programs and activities may be always different from other traditional humanitarian sectors. Lack of it will not directly affect someone's physical survival. However, it is a human right, and a vital element in one's life, for his or her development and sustainability. Next, I explore the perception of education in emergencies as a development activity to compare with the above discussion.

### **2.3.2.2 Education as a development activity**

While facing the challenge to be fully part of humanitarian assistance, education specialists kept the foundation of emergency education programs in a development sphere. Pigozzi stressed that “education is not a relief activity: ... and must be conceptualized as a development activity (1999, p. i).” She further suggested that “education in emergency situations” should not be seen “as a short-term response that is a ‘stop-gap’ measure until normalcy can be restored (Pigozzi, 1999, p. 3).” Obviously, education is not a relief work in a traditional sense, because educational experiences are continuous processes. In order to recover and rebuild the entire Education Sector in crisis situations, there is no quick solution, and interventions should be *continuous* and *sustainable* (Aguilar & Retamal, 2009).

For those who work for education programs in emergency settings, however, the challenge is not as simple as it seems. At the onset of crisis, often planning has to be done in a short period of time; urgently required humanitarian needs are prioritized; and there are often limited resources and capacities available in the affected nations or communities (e.g., finance, human and leadership capacities, implementing bodies, and supply procurement). Often multi-sectoral coordination simplifies and overlooks detailed technical elements of individual sectoral interventions. Furthermore, the donor communities often have: inadequate financial commitments; limited flexibility in utilization and liquidation; and high demands for accountabilities.

It has been also recognized that there is a gap between emergency response and development assistance in both planning and finance (Brannelly et al., 2009). Often different (and uncoordinated) departments and actors deal with either emergency or development assistance within governments, external agencies, or donor institutes. Funding allocation

mechanisms are also separated, and even decision-making procedures can be different. Or no adequate transition plans are considered or developed in the early phase of emergency operations. These gaps present additional challenges for relief agencies and affected governments to respond to immediate requirements and to plan smooth transition to reconstruction and development.

Managing education programs can be quite different between emergency situations and normal development contexts. Aguilar and Retamal pointed out that, in emergencies “‘business as usual’ is no longer a viable option (2009, p. 5).” Special measures are required at different levels of emergency responses (Pigozzi, 1999), and Sinclair listed additional differences in managing education programs in emergencies, including: 1) procedural; 2) special needs of the affected populations; and 3) the short time scale and planning horizon imposed in emergencies (2002). She explained: “this imposition (of the short time scale and planning horizon) comes from both the urgency of the situation itself and the exigencies of international donors, who often work on an annual project cycle and thus find multi-year educational activities difficult to support in emergencies (p. 31).”

Despite these given demanding circumstances in emergencies, Aguilar and Retamal suggested the following:

There is a clear relationship between emergency, rehabilitation and development. In order to ensure a smooth transition from relief to rehabilitation and development, emergency assistance should already provide ways that are supportive of recovery and long-term development. Thus, emergency measures should be seen as a step towards long-term development (1998, p. 9).

The 1991 UN Resolution 46/182 also stated the same: “Emergency assistance must be provided in ways that will be supportive of recovery and long-term development (UN General Assembly, 1991).” Aguilar and Retamal added that “more and more, recent educational humanitarian

interventions have been perceived as coherent responses serving two purposes: (a) responding to the humanitarian and psycho-social needs of affected children; (b) contributing to the future economic/human resource development of countries in crisis (1998, p. 8)."

Clearly, there are dual, or multiple, viewpoints to approach education programs in emergencies. However, the goals should be the same – sustainable and improved educational opportunities for all children. While struggling to ‘compete’ among other relief sectors, the important question to ask here is not a question of either relief or development. However, the question is what can be done to ensure the lasting security of children and protection of their rights even in difficult situations. And, one of the answers should be to provide immediate and sustainable support to their educational needs during, and beyond, a relief stage.

### **2.3.3 Critical roles of education in crisis situations**

Whether education is considered as a humanitarian or development activity in emergencies, researchers and professionals focused on the role(s) of education in emergency contexts. Emergency situations affect children’s well-being and development. Education might not always become a “positive impact” on children and the society, unless its relation to conflict and peace was carefully considered (Bush & Saltarelli, 2000). Or, educational environments might not be always ‘safe haven’ for children, and there is a possibility that education could place children at risk of violence (Fawcett, 2005). In this section, I explore some of these complex natures of education in the context of emergency situations.

In recent years, education itself became a specific target of violence in conflict situations or unstable environments (O'Malley, 2007, 2010). In relatively recent incident, one Pakistani girl, Malala Yousafzai, was shot by a Taliban group in the country’s northeastern region

(Ahmad, 2012). In Afghanistan, teachers received “night letters” threatening them to close schools otherwise to be attacked (Glad, 2009; O'Malley, 2007). During the Maoist insurgency period (1996-2006) in Nepal, children were indoctrinated into the rebel political ideology and recruited to its military at school; or, worse, became victims of the crossfire on school grounds (M. Smith, 2010). In northern Uganda, students were abducted from school compounds, school buildings were used as military barracks, and landmines were planted around school areas. In southern Thailand, teachers carried guns for their protection (UNICEF, 2008). These threats and attacks in learning environments can cause serious negative impacts to the progresses in education. Such negative impacts include: a) loss of education staff and students; b) physical damages in schools; c) closure of schools; d) parents stop sending their children to schools; e) set-back of the progress made in education; and f) losing out of a generation, especially girls, accessing education (O'Malley, 2007, 2010; World Bank, 2005).

Some of these attacks were specifically targeted because the role and content of education were perceived as not welcome or negative influence to children and societies. Bush and Saltarelli (2000) described that there were possible polarized characteristics of education that may have positive or negative consequences for social justice and equality, calling them as “*positive and negative faces of education* [italics added].” According to them, the positive face of education gives peacebuilding and conflict-limiting impacts; and the negative one has peace-destroying conflict-maintaining impacts, especially in conflict-experienced societies.

In case of natural disasters, similarly, schools or educational environments may not be always the safest places. For example, the 2005 earthquake devastated the mountainous region of north-eastern Pakistan, completely destroyed many communities and killed thousands of children inside school buildings (Kirk, 2008). The similar incident happened when another huge

earthquake hit the Sichuan region of China in 2008, and the school buildings collapsed and killed many school children. In Pakistan, prior to the disaster, the Kashmir region was rapidly progressing toward universal primary education (UPE). Numerous village schools were established to accommodate children in those mountainous communities, but many of them were poorly built. As a result, instead of protecting them, these school buildings became the biggest hazard for children's safety at the time of the disaster.

Schools and communities, however, tried to make educational environments safe and secure. In Afghanistan, establishing home- or community-based schools close to children's homes or within their villages became a key strategy in mitigating girls' potential exposure to violence (Mathieu, 2006). Physical safety in school, such as erecting fences, was a critical preventive security measure to keep children safe and protected from outside harm (Davies, 2005). Parents and community members were involved in school security committees, or *shuras*, to increase the security at school and even negotiate with hostile elements (Glad, 2009).

In order to secure access of humanitarian assistance to the affected in active conflict situations, the humanitarian community developed the strategy called "corridors of peace" or "days of tranquility" as a "breathing space" (Evans, 1996; IASC, 2002). This inspired the development of "children as conflict-free zones," or "Children as Zones of Peace," which was implemented in Nepal in early 2000s as "School as Zones of Peace (SZOP)" (M. Smith, 2010). The SZOP initiative was based on community involvement through which the code of conduct was negotiated among all conflicting parties in relations to ensuring conflict-free schools and banning attacks against school children and teachers. M. Smith (2010) described that the



initiative in Nepal was successful because of associated social pressure. She also explained that different but flexible negotiation tactics were used at different phases of the conflict.<sup>18</sup>

For natural disasters, schools in Japan were built based on earthquake resistance building codes. Teachers and students regularly carried out evacuation drills and safety check of school compounds. Even schools were assigned as temporary evacuation locations for the communities (Kondo, 2013).

The above examples demonstrate that, if not carefully examined and planned, education, or educational environments, could become negative influence to, or hazardous for children in challenging situations like conflict and disaster. Despite the challenges, however, it is doable to ensure safe and protected educational access and environments for all children, both girls and boys, those from different backgrounds or with special needs. This critical element of education should not be limited to emergency programs, but also extended to non-crisis contexts as primary concern of education.

Because crises bring chaos and complex factors and dynamics into the affected communities, focusing on clear priorities becomes crucial – protecting children and their childhood experiences even in difficult situations for their survival, well-being, and development. Next, I further explore the relations between education and child protection in the context of emergency situations.

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<sup>18</sup> According to M. Smith (2010), from 2004 to 2006, a back door and shuttle diplomacy process at local level became useful, while, from 2007 onwards, using the top-down structure of each party was effective because there was very little autonomy at local level.

## 2.4 EDUCATION AND CHILD PROTECTION IN EMERGENCIES

The ability to carry on schooling in the most difficult circumstances demonstrates confidence in the future: communities that still have a school feel they have something durable and worthy of *protection* [italics added] (Machel, 1996, p. 54).

The international community recognizes that education is not only an individual right, but also often understood as an enabling right (Pigozzi, 1999). Dewey described that education is necessity in people's lives – the foundation for all activities that one be engaged throughout his or her life (formally, informally, or non-formally) (1944). Nicolai and Triplehorn (2003) also applied this concept in emergency situations, and explained that education is a significant part of children's development processes, and it is an important *protection* tool. They considered that education is a basis to protect all children's rights – rights to *survival, development, participation, and protection* (Nicolai & Triplehorn, 2003).

Referring to the 1989 Convention on the Rights of the Child, furthermore, Nicolai and Triplehorn (2003) listed the following three protective elements of education in the crisis contexts:

- *physical protection* as providing a safe, structured places for learn and play, positive alternatives to military recruitment, gangs and drugs, and basic knowledge of health and hygiene;
- *psychosocial protection* as giving children an identity as students, a venue for expression, support to social networks and community interaction, and a daily routine; and
- *cognitive protection* as developing and retaining the academic skills of basic education, accessing urgent life-saving health and security information as well as knowledge of human rights and skills for citizenship.

They continued suggesting that these linkages between education and protection should be strengthened by:

- a) *maximizing the opportunities* (through community leadership, facilitating access, presence as prevention, and assessment, dissemination, reporting and monitoring); and
- b) *minimizing the risks* (such as attack, recruitment, separation, and exploitation) (Ibid.).

Education became a significantly important element in crisis contexts to protect children and their childhood experiences from violence, harms, or risks. In this section, I focus on two specific strategic frameworks to ensure the safety and security of children in emergencies: 1) protective environments and child-friendly spaces (CFS); and 2) early childhood development (ECD) or early learning programs.

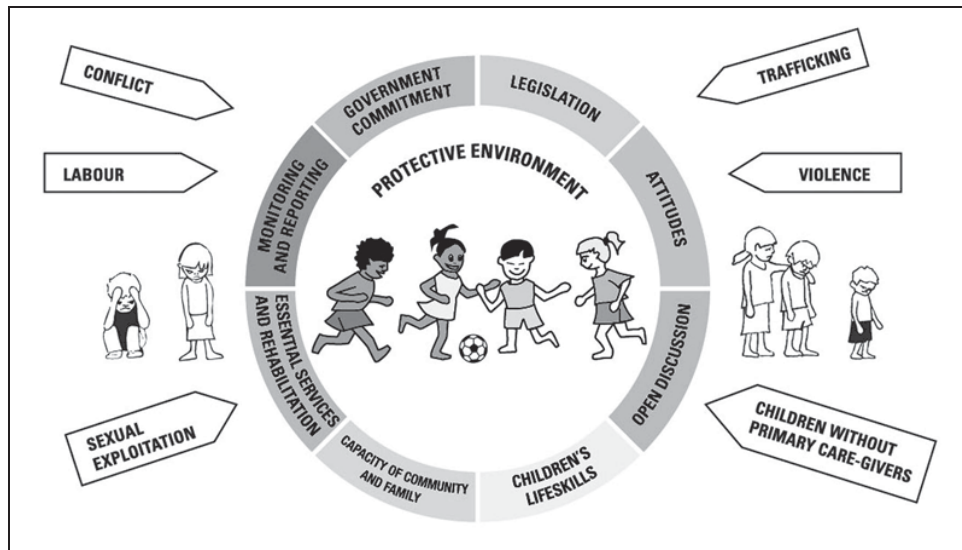
#### **2.4.1 Protective environments for children**

‘Child protection’ is the term commonly used by international cooperation agencies to describe the work related to protect the rights of children. It is related to their family and community environments as well as social systems and services, including health, education, welfare, law and more. For instance, UNICEF referred the term ‘child protection’ to “preventing and responding to violence, exploitation and abuse against children (2006a, p. 1).” In addition to this definition, an international NGO, Save the Children, further identified the following as most critical types of protection that children require in disaster areas and war zones:

- 1) protection from physical harm;
- 2) protection from exploitation and gender-based violence;
- 3) protection from psychosocial distress;
- 4) protection from recruitment into armed groups;
- 5) protection from family separation;
- 6) protection from abuses related to forced displacement; and
- 7) protection denial of children’s access to quality education (2005).

The 1998 Convention on the Rights of the Child, furthermore, was developed based on the following principles: 1) non-discrimination; 2) best interest of the child; 3) survival and development; and 4) respect for the views of the child (right to participation). Because child well-being and development involve many components, protecting a child, and his or her rights, should require a multi-disciplinary and cross-sectoral approach (Pais, 1999). This approach is in line with the principles of the Convention of the Rights of the Child, which consists: 1) non-discrimination; 2) best interest of the child; 3) survival and development; and 4) respect for the views of the child (right to participation) (Pais, 1999). To attempt mapping out this multi-disciplinary and cross-sectoral field of child protection, Landgren proposed a conceptual model called the “Protective Environment Framework” (2005). The framework consisted the following eight (8) essential dimensions to provide protection to children (See Figure 3; and APPENDIX B for the detailed descriptions of each dimension):

- 1) protective government commitment and capacity;
- 2) protective legislation and enforcement;
- 3) protective culture and customs;
- 4) open discussion;
- 5) protective children’s life skills, knowledge, and participation;
- 6) protective capacity of families and communities;
- 7) protective essential services; and
- 8) protective monitoring, reporting, and oversight.



**Figure 3.** Landgren's Protective Environment Framework

Adapted from "The Protective Environment: Development Support for Child Protection" by K. Landgren, 2005, *Human Rights Quarterly*, 27, p. 228. Copyright 2005 by the Johns Hopkins University Press.

Landgren explained: "(t)his approach ... identifies the systems and capacities needed to support child protection at all levels (2005, p. 226)." She also recognized that "(h)ow protectively these elements function, and how they interact, differs from one society to another, and may vary in relation to different types of abuse (Ibid.)."

As showed in Figure 3, there could be different serious obstacles and threats to the safety and security of children and their environments, including emergencies like disaster and conflict. Landgren stressed that "(c)onflict, poverty, natural disasters, and epidemics are ... recognized as undermining the availability of protection (Ibid.)." Thus, she suggested: a) child protection related programs should be more preventive nature than 'curative'; and b) there should be more systematic responses to tackle root causes of such risks and improve surroundings to be safer for children (Landgren, 2005).

When facing a natural disaster or armed conflict where social structures and resources are damaged or lost, it may be difficult to achieve these protective conditions. However, Landgren (2005) explained:

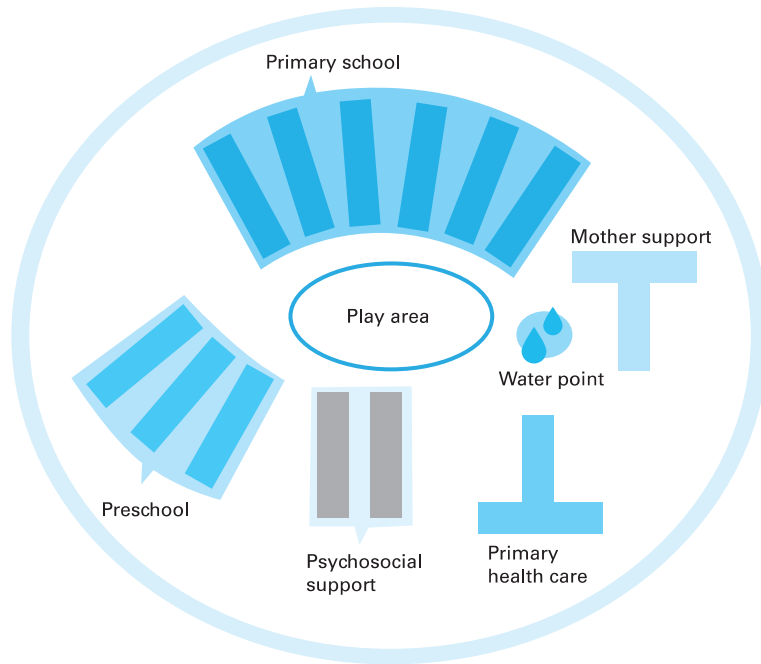
A range of mitigating interventions is traditional in humanitarian emergencies. ... Providing services or material assistance (...) can reduce the vulnerability of men, women, and children, and can enable parents to offer greater protection and stability to their children (p. 226).

Moreover, she pointed out that “(a) school environment, however primitive, gives children a constructive focus for their energy (Ibid.)” The suggested protective dimensions should become preventive measures to protect children from threats of violence, exploitation, abuse and other risks.

To ensure the protection and assistance for children affected by natural disasters and armed conflicts, UNICEF also developed a programmatic strategy called “Child Friendly Spaces (CFS),” and explained its six core principles of CFS as follows (UNICEF, 2009b):

- Principle 1: CFS are secure and safe environments for children.
- Principle 2: CFS provide a stimulating and supportive environment for children.
- Principle 3: CFS are built on existing structures and capacities within a community.
- Principle 4: CFS use a participatory approach for the design and implementation.
- Principle 5: CFS provide or support integrated programmes and service.
- Principle 6: CFS are inclusive and non-discriminatory.

The conceptual design and aerial picture of the early CFS model in Turkey showed in Figure 4 and Figure 5. CFS was designed to be protected from the rest of the camp, where children could access to all necessary services and activities in chaotic conditions of the displaced communities.



**Figure 4.** Example of child-friendly spaces

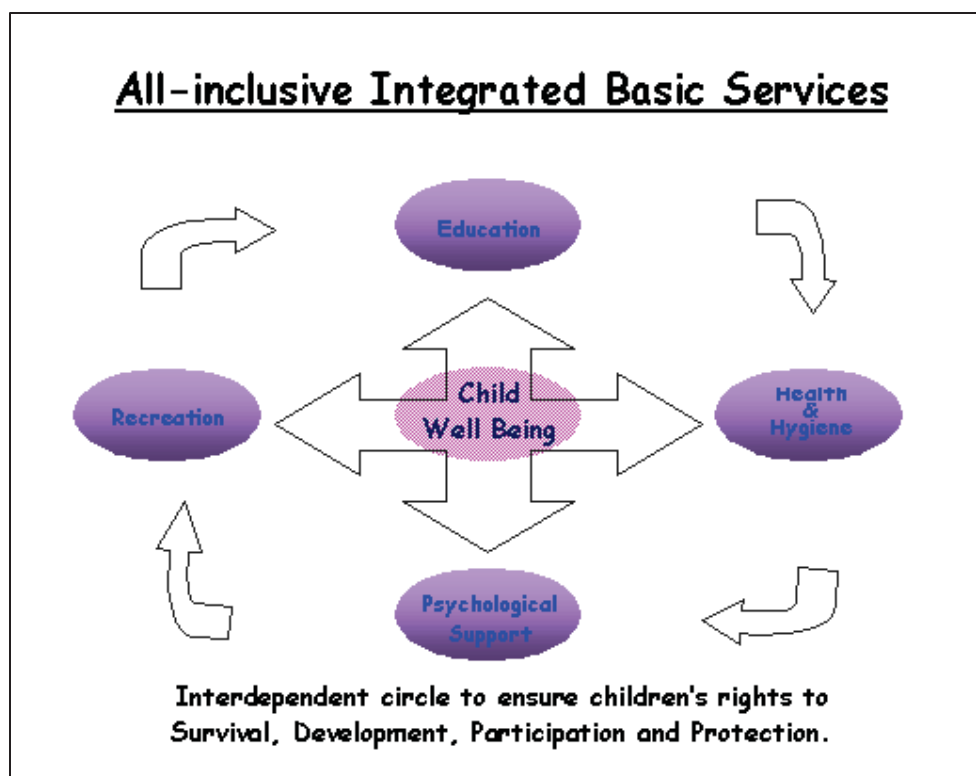
Adapted from by “Chapter 5: Schools as Protective Environments,” by UNICEF, 2009a, *Child friendly schools: Manual*, p. 35 (Originally from P. Aguilar, 2001; and cited in UNICEF, 2009b; UNICEF & University of Pittsburgh, 2004). Copyright 2009 by UNICEF.



**Figure 5.** Aerial view of CFS in Turkey

Adapted from “Child friendly spaces/environments (CFS/E): Lessons learned from Turkey,” by P. Aguilar, 2001, Paper presented at the Education Programme Officer (EPO) Meeting in Senegal. Copyright 2001 by Pilar Aguilar. Reprinted with permission.

To compliment the CFS model, Aguilar proposed a conceptual framework “to guarantee children’s right to *survival, development, participation and protection*, particularly in a situation of crisis or instability (Aguilar, 2001).” In CFS, as shown in Figure 6, multi-disciplinary and cross-sectoral protective elements supports child well-being, and its protection focus is “not only defending [children] against physical aggression but also ensuring that their full range of rights and needs are respected and fulfilled (UNICEF & University of Pittsburgh, 2004, p. 2).”



**Figure 6. "How to Operationalize CFS"**

Adapted from “Child friendly spaces/environments (CFS/E): Lessons learned from Turkey,” by P. Aguilar, 2001, Paper presented at the Education Programme Officer (EPO) Meeting in Senegal (cited in UNICEF, 2009b; UNICEF & University of Pittsburgh, 2004). Copyright 2001 by Pilar Aguilar. Reprinted with permission.

CFS, or others may call Safe Spaces, Child Centered Spaces, or Emergency Spaces for Children, became a common program strategy in emergencies, implemented by various humanitarian organizations (Ager & Metzler, 2012). Some were focused on establishing safe and



stimulating environment for younger children, and others were creating spaces available to different age groups of children (e.g., youth club, after school center). Save the Children highlighted the most common objectives of CFS as follows (but not limited to):

- 1) To offer children opportunities to develop, learn, play, and build/strengthen resiliency; and
- 2) To identify and find ways to respond to particular threats to all children and/or specific groups of children, such as those with particular vulnerabilities (2008).

In addition to these, Ager and Metzler suggested that CFS could be used as a means of promoting children's psychosocial well-being, and as a foundation for strengthening capacities for community child protection capacity (2012). Even in the East Timor's post-conflict community, CFS not only supported families but also became a safe place for reconciliation with their common interest of children (IASC, 2002). UNICEF summarized: "CFS protect children by providing a safe space with supervised activities, by raising awareness of the risks to children, and mobilizing communities to begin the process of creating a Protective Environment (2009b, p. 9)." The UNICEF/University of Pittsburgh desk study of CFS further articulated:

(The CFS) approach also focuses on empowering families and communities in the healing process. (...) The most effective and sustainable approach to recovery is to mobilize the existing social care system (2004, p. 4).

While traditional humanitarian assistances are often reactive, or "a stop gap measure," to an emergency condition, CFS, or a program strategy based on the Protective Environment Framework, became the key strategy to (re-)install the normalcy in children's lives and support the recovery capacities of families and communities. CFS is not only to provide quality educational opportunities to children, but also to become the foundation for generational protection and sustainability of the crisis-affected communities (Aguilar & Retamal, 2009; McClure & Retamal, 2010; Vargas-Barón & McClure, 1998).

## 2.4.2 Early childhood development (ECD) programs as protective measures

In his 2013 State of the Union address, the US President Barack Obama stated providing high-quality early learning opportunities for all young children starting at birth as one of his second term priority areas (Obama, 2013). Internationally, ECD is recognized as first goal of the Education for All (EFA), while the Millennium Development Goals did not include a specific goal on ECD (Birdsall, Levine, & Ibrahim, 2005; UNESCO, 2000). It would be a great precedent if the country like US could lead the way to achieve better early childhood development (ECD)<sup>19</sup> support for young children.

The area of early learning, or ECD, however, is still often considered to be a private, family matter, or even a luxury item (Consultative Group on Early Childhood Care and Development [CGECCD], n.d.). The Education for All (EFA)'s thematic study listed the following as the problems in ECD: weak political will; weak policy and legal frameworks; lack of, or poor use of financial resources; uniformity (lack of options); poor quality; lack of attention to particular populations; lack of co-ordination; and narrow conceptualization (UNICEF & Myers, 2001). In this last section of the chapter, I review this field of ECD in relation to the protection of young children and their childhood experiences in the specific context of emergency situations

The Consultative Group on Early Childhood Care and Development (CGECCD) defined:

- *Early childhood care and development (ECCD)* is a field of endeavor that focuses on supporting young children's development; and

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<sup>19</sup> The field of early childhood development (ECD) is also referred in similar terms like: early childhood care and development (ECCD), early childhood care and education (ECCE), early learning, and more. These terms are often interchangeable, and they indicate the field concerning children's physical and cognitive development at their early years. For the purpose of this paper, I use the term of *early childhood development*, or *ECD*, as a general term, otherwise I maintain the terms used in the cited references.

- *Early childhood* encompasses the period of human development from prenatal through the transition from home or ECCD centre into the early primary grades (prenatal – 8 years of age) [italics added] (2010).

As framed by the Convention of the Rights of the Child (CRC), furthermore, the field of ECD is interdisciplinary in its nature, including health, nutrition, education, social science, economics, child protection, and social welfare (CGECCD, 2010). As discussed in the previous section, the Landgren’s Protective Environment Framework corresponded this idea.

It is a well-known fact that early years of a child’s life are the most significant period of his or her development for immediate well-being, school readiness and future success (CGECCD & INEE; UNICEF, 2006c; Vargas-Barón, 2005). Especially, first three years of life are the period when incredible growth happens in all areas of a child’s development. According to the National Center for Infants, Toddlers, and Families, a young child’s brain grows to about 80 percent of adult size by three years of age and 90 percent by age five (Zero to Three, 2012). At the cost-benefit side, for example, research showed that long-term benefits from ECCD intervention programs could be a cost-benefit ratio of 7:1, or, in other words, for every dollar spent on ECCD programs, 7 dollars were saved through the added benefit to society (Károly, Kilburn, & Cannon, 2005) [cited in CGECCD & INEE, n.d.]. UNESCO and OECD described “early childhood care and education ... as an effective strategy for reducing poverty and social inequity, addressing their causes from the start (UNESCO, 2004, p. 3).”

Emergencies, however, pose a set of challenges for young children who are often considered to be one of the most vulnerable groups, including elderlies and persons with special needs, in an adversity (Nantchouang, 2011; Tran, 2011). *Malnutrition, disease, poverty, neglect, social exclusion, violence, and lack of a socially stimulating environment* are the threats to

children's developmental delays (CGECCD, 2010; CGECCD & INEE), and these risks could be higher in crisis environments. Vargas-Baron described:

Higher rates of (developmental) delay are often seen in camps for internally displaced families or refugees and areas affected by famine. In such situations, mild to severe delays often go undiagnosed (2005, pp. 3-4).

Landers (1998) also warned the risks of excess stresses that children would experience in catastrophic events. She explained: "(Especially) young children living in situations of armed conflict (not only) are ... in danger of becoming the victims of violence (but also) can become accustomed to violence ... It is the accumulation of risk factors that jeopardizes development particularly when there are no compensatory forces at work (to mitigate the effects) (Landers, 1998, p. 6)." Additional literature concurred with this. When early developmental opportunities were missed or delayed, many of the capacities required for later healthy development could be compromised or altered, and it would be difficult to reverse (CGECCD, 2010; CGECCD & INEE; Mustard, 2005).

"Despite their vulnerability, young children do have the capacity to anticipate, cope with and recover from hazard impacts," Tran described (2011, p. 7). She further cited the International Resilience Research Project, which was conducted with children (ages 0-3, 4-8 and 9-11) in 22 countries, and indicated that "by the age of 9 years, children can promote their own resilience at the same rate as adults and while cultural differences exist these do not prevent the promotion of resilience" (Grotberg, 2001) [cited in Tran, 2011, p. 7]).

The field of ECD, furthermore, "links the young child's cognitive, social, emotional, and physical processes *with the care (by families, communities, and the nation)* required to support their development [italics added] (CGECCD, 2010)." Thus, it is important to focus on the care capacities or environments available for children in their families and communities. Among the

key strategies suggested for ECD interventions, other literature also emphasized the importance of supporting caregivers to care for their children (Early Years, 2010; Heroman & Bilmes, 2005; Nantchouang, 2011; Tran, 2011). The Consultative Group on Early Childhood Care and Development (CGECCD) (2010) suggested the following specific inputs in supporting caregivers:

- providing preconception, pre- and post-natal education, care, and protection;
- providing parenting information and support for parents and family members through formal and nonformal approaches, including home visits;
- providing developmentally appropriate child care for working parents;
- supporting six months of exclusive breastfeeding, and thereafter ensuring balanced, responsive, and appropriate complementary feeding at all growth stages;
- ensuring birth registration; and
- promoting opportunities for women's development.

Vargas-Baron explained the close relationship between young children's success and their family support capacities as follows:

The survival and developmental prospects of children – the odds that they will reach school age with the basic cognitive, social and emotional skills necessary for success – reflect the capacities, resources and supports available to their families. Put another way, the economic, health, mental health, nutritional and educational status of families drive the trends for child survival, developmental and school readiness. ... The key to improving school performance is to invest in the families of young children (2005, p. 4).

In emergency situations, not only children are affected by crises, but also their caregivers, including immediate parents and those involved in childcare work, are equally affected, which may impact their care capacities (Tran, 2011). To make sure of children's healthy growth and development and support their resiliency at difficult times, a priority should be also given to (re-)install and strengthen protective capacities of families and communities as part of psychosocial support strategy in crises.

As discussed earlier, the field of education in emergencies is a new sub-field of international development education. Then, the field of early childhood development (ECD) in

emergencies is even less studied, not prioritized, or often neglected (Tran, 2011). However, early years of children's lives are too important to overlook not only for their survival, well-being and development, but also for their contribution to the development and sustainability of family, community and country in the future. For this very reason, Vargas-Baron (2005) stressed that each country "must be the architect of its own generational commitment to its young (p. 1)," and its "ECD Policies should consider placing emphasis on increasing national investment in community-led, cost-effective and culturally competent programmes for pregnant women and (young) children (p. 4)." Even under difficult circumstances like disaster and conflict,, to ensure all children's adequate and appropriate physical and cognitive growth and psychosocial well-being is a generational duty for all stakeholders to achieve sustainable development and long-lasting security in the global community.

## **2.5 SUMMARY**

In the 21st century, the world is witnessing devastating crises like natural disasters, conflicts and instabilities. These catastrophic events and unstable conditions have disrupted and disturbed many innocent people's lives around the world. The international community and affected states continue to face challenges in assisting humanitarian needs of families and communities, and supporting children to survive, grow and have a reasonable chance for a 'normal' life in crisis-affected situations.

In this chapter, I reviewed the field of education, and ECD, in emergencies, in relation to humanitarianism and protection of children and their childhoods as a whole. The recent experiences of natural disasters and armed conflicts indicated the complex natures of emergency

situations. To accommodate the situation, humanitarian assistance became a more complex enterprise where humanitarianism and security concerns were focused on protection of individual survival, livelihood and dignity (Amouyel, 2006; IASC, 2002; University of British Columbia, 2005).

As for education as part of humanitarian assistance, I reviewed how the field of education in emergencies had been conceptualized and examined the critical roles of education to ensure protecting children and their childhood experiences in crisis situations. As one of the key strategies, relations between education and child protection was reviewed, with detailed analysis of how the protective environment framework was translated into safe and protected spaces for children in emergency situations. Moreover, protective environment frameworks should be addressed as cross-sectoral priority (Aguilar & Retamal, 2009; Landgren, 2005).

Lastly, special focus was given to early childhood development (ECD), or early learning, programs as protective measures in emergencies. While young children could be most vulnerable in difficult situations, protection of their physical and cognitive development as well as psychosocial well-being should be considered as a generational responsibility (Aguilar & Retamal, 2009; McClure & Retamal, 2010; Vargas-Barón & McClure, 1998). In humanitarian assistance, central focus should be given to strengthening the child protection capacities and systems of affected communities and states.

In the next chapter on research methods and methodology, based on the complex frameworks presented in this chapter, I first explore how research, both qualitative and quantitative, can help better understand the field of education and ECD in emergencies. Then, based on my primary focus on qualitative research methods, I detail my study subject and present the structure of my field research.

### **3.0 RESEARCH METHODOLOGY**

This dissertation research project investigated how daycare centers had provided the protection and safety to young children at the time of the 2011 East Japan Earthquake and Tsunami Disaster. The study was intended to provide deeper understanding of how early childhood development (ECD) programs, specifically daycare centers in Iwate, had ensured (re-)building and maintaining protective environments for children in crisis situations. As I detailed in the previous chapter, humanitarian assistance is a complex field that requires complex solutions. In this chapter, I first review the current research and knowledge sharing practices in the field of education in emergencies, focusing on the uses of qualitative and qualitative inquiry methods and the relevance of qualitative or ethnographic research methods to study crisis context. Second, I describe the research structures and tools that entail in this research, including: 1) my research perspectives; 2) study site and sample; 3) research instruments and data collection methods used; and 4) qualitative analysis process, including the use of NVivo, qualitative data analysis software.

#### **3.1 RESEARCH INQUIRIES IN EMERGENCY EDUCATION**

Whether it is in an emergency situation or not, research and information management, including assessments, monitoring reports, case studies, or empirical researches, provide important insights



of situations to make appropriate and timely decisions in planning, implementation, practice, and policy development and adjustment. Especially in humanitarian assistance, the detailed conditions and urgent needs of the affected populations must be rapidly uncovered. As phases move from initial emergency to recovery, reconstruction and development, constantly changing situations need to be closely monitored and interventions should be adjusted accordingly. In such demanding environments, it is crucial not only to quickly access, share and record data and information that would dictate both operational and policy decision-makings, but also to develop relevant knowledge bases for future emergency responses.

To frame the methodology for my dissertation research, in this section, I review the current knowledge-base management and research inquiries in the field of education in emergencies. I examine the advantages and challenges of both quantitative and qualitative inquiry methods and suggest the relevance of ethnographic approaches to study the context of humanitarian assistance. Lastly I discuss ethical challenges involved in conducting researches in crisis-affected situations.

### **3.1.1 Knowledge base development in humanitarian assistance**

The international humanitarian community have attempted to improve the large information and knowledge sharing systems through rapid assessments, Cluster approaches for better coordination mechanisms, on-line situational reports and more (Holmes, 2007). In the field of education in emergencies, various information reference tools have been used to make critical operational and policy decisions. For example, *rapid assessment* is “to develop a sound information base” and “a plan for action” to respond to urgent and longer term needs of the affected communities (UNESCO, 2006). A *situational report*, which is known as *sitrep*, provides

a general overview of developing situations of the crisis and the progress made by relief efforts. Results of rapid assessments and situational reports are used to share common understanding of crisis-affected situations among humanitarian agencies, offices and donors (OCHA, 2002; UNICEF, 2005b). In addition, a few emergency education professionals produced in-depth descriptive *case studies* about complex educational experiences in various crisis countries and regions, including Burundi, East Timor, Kosovo, Pakistan, Palestine, Rwanda, and Southern Sudan.<sup>20</sup>

All of these above information resources were developed from field observations and experiences, and used extensively by those involved in emergency programs. However, they also presented some challenges. For example, formats for rapid assessment and situational reports were often standardized and simplified with numerical data (See INEE, 2004; Sphere Project, 2004; UNESCO, 2006; UNICEF, 2006b). These tools needed to be quickly and easily prepared, used and shared. As Darcy pointed out, however, characterizing complex situations through ‘checklist’ approaches might limit understanding of the actual affected community as a whole (2005, p. 14). A solo focus on quantitative accounts makes the findings appear standardized and generic, overlooks critical issues of local contexts, and creates limitations or gaps in both immediate and long-term outcomes. These contextual issues and their multiplicity should be carefully examined to make most appropriate strategic decisions for both immediate humanitarian assistance and accelerating sustainable recovery and development of the affected communities (Burde, 2004b; Sobe, 2009).

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<sup>20</sup> Most of these case studies are available electronically at the UNESCO International Institute for Education Planning (IIEP)’s website - <http://www.iiep.unesco.org/information-services/publications/search-iiep-publications/education-in-emergencies.html> (Accessed on September 8, 2013).

In regards to case studies, especially focusing on conflict-affected situations, Rappleye and Paulson described them as “not simply objective accounts of the realities of conflict but fusions of evidence from conflict, dominant modes of discourse, and political imperatives particular to each given organization at given points in time packaged into the seemingly innocuous language of ‘best practice’ (2007, p. 255).” Use of ‘*best practice*,’ or ‘*good practice*,’ models seemed to have become popular among international humanitarian actors. However, a few scholars criticized that the dependency on best practice could obscure the complexity of local realities and relevance, and suggested not to rely on such rhetorical assumptions solely but to back them up with further critical scholarly inquiry and research using solid theoretical and analytical tools needs (Burde, 2004a; Rappleye & Paulson, 2007).

Other researchers, in addition, discussed the technical and operational problems in the current information management practices in humanitarian assistance. In his study on OCHA’s SitReps (2009), Rabinowitz observed that information in sitreps were often not reliable or useful, or outdated, and attributed failures of leaderships, unclear mandates of each agency, and the culture of the humanitarian community to the problem. Hofmann (2004) also blamed the characteristics and circumstances of humanitarian assistance, such as: humanitarian workers were not equipped with skills and capacities to collect and interpret critical information; volatile environments in which interventions generally take place; lack of access to crisis affected areas; high turnover of agency staff; and, short lifespan of many projects.

As A. Smith (2007) described as “an emerging field,” history of education in emergencies is still short both operationally and academically. Over the time, however, comparative education researchers suggested various study areas for the field of education in emergencies. In late 1990s, field specialists suggested to develop conceptual frameworks for

education “in disrupted societies,” including: general context and nature of violence in society; the root causes of violence; psychological effects; early warning systems; and effects on education systems (Tawil, 1997). In regards to schools and war, Davies (2005) proposed the following examples of research subjects: a) learning achievements (e.g., Mathematics and literacy); b) the ratios of military to education spending, and the link to stability; c) citizenship, peace and security, and democracy education and their impacts; d) teaching about conflict; e) resilient schools; and f) the relation of young people joining fundamentalist or terrorist organizations. Williams, furthermore, stressed that the relations between education and human survival and security should be recognized as a relevant subject in the current context of international and development education and human rights (2000). Yet, there are a limited number of scholarly researches available, some analytical, but not many theoretical studies conducted on education in emergency. Crisis environments, both armed conflict and natural disaster, are often hostile and complex, which make carrying out empirical researches on the ground and developing theoretical frameworks more challenging.

Educational achievements in emergency situations are not only about the number of children accessing education, but also about what kinds of education they receive, how their educational needs are realized and more. However, all the knowledge-base development resources could directly influence the strategies to provide educational opportunities to children in need at their critical times and to rebuild and strengthen the education systems in crisis-affected communities. Especially, it is critical for policy and decision makers to carefully consider types and use of information and knowledge both most relevant to represent realities and most useful to make timely and important decisions at the critical times of emergency responses and recovery and reconstruction efforts.

### 3.1.2 Quantitative measurements and qualitative inquiries

As described earlier, many operational documents in humanitarian assistance were often supported with quantitative accounts of crisis-affected situations and humanitarian interventions. These numerical accounts can be quickly collected and formulated, and easily (almost universally) comprehended. For example, UNICEF's Emergency Field Handbook provided an example form of the Rapid Assessment of Learning Spaces (RALS), through which basic situational information could be collected, such as numbers of classrooms, teachers, and pupils or availabilities of school furniture, supplies, water, and toilets (2005b). These quantitative accounts are relatively easy to cover areas, convenient to standardize the formats, and consistent to analyze. Use of these numerical descriptions became essential for humanitarian, and often diverse, groups to share common understanding of situations and targets, to which specific interventions and inputs are directly contributed.

Hofmann (2004), however, pointed out that "a focus on measurement," which is the product of *Western* result-based framework approach, "could reduce operational effectiveness, and lead to the neglect of issues such as protection and dignity because they are difficult to measure (p. 1)." He continued: "focusing on what is measurable risks reducing humanitarian aid to a technical question of delivery, rather than a principled endeavor in which the *process* as well as the *outcome* is important [*italics added*] (Ibid.)."

Doing research or collecting data and information in and about emergency situations is not a simple task. To interact with affected communities, or even simply observe their lives in refuge, researchers need to carefully consider complex nature of circumstances and ethical

concerns that emerge, such as: secured access to information or subjects; uncertainty of situations; data quality and accuracy; impartiality; and more. Because such complexity is involved, qualitative inquiries may be suitable to understand the multi-dimensional characteristics of, and relations between, affected communities and humanitarian assistance. Furthermore, the shift of humanitarian assistance from provision of *basic survival needs* to protecting *human security* or individual human rights made the field more complicated, requiring broader and cross-disciplinary, but in-depth and context-based analyses of conditions.

It is, therefore, crucial for humanitarian practitioners, who are often outsiders to the affected communities, to be sensitive to the local contexts and historical backgrounds of emergency situations (Sobe, 2009). For example, as pointed out by de Waal, “humanitarian aid (should) fit into and complement people’s coping and livelihood practices (1997 [cited in Darcy, 2005, p. 4]).” This should be the core principle in both development and humanitarian cooperation; not to create dependency nor undermine local social contract systems (Burde, 2004b). Understanding what the affected populations experienced, how they see their own situations, and what they want their futures to be would help the humanitarian community provide more appropriate and timely assistance for prompt recovery and sustainable reconstruction of the communities.

The positivistic approaches to utilize quantitative accounts are imperative, useful and suitable to measure universal values and outlooks of situations and interventions. However, focusing solely on ‘delivery’, or result-based framework approaches, may undermine valuable accounts of contextualization, local particularity and relevance, or even for root causes of crisis situations, which may be hidden behind numbers. Or, simplifying affected communities as ‘numbers’ and stereotyping them as ‘victims’ of tragedies may undermine local existing coping

capacities, such as both individual and collective resilience. Thus, understanding of detailed contextualization, or lack thereof, can largely influence outcomes of post-disaster recovery and reconstruction. Under difficult circumstances like disaster-affected communities, various qualitative contexts are intertwined. Qualitative research could best help untangle these complex accounts for better understanding of the experiences and relations among those involved in the particular situations. In the following sections, I further review how qualitative research, especially ethnographic studies, can contribute to the educational work in crisis contexts.

### **3.1.3 Relevance of ethnographic research**

In any situations, educational settings are where social and cultural norms and values are shared, communicated and learned, as Spindler and Spindler described as “education as cultural transmission” and explained:

(C)ulture (is) a continuing dialogue that revolves around pivotal areas of concern in a given community. The dialogue is produced as social actors apply their acquired cultural knowledge so that it works in social situations --- they make sense and enhance, or at least maintain, self-esteem. Neither the knowledge nor the situations replicate themselves through time, but both exhibit continuity (1997b, p. 52).

Even in emergency situations where humanitarian assistance is involved, this idea should not be forgotten. In such chaotic and complex environments, having the means to share and learn socio-cultural values is one of the most meaningful rights that affected populations are left with. The idea of “(e)ducation ... as a major instrument in cultural survival (Spindler & Spindler, 1997a, p.58)” is even more relevant in crisis situations.

Educational anthropologists described that ethnography “is primarily descriptive in nature (Fetterman, 1989, p. 139),” and “use(s) some model of cultural process in both the gathering and interpretation of data (Spindler & Spindler, 1997b, p. 50).” Even though it may not

be easily done in crisis settings, direct or participant observation is one of the important ethnographic research steps. Many researchers agreed on the significance of “being there,” or “being *in situ*,” and “ethnographic observation ... that lasts long enough to permit the ethnographer to see things happen not once but repeatedly (Spindler & Spindler, 1997a, p. 66).” Geertz explained its importance for ethnographers in their relations with readers: “Ethnographers need to convince us ... not merely that they themselves have truly ‘been there,’ but ... that had we been there we should have seen what they saw, felt what they felt, concluded what they concluded (1988, p. 16).”

Spindler and Spindler, and many other academic researchers, suggested ethnography or ethnographic research as an essential inquiry method for better understanding complex social and cultural interactions in communities (Fetterman, 1989, 1993; Spindler & Spindler, 1997a; Spradley, 1980). Ethnographic approaches allow researchers “to discover the cultural knowledge that (local) people hold in their minds, how it is employed in social interaction, and the consequences of its employment (Spindler & Spindler, 1997a, p. 71).” This is significant in studying complex crisis experiences. For example, Boyden (2003) explained that, when ethnographic research and knowledge about pre-conflict society and culture is absent, social norms, values, dynamics and power structures are often stereotyped, which could lead to undermining, rather than reinforcing, social reconstruction and healing. This suggests a need for far greater contextualization and ethnographic, or qualitative, inquiry of crisis-affected situations where humanitarian assistance is involved.

Educational anthropologists, furthermore, suggested that an ethnographer should enter study site with a fresh mind (Fetterman, 1989, p. 11), with flexible and open hypotheses, coded instruments, and categories of observation (Spindler & Spindler, 1997a, p. 68). However,



researches in the field of international cooperation often begin with already developed hypotheses and questionnaires, and their fieldwork schedules are pre-determined with limited flexibility. Nonetheless, researchers should attempt to minimize biases and prejudices and remain flexible to access rich and untapped sources of local knowledge and information.

Ethnographic inquiry techniques and processes seem to be valuable applications in humanitarian assistance, or in the field of international cooperation in general. Spindler suggested:

Ethnographic training can be very valuable for non-anthropologists and for people who do not expect to be professional researchers but who are directly involved in education. Ethnography can provide a sensitizing experience of great significance (1982b, p. 3).

Humanitarian assistance is a complex field where the local populations, governments, external relief agencies and donors with different values and realities would interact and communicate one another. Educational anthropologists suggested that ethnographic approaches would help recognize multiple realities in multicultural environments that require better observation and more realistic interpreters of social interaction and communication (Fetterman, 1989, 1993; Spindler, 1982a, p. 496). Furthermore, Fetterman stressed the importance of ethnographers' ability to communicate with their audiences as follows:

(I)n delivering their findings to their various audiences ... ethnographers must again observe and distinguish differing realities. Further they must speak in the several languages appropriate to those realities (1993, p. 1).

To research about and apply knowledge to assist crisis-affected communities where humanitarian assistance is involved, one needs to be able to: 1) recognize multiple realities of his or her subject field; and 2) communicate the multiple realities that were observed with multiple concerned groups. For this reason, ethnographic approaches seem to be best fit to study education in emergencies.

### 3.1.4 Ethical and practical challenges in conducting research in emergencies

Applying ethnography, or qualitative inquiry methods, to understand crisis contexts will not come without a challenge. Researchers must face and understand (ethnographic) ethical responsibilities. First of all, they need to acknowledge that, once they enter the field, the presence of researchers themselves may change the dynamics, relations, and even consequences in subject communities. Spindler and Spindler stressed that “the primary obligation is for the ethnographer to be there when the action takes place and *to change that action as little as possible by his or her presence* [italics added] (1997a, p. 66).” This is also one of the challenges in humanitarian assistance where the external community could ‘invade’ and influence social contracts and capacities of the affected communities, such as creating or increasing dependency on external assistance.

A second challenge is ‘authority of research’, or “exercise of power” as Wolf described:

The anthropologist listens to as many voices as she can and then chooses among them when she passes their opinions on to members of another culture. The choice is not arbitrary, but then neither is the testimony. ... she eventually takes the responsibility for putting down the word, ... I see no way to avoid this exercise of power ... (1992, p. 11).

As discussed in the previous section, it is important for researchers, whether anthropologists/ethnographers or not, to listen to local voices. In humanitarian assistance, however, voices of affected populations are hardly reflected in the operational and strategic decision making processes (Darcy, 2005, p. 8), while local voices and knowledge can be critical for sustainable effects of interventions. At the same time, there are rhetoric risks for those who transmit the voices to be perceived as “information source” instead, if they “manipulate truth as well as language” and “adapt to many audiences and many realities” (Fetterman, 1993, pp. 4-5).

The principle seems to be “informants first” (Spradley, 1980, p. 21), and not exploit them (Wolf, 1992). How ethnographies, or ethnographers, serve their informants, would all depend on how they “face the task of interpretation and cultural translation (Spindler & Spindler, 1997b), p.53).” As Geertz explained, an ethnographic responsibility, or traditional anthropological goal, is “transmitting the information from one culture to another with less puzzlement” or he describe as “thick description” (1973, p. 16). Wolf also agreed: “As ethnographers, our job is not simply to pass on the disorderly complexity of culture, but also to try to hypothesize about apparent consistencies, to lay out our best guesses, without hiding the contradictions and the instability (Wolf, 1992, p. 129).” Any researchers should be fully aware of their ethical responsibilities and risks. However, this is a more critical issue in dealing with qualitative accounts, which hold multiple possibilities of interpretation and cultural translation.

In the context of emergencies, third, researchers may need to review and ensure additional ethical issues and comprehensive strict codes in conducting qualitative or ethnographic research. For example, Boyden (2000) suggested the following ethical and practical topics to be considered in conducting research with war-affected and displaced children: 1) informed consent of research and researcher; 2) clear expectations explained; 3) accountability toward interests of research informants (including children); 4) protection of informants from harm, or clear “do no harm” policy; and 5) respect for informants’ abilities. She explained another serious risk that “research is not a neutral exercise and, especially in the context of armed conflict, civil strife and forced migration, has considerable potential to infringe upon the privacy, well-being and security of its subjects (Ibid.).”

Lastly, there are other practical challenges expected in doing researches about emergency settings and humanitarian assistance, such as: 1) access to study locations and subject groups; 2)

timing and duration of study; 3) safety and security of researchers; 4) logistic arrangements; priority; and 5) interests of the humanitarian community (OECD, 1999). These issues could affect decisions on research focuses and designs, considering what are feasible in given circumstances. Conducting research in crisis situations, researchers are required to be flexible, and adapt to different research process or methodological issues due to their subjects' protection or their own safety.

### 3.2 STUDY PROCEDURES

Based on the methodological classification provided by Bhattacharjee (2012), I consider my dissertation study to be *interpretive research*. It takes a form of case study that reveals specific disaster experiences of daycare centers in Iwate, Japan in the East Japan Earthquake and Tsunami. Bhattacharjee explained:

(C)ase research (or study) is an intensive longitudinal study of a phenomenon at one or more research sites for the purpose of deriving detailed, contextualized inferences and understanding the dynamic process underlying a phenomenon of interest (2012, p. 107).

Thus, this study is expected to provide better understanding of how daycare centers in the affected areas protected young children from the disaster and their childhood experiences in post-disaster environments.

In this section, first, I briefly discuss what is my epistemological and ontological research perspective from which this study was developed. Then, the study site and sample population are described, and I detail the data collection processes and research instruments that were used in the study. Lastly, I explain the processes that were applied for research analysis.

### 3.2.1 Qualitative and interpretivist research perspective

The previous section showed that I am primarily interested in, and largely influenced by, educational anthropology and qualitative or ethnographic inquiry methods. Such methods help in “exploring the broader understanding possible in natural conversations and narratives, as well as examining the essential qualities within human experience (Piantanida & Garman, 1999, p. 245).” Furthermore, I situate my ontological and epistemological perspective within the *interpretivist research paradigm*. Crotty (1998) defined the *interpretivist* (or *social constructivistic*) perspective as a view of how different groups of people construct, or do not construct, their realities. Piantanida and Garman described: “A basic tenet of interpretivism includes the notion that as reflective human beings, we construct our realities, for the most part, in discourse communities (Piantanida & Garman, 1999, p. 247).” Realities are not just ‘*out there*’ or ‘*given*’, but, through our interactions with others, society, events, and more, we ourselves individually and collectively construct realities.

Referring to Burrell and Morgan’s sociological paradigms (1979), Bhattacharjee also described:

(I)f (researchers) believe that the best way to study social order is through the subjective interpretation of participants involved, such as by interviewing different participants and reconciling differences among their responses using own subjective perspectives, then they are employing an interpretivism paradigm (2012, p. 19).

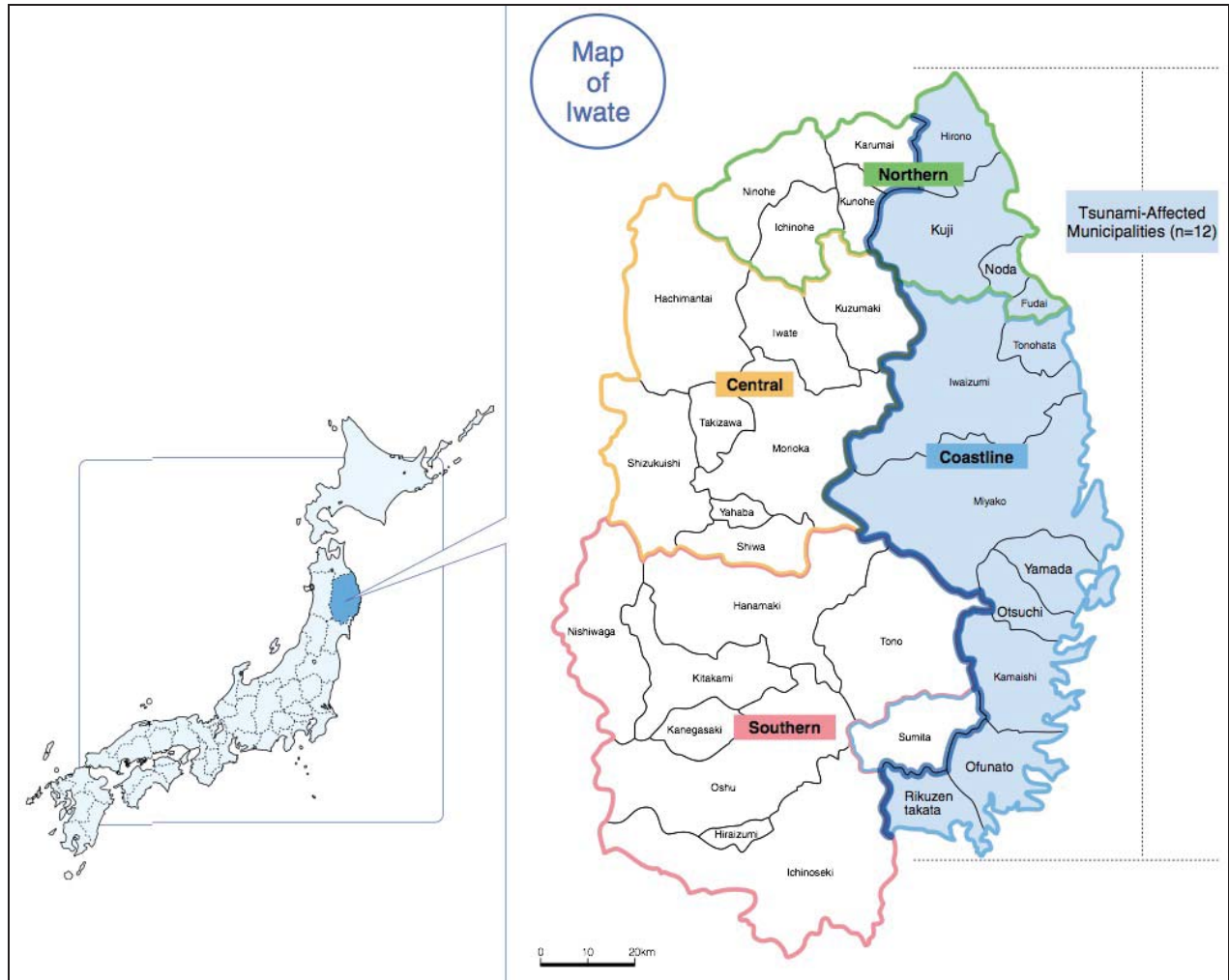
These descriptions resonated myself with the interpretivist paradigm. I often find myself drawn to unique individual experiences rather than generalized and median states of the subjects that I study about. That is where I gain significant understanding of the subjects and their realities, and identify gaps and root causes of the problems. Piantanida and Garman pointed out that:

(I)nterpretivists do not claim that their research portrayals correspond to a general reality, but rather that interpretivist portrayals strive for coherence, which provides the reader with a vivid picture of the essence of the meanings of what is under study (1999, p. 247).

Some of the data collected in this study may “correspond to a general reality” and the past knowledge in the field of education and ECD in emergencies or humanitarian assistance. Focusing on various qualitative accounts collected in my fieldwork, however, I hope to logically highlight and structures my discovery and understanding of unique insights and gaps hidden behind the obvious pictures of general disaster experiences. By taking the interpretivist approach, therefore, the research findings should help me develop some theoretical frameworks both unique to the case and applicable to other settings in the field of protection of children in emergencies.

### **3.2.2 Study site and sample**

I chose Iwate Prefecture in Japan as study site for my dissertation research. Iwate was one of the prefectures most heavily affected by the 2011 disaster. It is situated in northeastern of Japan’s main island, *Honshu*, some 300 miles away from Tokyo. While the strong tremor reached the whole prefecture, whose area is about 5,900 mile<sup>2</sup> (a little larger than Connecticut) and the second largest in the country, the tsunami hit the entire coastline of Iwate. Especially, the destructions in the six southern coastal municipalities were extremely severe and extensive (See Figure 7 for the map of Iwate).



**Figure 7.** Map of Iwate

Adapted from “東日本大震災津波 岩手県保育所避難状況記録 - こどもたちは、どう守られたのか [East Japan Earthquake and Tsunami - Survey study on the evacuation of nursery schools in Iwate: How were children saved?],” by C. Kondo, 2013, pp. 2-3. Copyright 2013 by the Japan Committee for UNICEF and Iwate Prefecture's Children and Family Division of the Health and Welfare Department.

Prior to the disaster, the coastal area of Iwate faced modern societal problems, such as decreases in their total population, aging community, and declining birthrates (Iwate Prefecture, 2011b). As for its economy, the inland southern part of the prefecture had successfully attracted a few industries in the recent years due to its accessibility from/to the Tokyo metropolitan area. However, economic development in the northern and coastal areas remained slow and income disparities were widening among different parts of the prefecture (Iwate Prefecture, 2008).

The March 11 disaster severely impacted the already economically and socially vulnerable area. Because of its unique geographical character<sup>21</sup>, government offices, local businesses and industries, and residential buildings were located in the limited land along the coastline, and were completely destroyed or severely damaged by the tsunami. Among the twelve (12) coastal municipalities directly hit by the tsunami, especially, the damages in Rikuzentakata and Otsuchi were extensive, lost their municipality buildings along with many government staff. Also, it was estimated that these two municipalities lost 7.6% and 8.2% of their populations respectively by the disaster (Iwate Prefecture, 2013). Even tsunami survivors lost their family members, houses, belongings, jobs, and many others.

For the purpose of my dissertation, I chose to focus on the childcare support systems, especially daycare centers, in the disaster-affected area of Iwate as my primary study subject. During my assignment in Iwate for JCU, whose mission is primarily focused on protecting the rights of children, it had come to our attention that early childhood development (ECD) was the area where the timely and adequate governmental assistance was not given after the disaster (JCU, 2011a).

In 2011, 353 government-certified daycare centers (both public and private) operated in Iwate Prefecture, enrolling about 26,146 young children of age between 0 and 5. Out of total 33 municipalities in Iwate, 12 coastal municipalities were directly hit by the tsunami. Among them, the Iwate government reported that 18 daycare centers were directly affected by the tsunami – 12 centers were assessed as ‘*completely destroyed*’ and 6 as ‘*partially damaged*’ (See Table 6 for the list of tsunami affected daycare centers in Iwate). At least 1,240 children were enrolled at these daycare centers on the day when the disaster happened.

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<sup>21</sup> In Japan, this saw-toothed coastline is known as *rias coast*. It is similar to *fjord* in the Scandinavian Peninsula.



**Table 6.** List of daycare centers directly affected by tsunami

No	Daycare center (DC) name	Owner	Capacity	Damage		Operational status (as of March 2012)
				Assessment (by Govt)	Detailed condition	
1	Katakuri DC	Public	150	Completely destroyed	Washed away	Reopened at the old building of Z DC
2	Hanamizuki DC	Private	90	Partially destroyed	Flooded above the floor	Reopened at the same facility
3	Hamanasu DC	Public	90	Completely destroyed	Washed away	Closed
4	Kosumosu DC	Private	45	Partially destroyed	Front yard side destroyed	Closed
5	Ajsai DC	Public	45	Completely destroyed	Washed away	Reopened at R Kindergarten
6	Nanohana DC	Private	55	Completely destroyed	Washed away	Reopened at H Community Assembly Center
7	Satsuki DC	Private	60	Partially destroyed	Large scale damage; First floor washed away	Reopened at the old building of SN Kindergarten
8	Botan DC	Public	45	Completely destroyed	Washed away	Reopened at D Elementary School
9	Ayame DC	Private	60	Completely destroyed	Washed away	Reopened at a temporary school building
10	Kantsubaki DC	Private	90	Completely destroyed	Flooded up to the ceiling; Building structure remained, but assessed as "completely destroyed"	Reopened at a temporary school building
11	Shakunage DC	Public	60	Completely destroyed	Washed away	Reopened at a temporary school building
12	Yamabuki DC	Private	56	Partially destroyed	Flooded above the floor at 130 cm	Reopened at the same facility
13	Asagao DC	Public	90	Completely destroyed	Washed away	Reopened at a temporary school building
14	Himawari DC	Private	90	Partially destroyed	Flooded above the floor; exterior a/c units and heating systems damaged	Reopened at the same facility
15	Suzuran DC	Private	50	Partially destroyed	Partial foundation damaged; Window glasses, flooring, beddings, furniture damaged	Reopened at the same facility
16	Kinmokusei DC	Private	30	Completely destroyed	Washed away	Reopened at the old building of K Hotel
17	Mikan DC	Public	45	Completely destroyed	Washed away	Reopened at a temporary school building
18	Sumire DC	Private	90	Completely destroyed	Washed away	Reopened at the old building of Y DC

Source: Iwate Prefecture, 2011a

For the purpose of this dissertation, I randomly assigned a pseudonym, or pseudo-name, to each daycare center listed as “directly affected.” In addition, I chose not to indicate their geographical locations on the map to protect their identities. Instead, I use general terms of their proximity to the shoreline and local geographical features to character where these daycare centers were situated relative to the tsunami.

### **3.2.3 Data collection and research instruments**

After the earthquake and tsunami disaster hit east Japan, I joined the Japan Committee for UNICEF (JCU) in April 2011, and managed its emergency programs in Iwate for one year. The tsunami disaster severely damaged a large scale of local infrastructures and businesses and left almost no accommodations available in the affected coastal region. Because the coastline region was separated from the inland central area by mountains, JCU could only set up a temporary operational base in Morioka, Iwate’s capital. Thus, we drove for 60 miles of partially mountainous local roads, or 2 to 2 1/2 hours by car for one way, every day to reach the affected communities.

Because of my work as Field Manager, I worked with daycare centers, kindergartens, schools and local government offices in tsunami-affected municipalities on a daily basis. Initial introduction experiences were not always smooth, because many were under complete devastation and loss. Throughout the course of a year, however, I got to know and gain trust from many of the childcare workers, teachers, and government officials. Especially, because our organization was involved in the recovery assistance for tsunami-affected daycare centers, I built close relationships with their personnel. Furthermore, the year that I spent in Iwate gave me an opportunity to “be there,” take part of humanitarian assistance as well as local events and

activities, and observe how various groups of people were interacting in the situations. Thus, I chose the childcare support systems, or daycare centers and their stakeholders, in Iwate as my dissertation subject or study sample.

My primary study sample group, or informants, was the personnel of daycare centers, more specifically the directors. They were also the primary counterparts in my work as humanitarian worker. All the relevant daycare directors were invited to participate in the study voluntarily – no mandatory reporting was requested. For each research collection process, furthermore, relevant groups of these informants were selected based on “non-probability” and “expert sampling” (Bhattacharjee, 2012). The directors were the representatives of daycare centers, and in the positions to lead and oversee their institutions. Thus, they were considered to be “more credible (Ibid.)” as study sample for my research.

During the spring of 2012, I conducted a survey study about evacuation measures of daycare centers in Iwate (Kondo, 2013). It was a joint project of the JCU and Iwate Prefecture’s Children and Family Division of the Health Welfare Department (or the Iwate Prefecture Government [IPG from this point]). Because objectives of the survey study and my dissertation shared the similar concerning topics within the larger spectrum of protecting children and their childhood experiences in emergencies, I used the data and information collected through the research instruments developed for both projects. The research design and instruments were approved by the University of Pittsburgh Institutional Review Board (IRB) as an exempt study in September 2012 (PRO12040137).

For my dissertation research project, I used the following four (4) main research instruments or methods:

- 1) Multiple choice questionnaire survey;

- 2) Open-ended questionnaire survey;
- 3) Face-to-face semi-structured interview; and
- 4) Direct or participant observation.

Both survey questionnaires (1 & 2) and interview questions (3) were developed based on:

a) relevant literature and publications in the field of disaster risk reduction (DRR) in childcare institutes (All-Japan Federation of Private Kindergartens, 2010; Japan Society for Civil Engineers [JSCE], 2005; Kochi Prefectural Board of Education, 2012; Ministry of Economy Trade and Industry, 2012; Shizuoka Prefecture, 2012); and b) components of the Landgren's Protective Environments for Children framework (2005). For this dissertation research, my primary interest remained in the qualitative accounts gathered through the above research instruments. However, due to the availability of both qualitative and quantitative data from the listed research instruments, I attempted to partially employ "mixed research methods" for this study. Bhattacharjee (2012) suggested the benefits of using quantitative data in interpretive research as: a) "quantitative data may add more precision and clearer understanding of the phenomenon of interest than qualitative data"; b) "joint use of qualitative and quantitative data, ..., may lead to unique insights and are highly prized in the scientific community" (pp. 103-104). All the survey questionnaire sheets and interview questions are showed in APPENDIX C.

There were a total of 353 government-certified daycare centers registered and operating in Iwate as of 1 March 2011, in which 26,146 children were enrolled (Iwate Prefecture, 2011c). Out of them, the following Table 7 shows the summary of study samples targeted and participated for each research instrument in the study:

**Table 7.** List of study samples by research instrument

Research instrument	Study samples		
	Category/Criteria	No of daycare centers targeted	No of daycare centers participated (response rate)
1) Multiple-choice survey questionnaire	Daycare centers in Iwate	353	263 (74.5%)
2) Open-ended written survey questionnaire	Daycare centers in the 12 tsunami-affected municipalities <sup>22</sup>	93	73 (78.5%)
3) Interview	Daycare centers assessed as “directly affected” (e.g., damaged completely or partially)	18	18 (100%)

All research instruments were prepared and responded in Japanese, which was the native language of both study participants and the researcher. I maintained all the data entries, both qualitative and quantitative, in the original language throughout the research process. It was especially important for the qualitative accounts so that any meaning or nuances would not be lost. It was not quite possible to do “word-for-word translation” from Japanese to English, because of their different grammatical structures, therefore, I attempted to do “literal translation” or “faithful translation” between two languages (Newmark, 1988 [cited in Ordudari, 2007]). I also used the Japanese terms and descriptions in the text where appropriate.

In addition to the information generated through the above instruments and my own fieldnotes (questionnaires, interviews and observation), I had access to a large amount of public references, data and information during (and after) the year that I stayed and worked in Iwate. These locally available materials included, but were not limited to: government documents; agency reports; media materials, assessment reports; researches; and many more. As

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<sup>22</sup> These 12 municipalities were: Rikuzentakata, Ofunato, Kamaishi, Otsuchi, Yamada, Miyako, Iwaizumi, Tanohata, Fudai, Noda, Hirono, and Kuji. They all locate along the Pacific shoreline.

Bhattacharjee described, these “external and internal documents ... (were) used to cast further insight into the phenomenon of interest or to corroborate other forms of evidence (2012, p.107).”

In the following, I describe each component of the listed research instruments.

### **3.2.3.1 Multiple-choice survey questionnaire**

The first research instrument, *multiple-choice survey questionnaire*, was developed to capture different disaster experiences across the whole prefecture. Iwate had entirely experienced the massive earthquake, and, even in the inland region, many faced subsequent power outage, food and fuel shortage, and breaking down of transportation systems. From my interactions with daycare staff in tsunami affected area, furthermore, I learned that they wanted other people to understand their experiences, or sympathize them: what was like to face such a severe disaster; or what they went through in the aftermath. Hardships in tsunami-affected area could be compared with the other areas as the survey was targeted across the prefecture. Because the scale of the disaster was enormous, ranges of disaster experiences could be relevant for the rest of the country, which is highly prone to serious earthquakes in future.

This multiple-choice survey questionnaire, therefore, was designed to be relevant to all 353 daycare centers in Iwate, examining their general disaster risk reduction (DRR) measures and disaster experiences. The questionnaire consisted the following three (3) subject sections:

- 1) State of pre-3.11 earthquake and tsunami disaster risk reduction measures and preparedness taken at daycare center;
- 2) State of school when the 3.11 earthquake happened; and
- 3) Evacuation measures taken by school after the earthquake.

I used *dichotomous* and *nominal* response formats in this structured, multiple choice survey questionnaire where respondents could answer with yes/no, or choose a relevant answer(s) from a set of options (Bhattacharjee, 2012).

In collaboration with the Iwate Prefecture's Children and Families Division, this was conducted as a *self-administered mail* survey where willing respondents filled and returned the survey at their convenience. It was responded by 263 daycare centers out of total 353, with the response rate at 74.5%. This high response rate could be resulted from the fact that the survey materials, including the introduction letter, were sent from the governmental office. However, the questionnaires were developed to be simple and comprehensive so that respondents could easily fill the survey.

I used a computer-based spreadsheet/database software program, Excel, to organize and formulate the data sets from the survey. I primarily used simple formulations of sums and means, and each indicator was summarized as total for the prefecture, or disaggregated by region or by disaster-affected area or others. This was because main readers of the mentioned survey study were primarily daycare center personnel, and presentation of the data needed to be simple and easy for any readers to comprehend. For this study, I maintained the same formats of data presentation, because of the time constrain. However, I acknowledge, and recommend, the possibility of further quantitative data analysis, such as correlations among the indicators or comparing with other data from external sources.

### **3.2.3.2 Open-ended survey questionnaire**

This second research instrument, *open-ended survey questionnaire*, was targeted a total of 93 daycare centers in the 12 coastal municipalities that were hit by tsunami. Many of these daycare centers were not damaged or destroyed, but, whether directly or indirectly, all of them were

seriously affected by the disaster. Due to their geographical characteristics, which are known as *rias* coast, or saw-toothed coastline, these municipalities' residential, business, government and industrial areas were concentrated to the limited low and flat lands. The destruction from the tsunami was severe, and affected many, if not all, populations of these small concentrated coastal communities. Many daycare centers experienced the massive earthquake, extensive evacuations and difficult post-disaster recovery conditions at first hand. Thus, the second survey was designed for these daycare centers in tsunami-affected municipalities to describe details of their disaster experiences in their own writings.

This rather semi-structured, open-ended survey questionnaire was divided into the following three sections:

- 1) Actions taken by school on the day of the earthquake and tsunami (in the chronological order - before, when, and after the earthquake happened on 3.11);
- 2) Situations of the related individual items, including:
  - a. methods of evacuation;
  - b. evacuation points;
  - c. food access (including drinking water);
  - d. anti-cold weather measures;
  - e. sanitary situations;
  - f. staffing;
  - g. condition of children;
  - h. information access; and
  - i. returning children to their parents/guardians; and



- 3) Any reflections, opinions or other notes that they thought of after the disaster (e.g., things that should have been done or prepared before the disaster; things that school changed improved after the disaster).

Based on the Protective Environment Framework (Landgren, 2005), these questionnaires were specifically developed to review the situations and environments where these daycare centers had to protect their young children from the serious disaster. 73 daycare centers responded, with the response rate at 78.5%. Same as the process of the first survey, it was also done in a *self-administered mail* survey manner, sent by the government office. All written responses were re-entered into separate Word files (.doc/.docx), which were imported to NVivo, qualitative data organization and analysis software, for further analysis (See 3.2.4 Qualitative Analysis for more details).

### **3.2.3.3 Semi-structured face-to-face interviews**

The surveys were excellent instruments to collect data remotely, reach a larger population, and allow comparative analysis of subgroups (Bhattacharjee, 2012). However, they were limited in their content scales and structures: In the multiple-choice survey questionnaires, for example, options for answers were controlled; and, in the open-ended survey questionnaires, written responses could be simplified and omit detailed insights. Therefore, face-to-face interviews were a great complimentary method to allow study sample groups to explain and express themselves in their own terms. Furthermore, interview is an important data collection method for an interpretive research. Especially, face-to-face interviews were suitable to investigate rather severe and complex disaster experiences of those tsunami-affected daycare centers in a sensitive manner. As Bhattacharjee described, descriptive information shared by the interviewees, or

*informants*, helped me uncover both obvious and not-so-obvious, or “*hidden* reasons behind complex, interrelated, or multifaceted social processes (2012, p. 105).”

**Table 8.** List of interview participants

No.	Daycare center (DC) name	Interview participants	Post
1	Katakuri DC	Ms. Kaori Emura	Head Childcare Worker
2	Hanamizuki DC	Ms. Jun Endo	Director
3	Hamanasu DC	Ms. Sayori Egami	Director
4	Kosumosu DC	Ms. Ruri Tamura	Director
5	Ajsai DC	Ms. Naomi Kariya	Childcare Worker
		Ms. Akiyo Tonda	Director
6	Nanohana DC	Ms. Ritsuko Chiba	Director
7	Satsuki DC	Ms. Wakako Ota	Director
8	Botan DC	Ms. Hikaru Yoshii	Director
9	Ayame DC	Ms. Fumie Kitano	Director
10	Kantsubaki DC	Ms. Shoko Maehara	Director
11	Shakunage DC	Ms. Megumi Ueda	Director
12	Yamabuki DC	Mr. Jiro Umemura	Director
		Ms. Nanako Inagawa	Head Childcare Worker
13	Asagao DC	Ms. Yasuko Inui	Director
14	Himawari DC	Mr. Eita Omi	Director
15	Suzuran DC	Ms. Tomoyo Rikuta	Director
16	Kinmokusei DC	Ms. Ikuko Yamanaka	Director
17	Mikan DC	Ms. Komachi Seto	Deputy Director
18	Sumire DC	Ms. Usako Rikimoto	Head Childcare Worker
		Ms. Masayo Mochida	Director

The 18 daycare centers were identified as study samples for the interview component. These daycare centers were either completely destroyed (e.g., washed away or completely flooded) or partially damaged (e.g., flooded above the floor level, or damaged to the structure, furniture, and equipment) by the tsunami. The reason why the interview section was focused on these “directly affected” daycare centers was because their disaster experiences were within the same or similar range, such as: a) disaster preparedness measures; b) immediate actions and evacuation conditions on the day of the disaster; c) actual damages to their facilities and recovery efforts; and d) challenges in post-disaster environments. For the interview component, a total of

18 interview sessions were held at 18 tsunami-affected daycare centers, participated by 20 informants (See Table 8). For the dissertation purpose, each interviewee was given a pseudonym, or pseudo-name, randomly assigned by the researcher to protect their identities.

The introduction letter was sent by the Iwate Prefecture's office, and the researcher followed up with the interview participants by phone. At the beginning of every interview, the Information Sheet was provided to the interviewee(s) to explain "ethical principles in scientific research," which included: a) voluntary participation and harmlessness; b) anonymity and confidentiality; c) disclosure; and d) analysis and reporting (Bhattacharjee, 2012). This was particularly important in my interview process, because their participations in a research study should not become any harm or additional burdens, psychologically or physically, to these daycare center personnel who had gone through the tragic event.

I prepared the interview exercise in a semi-structure manner with the following five (5) subject areas:

- 1) Disaster risk reduction (DRR) measures taken by school before the disaster;
- 2) Situation of school and action taken when the earthquake happened;
- 3) Conditions of school and changes/improvements made as DRR measures since the disaster;
- 4) Any reflections on the disaster experiences;
- 5) Based on the crisis experiences, any thoughts about:
  - a. what would be the safe and protective environments for children even in difficult circumstances;
  - b. what were the most important elements to establish and maintain the safe and protective environments for children; and

- c. any obstacles and challenges to provide such safe and protective environments for children.

My questions were developed in relation to the Protective Environment Framework (Landgren, 2005) in mind. Furthermore, I developed this flow of subject areas with a few sample questions to guide me through the interview process, but also left some spaces or flexibilities in the structure. Having both *structures* and *flexibilities* gave me the following advantages in the interview process: Advantages to have *structures* included: a) Explaining the structure at the beginning helped the interviewee know what to expect in the interview; and b) I could simply follow the order of the questions, while being attentive to the interviewee's response. Benefits of having *flexibilities* were: a) By observing interviewee's responses and reactions, I could reorganize the interview structure and use different ways to ask questions; and b) I could let the interviewee expand his or her responses as they wished.

Each interview was designed for one hour or an hour and a half, considering of the availabilities of interviewees. All interviews were carried out during the month of April 2012, after one year passed since the disaster, and taken place at interviewees' daycare centers during their working hours. All interviews were digitally recorded using 'Voice Memos' software application of a MP3 player (e.g., iPod, iPhone or other mobile phone), and saved in the *.amr* (or "Adaptive Multi-Rate") format so that these files could be imported to the qualitative research analysis software like NVivo. After each interview, I also recorded my own audio memos, reflecting: a) overall impression of the interview and interviewee(s); b) subjects highlighted by the interviewee(s); and c) any other matters that I noted after the session. These audio memos became part of my fieldnote and helped me recall the interview details and important subject points that had been highlighted in the interviews.

The recorded interviews were later transcribed word-by-word and filed into separate Word files (.docx). Based on the transcriptions and my post-interview digital memos, in addition, I made summary notes (.docx) as quick references. All these interview files were imported into NVivo for further classification and analysis of qualitative data.

#### **3.2.3.4 Direct or participant observation**

Observation is one of the core techniques in interpretivist or ethnographic research. Spradley described that *participant observation*, which is often used in an ethnographic research, involves two purposes: 1) to engage in activities appropriate to the situation; and 2) to observe activities, people, and physical aspects of the situation (Spradley, 1980). Bhattacharjee (2012) distinguished the difference between direct and participant observation as follows:

- 1) *direct observation*, where the researcher is a neutral and passive external observer and is not involved in the phenomenon of interest (as in case research); and
- 2) *participant observation*, where the researcher is an active participant in the phenomenon and her inputs or mere presence influence the phenomenon being studied (as in action research) (pp. 106-107).

During the year that I spent in Iwate, the study site, I often found myself having multiple positions in relation to the local populations and communities: Japanese; non-Japanese; a humanitarian worker; and a researcher. As a Japanese, on one hand, I could speak the national language, understand the general Japanese culture, and even shared the same, or at least similar, sympathy and grief to the disaster experience with the subject populations. In this sense, I considered myself as ‘insider’.

I, on the other hand, found myself situated in a unique position in the subject communities, because of my background and work. First, I was from Osaka, far from Iwate, and did not share the same regional dialects, histories or social-economic backgrounds with the local populations. Second, my own country sometimes became ‘foreign’ to me, and I often situated

myself 'outsider' in it, because of living overseas for a half of my life and using English as primary communication language. As an aid worker, lastly, I kept a certain distance from the subject populations and communities, and not emotionally involved. It was part of my professional practices to stay objective towards the assisting communities. Thus, I could not completely become 'a local,' or one of them, and somehow stayed as 'outsider'.

I would not call myself an ethnographer, but, as a researcher, I was both an active participant and a passive external observer, at the same time or depending on the situations that I was in. As I had often done in any places that I lived or worked in the past, however, I maintained 'ethnographic curiosity'. I always enjoyed being in another culture, and observing it or taking part of it. In sum I maintained myself in a very unique position where I balanced being both an insider and an outsider in the study site

Many of the observation methods, nonetheless, whether participant or direct, became my field techniques as both researcher and humanitarian worker. Those techniques, suggested by Spradley, included: a) using a *wide-angle lens* to focus on the most important data; b) being an insider and outsider; c) continuous introspection or self-reflection; and d) taking fieldnotes or record-keeping (1980). The questionnaire surveys and interviews provided a great amount of essential data and critical information to the study. However, what I gained from my constant, direct and participant, observation in the field were not only equally important inputs to my dissertation, but also valuable learning experiences for myself academically, professionally and personally. Having "been there," regularly observed and often participated in local actions, and had informal and formal constant interactions with those involved in the concerned study subject somehow 'legitimized' me, or gave me the 'right,' or even "authority," to communicate what I had seen and experienced at first hand. As discussed earlier in this chapter (Wolf, 1992),

however, this ‘right’ comes with a power, which I came to appreciate but also constantly reminded myself of the danger to exploit such power in the research process.

### 3.2.4 Qualitative research analysis

By the term “qualitative research,” we mean ... research about persons’ lives, lived experiences, behaviors, emotions, and feelings as well as about organizational functioning, social movements, cultural phenomena, and interactions between nations (Strauss & Corbin, 1998, pp. 10-11).

For my dissertation research, I followed the Strauss and Corbin’s “Grounded Theory” that “was derived from data, systematically gathered and analyzed through the research process (Glaser & Strauss, 1967; Strauss & Corbin, 1998).” They further explained: “A researcher does not begin a project with a preconceived theory in mind ... (r)ather, the researcher begins with an area of study and allows the theory to emerge from the data (Strauss & Corbin, 1998, p. 12).” Bhattacharjee concurred: “Qualitative analysis is the analysis of qualitative data” and “(t)he emphasis ... is ‘*sense making*’ or understanding a phenomenon, rather than predicting or explaining [*italics added*] (2012, p. 113).” Miles and Huberman explained the qualitative research process and tasks as follows:

(Q)ualitative research is essentially an *investigative* process, not unlike detective work, as Douglas (1976) has argued convincingly. One makes gradual sense of a phenomenon, and does it in large part by contrasting, comparing, replicating, cataloguing, and classifying the object of one’s study (1984, p. 37).

On the contrary, Piantanida and Garman (1999) used more practical terms to explain the *facets* of “(I)iving with the (qualitative) study” as:

- immersing oneself in the inquiry;
- amassing the stuff of the inquiry;
- slogging through the stuff;
- coming to a conceptual leap; and
- crafting to a conceptual leap (p. 130).

While the limited quantitative data were also available (as discussed earlier), nonetheless, I employed and focused on qualitative methods for my dissertation research “where a detailed understanding of a process or experience (was) wanted,” and “where more information (was) needed to determine the boundaries or characteristics of the issue being investigated” (Bazeley & Jackson, 2013, p. 2).

In qualitative (and ethnographic) research, nevertheless, all of these processes and tasks may follow a *cyclical* pattern of investigations, or Spradley called “the ethnographic research cycle (1980).” He listed the tasks in “the ethnographic research cycle” as: 1) selecting an ethnographic project; 2) asking ethnographic questions; 3) collecting ethnographic data; 4) making an ethnographic record; 5) analyzing ethnographic data; and 6) writing an ethnography (p.29). After 5) or 6), researcher may go back to 2) and repeat the subsequent tasks, which makes the process “cyclical.” Spradley (1980) suggested that this cyclical process helps researchers “describe a wilderness area rather than trying to ‘find’ something,” and leads to “explicit awareness (p. 26)” of the complex realities where they research. In my analysis stage, I was constantly engaged in the circle of these detail tasks and inquiry process, which became crucial exercise for me to refine the research findings.

To aid analysis of the qualitative empirical data collected in the field, I used a computer assisted/aided qualitative data analysis software (CAQDAS or QDAS) program, NVivo10. This software allows users to work on different types of qualitative data materials, such as: interview transcriptions; summary notes; online materials; pictures; video and audio files; and more, simultaneously.

Using a CAQDAS software program like NVivo also enabled me to easily apply various coding techniques to classify, organize and categorize the massive qualitative data available to



the study (Bhattacharjee, 2012). Strauss and Corbin suggested a few coding techniques to be applied for qualitative data analysis, including:

- *Open coding*: The analytic process through which concepts are identified and their properties and dimensions are discovered in data;
- *Axial coding*: The process of relating categories to their subcategories, termed “axial” because coding occurs around the axis of a category, linking categories at the level of properties and dimensions; and
- *Selective coding*: The process of integrating and refining the theory (Strauss & Corbin, 1998).

During my research analysis process, I applied and mixed these coding techniques, as well as codes that were both “purely descriptive” and based on “more interpretive or analytical concepts” (Bazeley & Jackson, 2013). For example, I initially applied the *open-coding technique* based on the Protective Environment Framework components, or what Strauss called *a priori*, or theoretically derived, codes (1987). These were used “as sensitizing concepts, rather than as fixed categories (Patton, 2002; Strauss, 1987 [cited in Bazeley & Jackson, 2013]).”

Much of the entire process involved the constant *selective coding* exercises, and, as it moved forward, I also encountered *in vivo* codes that emerged as repeatedly used in the interviews (Strauss, 1987; Strauss & Corbin, 1998). For example, many interview participants discussed about the importance of resuming daycare programs after the disaster in general, but some highlighted why it was importance, such as: 1) daycare center was a safe and secure place for children; 2) it was also supplementary to their home environments; 3) daycare program gave a sense of normalcy in their lives; and 4) it maintained their care and development opportunities and experiences. These four points were highlighted as supporting, or sub-, categories to the parent node of “significance of ECD programs.”

**Table 9.** List of nodes coded in NVivo

Node	No of Sources (s=18)	No of References (r=1,374)
1. Disaster responses of daycare centers	18	328
1.1 DRR measures	16	78
1.2 Emergency evacuation of children	18	136
1.3 Post-disaster recovery challenges	18	114
2. Roles of ECD programs for children in emergencies	18	206
2.1 Children's DRR skills & abilities	17	55
2.2 Psychological support needs	17	61
2.3 Significance of ECD programs	17	90
2.3.1 Safe and secure places	14	27
2.3.2 Supplementary to home environments	5	7
2.3.3 Normalcy - Usual daycare programs	11	33
2.3.4 Continuous development opportunities	13	23
3. Childcare workers' capacities	18	153
3.1 Caregivers' responses to the disaster	18	79
3.1.1 Peer discussion and support	8	12
3.1.2 Sense of responsibility for children's safety	18	58
3.1.3 Post-disaster civic duty	6	9
3.2 Disaster effects on caregivers	15	61
3.3 Issue of staff allocation	7	13
4. Family and daycare relations	18	259
4.1 Family participation in DRR	18	53
4.2 Safe return of children to parents	18	180
4.3 Families' early recovery	13	26
5. Community disaster response capacities	18	241
5.1 Communities' support in DRR & disaster responses	18	119
5.2 Risks in massive evacuation	17	96
5.3 Mutual relations with the communities	12	26
6. Massive influx of external assistance	9	18
7. Governmental roles and responsibilities	18	169
7.1 DRR standards & guidance for daycare centers	17	120
7.1.1 Disaster warning systems	8	18
7.1.2 Emergency preparedness standards	17	53
7.1.2.1 Evacuation drills	17	43
7.1.2.2 Facility safety standards	5	6
7.1.2.3 Auditing	4	4
7.1.3 Manuals & technical assistance	14	49
7.1.3.1 Disaster response manuals & guidelines	12	27
7.1.3.2 Technical guidance & evacuation support	13	22
7.2 Post-disaster leaderships & capacities	10	25
7.2.1 Assessment & assistance	4	7
7.2.2 Guidance & facilitation	9	18
7.3 Child-friendly disaster resilient community planning	13	24

Table 9 shows the final list of nodes, or coded themes, that I generated in NVivo. The number of sources indicates how many of the total of eighteen (18) interview participants discussed the specific subject matters, or nodes, and the number of references shows how often the specific subjects were coded in the interviews. One part of the responses in the interviews can be coded for different nodes at the same time, and different parts of one interview can be coded for the same node. As a result, 1,374 reference parts of the 18 sources were coded under 42 nodes as shown in Table 9. I also utilized different query methods in NVivo (e.g., matrix query and text search) to examine relations among the coded thematic subjects, or *nodes*, and highlight important concepts. Thus, these classification methods helped me consolidate and structure the research findings and subsequent analyses, which will be presented in the next chapter.

These coding exercises involved the “*constant comparison*” process that would “(imply) continuous rearrangement, aggregation, and refinement of categories, relationships, and interpretations based on increasing depth of understanding” (Bhattacharjee, 2012, p. 115). In addition, I also applied other integration techniques like *storylining*, *memoing*, or *concept mapping* (Strauss & Corbin, 1990) in the process of (re-)organizing, linking, and refining the research findings for better and clearer understanding of the study subject. These qualitative analysis exercises helped me focus on critical findings of obvious or not-so-obvious concepts, categories, reasons, relations, and interpretations from the qualitative empirical data collected.

### 3.3 SUMMARY

In this chapter, I first reviewed the current research inquiry and knowledge-base management practices in the field of education in emergencies. This discussion was focused on the benefits of both quantitative and qualitative inquiries in the humanitarian assistance settings, including the relevance of ethnographic research to examine crisis situations and unique challenges in conducting researches in emergency settings. Then, I outlined the methods and design employed for my dissertation research in detail, which included the reason why qualitative research approaches were relevant, or suitable, to better understand the disaster experiences of daycare centers in Iwate to protect children and their childhood experiences from the 2011 disaster.

In the next chapter, I consolidate and present the research findings and subsequent analyses based on the data and information that I had collected using the research design framework presented above. My intention is to provide better understanding about the disaster experiences of childcare institutions, like daycare centers in Iwate, in the midst of a serious disaster situation, including how these daycare centers ensured protection of children and their childhood experiences and what the emerging issues and challenges were to support and strengthen their protective capacities for safety and security of young children in the communities.

#### 4.0 RESEARCH FINDINGS

In Japan, pre-school education is not compulsory, but UNESCO reported that its 2011 net enrolment ratio (NER) in pre-primary education was 88% (2014). The common options of early childhood development (ECD), or early learning, programs in the country are kindergartens (or *youchien* in Japanese) and daycare centers or nurseries (or *hoikusho*). They are administered by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and the Ministry of Health, Labour and Welfare (MHLW) respectively. Both institutions share the objectives of providing appropriate care and education for pre-school age children (Ichimi, n.d.). Their differences are: 1) that kindergartens are focused on education programs and operate for shorter hours, which may not be convenient for children with working parents; and 2) that daycare programs are to provide care and educational services to children of ages 0-5 who “have difficulties to be looked after at home” (e.g., their parents work during the day or for extended hours) (“Child Welfare Act,” 1947a; “School Education Law,” 1947b).

Table 10 shows the numbers of estimated 0-5 age populations and enrollments at kindergartens (3-5 ages) and daycare centers (0-5 ages) in 2012. Among the populations between 3 and 5 years old children, a total of 93% were enrolled in either kindergartens or (government-certified) daycare centers. Moreover, about 800,000, or 25%, of the ages 0-2 children were registered in the daycare services.

**Table 10.** 0-5 age populations and enrollments at kindergartens and daycare centers in 2012

Age	Estimated Population by Age		Enrollment at Kindergarten [Ages 3-5]		Enrollment at Daycare Center [Ages 0-5] <sup>23</sup>	
	Number	Number	Number	Rate	Number	Rate
0		1,068,000	-	-	108,950	10.2%
1	1,045,000		-	-		
2	1,045,000	2,090,000	-	-	689,675	33.0%
0-2		3,158,000	-	-	798,625	25.3%
3		1,074,000	442,508	41.2%	No data <sup>24</sup>	-
4		1,070,000	566,985	53.0%	No data	-
5		1,062,000	594,732	56.0%	No data	-
<b>3-5</b>		<b>3,206,000</b>	<b>1,604,225</b>	<b>50.0%</b>	<b>1,378,177</b>	<b>43.0%</b>
0-5		6,364,000	1,604,225	25.2%	2,176,802	34.2%

Sources: Ministry of Internal Affairs and Communications, 2011 (for the population data); MEXT, 2012b (for the kindergarten enrollment data); MHLW, 2012a (for the daycare center enrollment data)

In recent years, more parents of young children work and demands for the daycare services have increased. In 2012, 2,176,802 children were enrolled at daycare centers, against the total capacity of 2,240,178 nationally, at the occupying rate of 97.2%.<sup>25</sup> As a result, there had been problems of children waiting to be enrolled in authorized daycare programs, called “*taiki-jido* or wait-listed children.” As of April 2012, according to the Ministry of Health, Labour and Welfare, there were 24,825 children waiting for the entrance to government-authorized daycare centers, and the number increased to 46,127 by October of the same year (MHLW, 2013a).

In addition to government-certified daycare centers, there are options of: 1) non-certified childcare providers (including one with evening services and ‘baby hotels’); and 2) employer-provided childcare services (such as hospital-provided childcare programs) available for families with young children. Under the Child Welfare Act, these non-certified childcare providers are also required to register with and annually report their operational situations to local governments (1947a). As of 2012, totals of 7,739 non-certified childcare providers and 4,165

<sup>23</sup> These numbers only included the enrollments at government certified daycare centers, not those at non-certified daycare centers.

<sup>24</sup> The breakdown enrollment data for ages from 3 to 5 years were not available from the same source. Therefore, they were not indicated here.

<sup>25</sup> At the time of reporting, the 2012 data were the latest comprehensive numbers available on the subject.

employer-provided childcare facilities enrolled 184,959 and 61,451 children respectively (MHLW, 2013c). However, these non-certified childcare facilities often do not meet all the governmental childcare service standards, and many are not eligible to receive public funding assistance. Consequently, local governments do not subsidize the childcare service fees, which often become extra expenses for families.

As an attempt to solve the problem of “wait-listed children,” the Government of Japan created a third type of pre-school program called *nintei-kodomo-en*, or “certified child care center” (“Law regarding the Promotion of the Holistic Provision of Education, Childcare and Others for Pre-school Age Children,” 2006). This certified child care center is designed to have both kindergarten and daycare program components so that kindergartens can expand their programs to provide daycare services, such as lunch, napping and extended stay. As of April 2012, the registration of certified child care centers reached a total of 1,099 facilities nationally (MHLW, 2013d).

These recent developments indicate that childcare and early learning programs play important roles in the lives of young children and their families in Japan. For this dissertation research, I have focused on the situations of daycare centers in Iwate, especially those in tsunami-affected area. Young children spend much of their daily lives at daycare centers, and their daycare experiences are critical parts of these children’s healthy development and well-being. However, the 2011 earthquake and tsunami disaster put these young daycare children in grave danger. Young children could become vulnerable to various risks at the time of a disaster, because of their physical and cognitive abilities to respond to and cope with the crisis itself and post-disaster environments that may not be conducive for them.

In this chapter, I will first provide the overview of how daycare centers in Iwate had prepared for, responded to, and coped with such a serious disaster (4.1). Especially, I will highlight the success of evacuation drills as a governmental standard for daycare programs. Later, the challenges that daycare centers faced on the day of the disaster and in their recovery efforts will be discussed. In the second section, I will describe the conditions of young daycare children in relation to the disaster (4.2). Then, I will further detail important roles that daycare, or early childhood development (ECD), programs, played to ensure the (re-)establishment of protective environments for children during and after the emergency.

The disaster experiences of childcare workers in tsunami-affected areas will be portrayed in the next section (4.3). The interviews highlighted their strong commitments and hidden concerns to be responsible for children's safety at the time of an emergency. In the fourth section, a critical lesson learned from this disaster will be shared in regards to important daycare-family relations and shared understanding of children's safety in crisis situations (4.4). I will also discuss the roles of daycare centers to help children's families in their early recovery.

When the earthquake and tsunami struck the Iwate coastal region, communities provided extensive support for daycare centers to protect children from the chaos. In the fifth section, I will contrast how neighborhood communities could assist child-friendly emergency evacuations but also how they could become a risk factor for children's safety at the same time (4.5). Next, I will review how external communities, including foreign aid, national and international humanitarian organizations, and volunteers, fitted in this context (4.6). Although the interviews and survey results did not explicitly reveal in regards to the effects of external assistance, my field observation and experiences of working as a humanitarian worker provided detailed insights of critical relations between external organizations and local populations.



Lastly, the research led to a number of crucial issues concerning national, prefectural, and local governments in terms of their roles and responsibilities to support childcare institutions, like daycare centers, to ensure protecting young children from a natural disaster (4.7). I will discuss that governments' appropriate leadership and timely assistance would be essential to make community environments more (young-)child friendly and disaster resilient for the future generations in the country.

At the end of this chapter, to sum up, I will not only describe the disaster situations of daycare centers and their children in Iwate, but also identify the gaps and important issues in regards to protecting children in emergencies. Furthermore, I intend to highlight complex but critical roles of and relations among concerned stakeholders in maintaining and (re-)building protective environments for children before, during and after the crisis situation.

#### **4.1 DAYCARE CENTERS TO PROTECT YOUNG CHILDREN IN DISASTERS**

The records showed that the coastlines of Iwate, and of the Tohoku region, had been historically vulnerable to large-scale tsunamis, and local communities were aware of their tsunami risks (Iwate Prefecture, 2013). Local municipalities had taken various disaster preparedness measures in recent years, including development and demonstration of computer simulated possible tsunami scenarios. Based on the historic data and estimates, governments marked tsunami risk areas with signs, such as *tsunami-shinsui-soutei-kuiki*, or “Estimated Tsunami Inundation Areas” (see Figure 8) (MLIT, 2012). For example, 11 of the daycare providers that I interviewed had been aware that their facilities were inside the marked tsunami risk zones, but the other seven had not considered tsunami risks at their facility locations prior to the disaster. Nonetheless, the

2011 giant tsunami reached beyond these tsunami risk areas, and completely destroyed or flooded a total of 18 daycare facilities in the Iwate coastal region.



**Figure 8.** Street sign of the Estimated Tsunami Inundation Area

Adapted from “道路管理者における津波被害軽減対策検討マニュアル(案) [The manual which examines measures to reduce the damage of the tsunami in the road manager (A plan)],” by S. Takamiya, J. Usami, & S. Kataoka, 2010, *Technical note of National Institute for Land and Infrastructure Management* (582). Copyright 2010 by the National Institute for Land and Infrastructure Management of the Ministry of Land, Infrastructure, Transport and Tourism, Japan.

All the daycare centers in Iwate, however, managed to safely evacuate the children who were under their care, or with their personnel, at the time of the disaster. In this section, I will review overall disaster experiences of daycare centers, including: 1) to what extent these childcare providers had prepared for emergency disasters like the 2011 tsunami (a *before* question); 2) how they managed to evacuate young children safely (*during*); and 3) what challenges they faced to re-establish their childcare programs after the disaster (*after*).

#### **4.1.1 Pre-disaster preparedness measures**

##### Article 6. (CHILD WELFARE FACILITIES AND EMERGENCY DISASTERS)

1) Child welfare institutions must be equipped with necessary facilities and equipment against emergency disasters, including fire control tools, such as portable fire extinguishers, and emergency exists, and others. At the same time, these institutions must develop concrete response plans for emergency disasters and make constant efforts to beware of and conduct training for such hazards.

2) In regard to the matter of training in the previous item, evacuation drills as well as fire extinguishing drills must be carried out at least once in every month ("The Standards for the Equipment and Management of the Child Welfare Facilities," 1948).

The above Government of Japan's order clearly stated child welfare facilities, including daycare centers, were responsible to ensure necessary emergency disaster preparedness measures to be in place. In the interviews, most of the daycare providers indicated that they had developed their own emergency manuals or procedures, and only a few referred that they had manuals or guidelines provided by local authorities or external sources. There were only a few public references available, or accessible. Some were governmental manuals (Kochi Prefecture School Board, 2012; Ministry of Economy Trade and Industry, 2012; Shizuoka Prefecture, 2012) and others were developed by private technical groups (All-Japan Federation of Private Kindergartens, 2010; JSCE, 2005). These references were available online, but most daycare providers were not aware of, or in need to search for, these information resources.

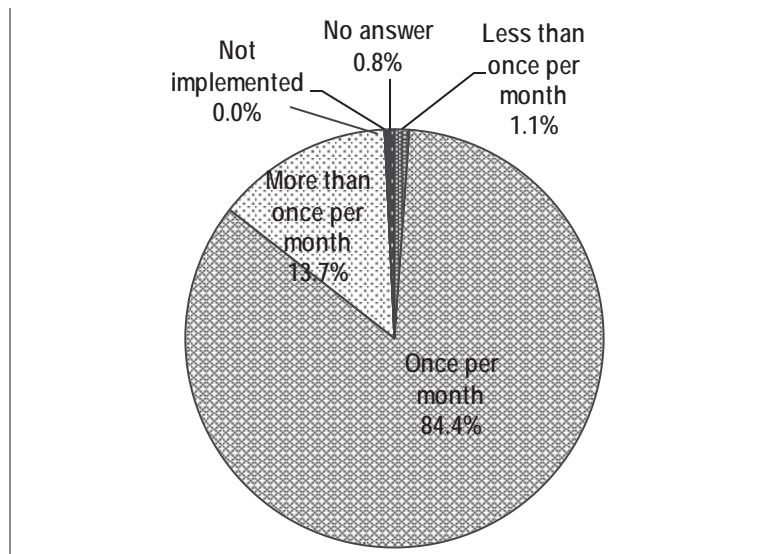
It seemed more common for daycare providers to develop their own manuals and improve their emergency response procedures as they practiced. If necessary, they sought out local fire departments for technical advice. In addition, governmental inspections usually included disaster prevention and preparedness components, and different prefectural governments could have different specific auditing items and formats. However, they were often in detail, such as (but not limited to):

- 1) Assignments for personnel;
- 2) Emergency disaster prevention plans;
- 3) Safety measures for indoor and outdoor facilities;
- 4) Emergency and fire prevention equipment;
- 5) Information dissemination to children's parents;
- 6) Community cooperation and coordination; and

7) Emergency and evacuation drills (Aomori Prefecture, 2014; Iwate Prefecture, 2014).

These items were developed based on the above 1948 Ministry of Health, Labour and Welfare's standards as well as the Fire Service Act (1948) and its related fire laws. In general, daycare providers followed and respected the inspection standards and processes as disaster preparedness measures for their daycare centers.

For the survey questions on disaster preparedness measures at daycare centers in Iwate, responses were not always unified (Kondo, 2013) (See APPENDIX D for summary results of the multiple-choice survey questionnaire responses). For emergency evacuation, however, 98 % of them carried out drills at least once in every month (See Figure 9). As clearly indicated in the 1948 standards, emergency evacuation drill was a concrete action that daycare centers could take.



**Figure 9.** Survey result: Frequency of evacuation drills at daycare centers in Iwate (N=263)

For drills, daycare personnel planned different scenarios (e.g., fires, earthquake/tsunami, intruder) and timings (e.g., play time, naptime, lunch time, etc.). Each person was assigned to

certain tasks, including being in charge to guide different age-groups of children, checking the fire safety, listening to the emergency radio, and making emergency calls.

The interviews with daycare personnel further revealed that some of tsunami-affected daycare centers took creative initiatives to conduct drills. In addition to their regular monthly emergency drills, for example, Asagao Daycare Center, which was located only 500 meter away from the nearest port, carried out an extra evacuation drill dedicated to a tsunami scenario. The director, Ms. Inui, described:

We made sure that our children would get familiar with the word ‘tsunami.’ At our daycare center, we called the first (week-)day of every month as a ‘safety day,’ which sounded easy for children to remember. So, when we said “it’s a ‘safety day’,” children would know that “it’s the day that (they) practice running for tsunami” and react quickly (Ms. Inui, Asago Daycare Center).

Another daycare center carried out drills without telling either children or staff. Ms. Maehara, the director of Kantsubaki Daycare Center, which had about 90 young children on the day of the disaster, explained:

When planning for a drill, childcare workers would say: “It would be good when children playing outside”; “It’s better at the normal care time”; or “We prefer to avoid lunch or nap time.” ... But, I thought: “Wait a minute, whose evacuation drill is it?” I thought that drill should not be for (convenience of) the staff (Ms. Maehara, Kantsubaki Daycare Center).

The study exhibited that these childcare providers had developed, and incorporated, disaster safety measures and response plans appropriate and necessary to their own daycare environments. Especially, evacuation drills were fully integrated as part of their curriculum.

#### **4.1.2 Safe evacuation of young children**

The initial earthquake on the day of the disaster was unusually strong and lasted long. Many personnel at daycare centers immediately thought: “This is not (a) normal (earthquake).” It was

around the naptime, and children were in the beddings or getting up and preparing for afternoon snacks. As they had practiced in drills, children quickly went under the tables, or covered their heads with blankets. Directors gave instructions and classroom teachers prepared children for evacuation. Like drills, many stayed put until the tremor stopped. Others let children get out of the building, while the earthquake continued. Teachers thought that the ceilings would fall onto children.

Once the initial tremor was settled, daycare staff carried out the roll-call of children and checked the safety of fire hazards. A few described that, because the earthquake happened at the naptime, they knew where everyone was and it did not take too much time to gather children and do the roll-call. Soon, families started arriving for their children and childcare workers checked and handed over children to their parents and family members. While aftershocks continued, most daycare centers quickly prepared and started evacuating to the outside of their premises.

In the Iwate's coastal area, all daycare centers managed to safely evacuate from the tsunami. In drills for an earthquake, they usually take refuge in playgrounds to avoid any falling objects inside the buildings. However, about a half of the daycare centers in tsunami-affected municipalities evacuated to the outside of their compounds on the day of the disaster (See APPENDIX D). This indicates that daycare personnel assessed and anticipated further dangers (in this case, it was a tsunami, or building collapse). Furthermore, their evacuation experiences were nothing easy, or more than what they had projected. Most of them began their evacuation processes quickly. However, the interviews revealed that a few daycare centers waited until the last minute, because they thought that their facilities were outside the tsunami risk areas. Others had to move to the higher grounds, or run and climb the steep hills, even after they had arrived at their primary pre-assigned evacuation places.

It was a cold day in March, and it started snowing. Daycare groups looked for or followed the neighborhood residents to safe indoor spaces available. The spaces that people could seek for shelters were limited. Quickly, local schools, hospitals and community facilities were set up as evacuation centers (c.f., schools and other community facilities are commonly assigned as evacuation hubs by local authorities). Others temporarily took refuge in places like: residential houses, small office buildings at construction sites, a closed textile factory, an unused hotel facility, and Buddhist temples.

The conditions of evacuation shelters were far from ‘child-friendly,’ or not ideal for young children. For example, local evacuees quickly overcrowded shelter facilities. People at facilities (e.g., principals and teachers at schools or staff at hospitals) organized spaces available for evacuees, and often prioritized the families and groups with young children to be assigned to the separate rooms from the rest of local residents. Some facilities had limited stocks of emergency food and water and heating equipment. Often, local residents whose houses had survived the tsunami brought in food items, blankets and oil heaters, and helped make makeshift kitchens for evacuees. Throughout the tsunami-affected areas, basic utility systems (e.g., electricity, water, sewage, gas) were damaged so that access to water was limited and toilets were clogged up.

The tsunami also shut down the phone communication and transportation systems, and some parents could not come for or contact their children. Daycare personnel stayed with children until the last one was safely handed over to his or her family. The survey indicated that while all daycare providers in inland areas returned all children to their parents on the same day of the disaster, only 45% in tsunami-affected coastal areas could manage to do the same. For a

few daycare centers, personnel stayed with children up to one week until their parents could reunite with them (See Table 11 for the details).

**Table 11.** Survey result: When did the last child return to his/her parent?

		Affected areas (N=73)	Other areas (N=190)
During the business hours (e.g., by 7:00pm)		28 (38.4%)	171 (90.0%)
During the same day (before midnight)		5 (6.8%)	14 (7.4%)
Next day		17 (23.3%)	0 (0.0%)
Day after next day		12 (16.4%)	0 (0.0%)
Others	3 days later	6 (8.2%)	0 (0.0%)
	5 days later	1 (1.4%)	
	1 week later	1 (1.4%)	
No answer		3 (4.1%)	5 (2.6%)

In the interviews, many expressed: “We thought that we could go back (to daycare center, after the earthquake).” They did not expect for such prolonged evacuation with children and did not assume the situation where parents could not come for their children. Despite many unexpected challenges, most of the daycare personnel described that they were satisfied with how they had handled the situations. Especially, they were pleased how their evacuation drills had worked at the actual disaster. For instance, Ms. Egami, the director of Hamanasu Daycare Center, which was washed away by the tsunami, was on personal leave on that day, but she rushed back to her school after the earthquake. She only found out that the building was empty and all children and staff quickly and safely had evacuated to the assigned location. She praised her staff’s action saying “the evacuation was perfect.” These examples indicate that, under such challenging circumstances, daycare personnel carefully managed each situation to execute safe evacuation of children.



### 4.1.3 Post-disaster recovery challenges

While the East Japan Earthquake and Tsunami Disaster was a traumatic event for children, post-disaster environments were nothing close to “child-friendly” either. Destruction in tsunami-affected municipalities was enormous, severely damaging local governments, businesses, and industries, as well as road and transportation systems. Much of the residential areas also suffered, and massive evacuee populations overwhelmed local shelters. Schools, kindergartens and daycare centers were also affected and temporarily closed. While outdoor spaces no longer existed, indoor environments were extremely limited for children to play freely and run around. Some even suffered allergies or hives from living in evacuation shelters. The situations at homes, if they survived the disaster, were not much better either, because the neighborhoods were completely destroyed.

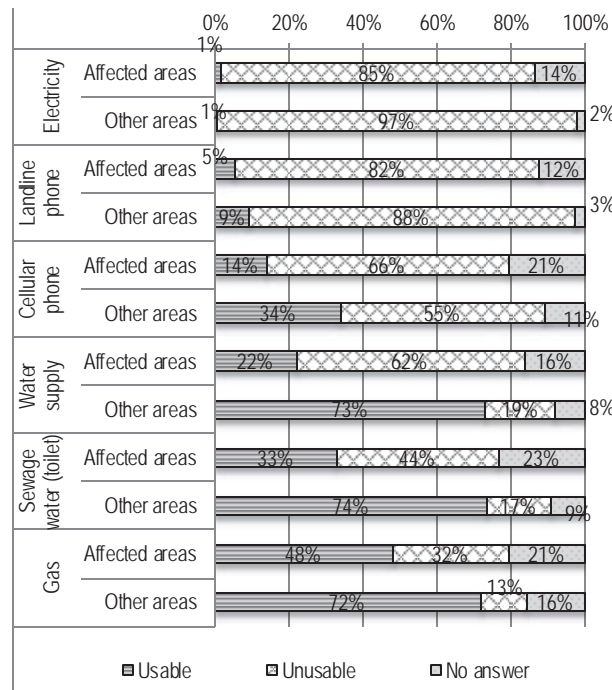


Figure 10. Survey result: Basic utility service conditions after disaster

The basic utility services, including electricity, telephone systems (both landline and cellular), water supplies, sewage systems, and natural gas, were not only heavily damaged in tsunami-affected areas, but also impacted throughout the larger area of Iwate (See Figure 10). The disaster also affected the supply chains of daily essentials, such as food and gasoline.

Under these circumstances, the situation was extremely difficult for daycare centers to resume their childcare programs after the disaster. Especially, it was a serious challenge for tsunami-affected childcare providers to find proper and safe alternative facilities for daycare use, because many buildings were damaged by the disaster or occupied by evacuees. Some had to start with the room(s) available, or provided, at evacuation centers, residential home, Buddhist temple, or vacant facility. Table 12 shows that most daycare providers in inland areas managed to reopen their centers a few days after the disaster, when it took a few weeks to more than two months for a half of the daycare centers in tsunami-affected municipalities to resume their childcare services.

**Table 12.** Survey result: When did your daycare center reopen?

	Affected areas (N=73)	Other areas (N=190)
Next day (Saturday)	8 (11.0%)	75 (39.5%)
2 days later (Sunday)	0 (0.0%)	2 (1.1%)
3 days later (Monday)	20 (27.4%)	69 (36.3%)
4 days later (Tuesday)	6 (8.2%)	23 (12.1%)
Others	36 (49.3%)	10 (5.3%)
No answer	3 (4.1%)	11 (5.8%)

Even after these facilities were reopened, challenges continued. It was particularly difficult for daycare staff to commute to work, because they had lost their personal vehicles in the tsunami and there was fuel scarcity throughout the region. Some temporary daycare facilities were not child-safe or child-friendly, did not meet the governmental standards to conduct

daycare programs. For example, children had to use temporary toilet facilities or standard toilets that were not made for young children. In some municipalities, water access was limited. At daycare centers, they used baby wipes to clean their hands and faces, and one daycare center used plastic wraps to cover plates so that they did not need to wash them after used. Because local businesses, such as grocery stores, were also affected, or because some temporary centers did not have kitchen facilities, it was difficult, or not possible, for daycare centers to provide standard full-day childcare programs, which should include lunch and snacks.

In the end, some childcare providers found alternative facilities and spaces like vacant facilities of kindergarten, daycare center, community center, and school. Others were assisted by aid organizations to build temporary prefabricated school buildings. Only a couple of them were temporarily closed or merged to other daycare centers where both children and personnel were also re-assigned.

A couple of daycare centers rehabilitated and re-used their buildings, because their damages were partial. Nevertheless, it was certainly not an easy decision for them to re-use the once-flooded facilities, concerned of possible health and sanitation risks. Ms. Endo, the director of Hanamizuki Daycare Center, expressed her uneasiness of using the facilities that were flooded above the floor level:

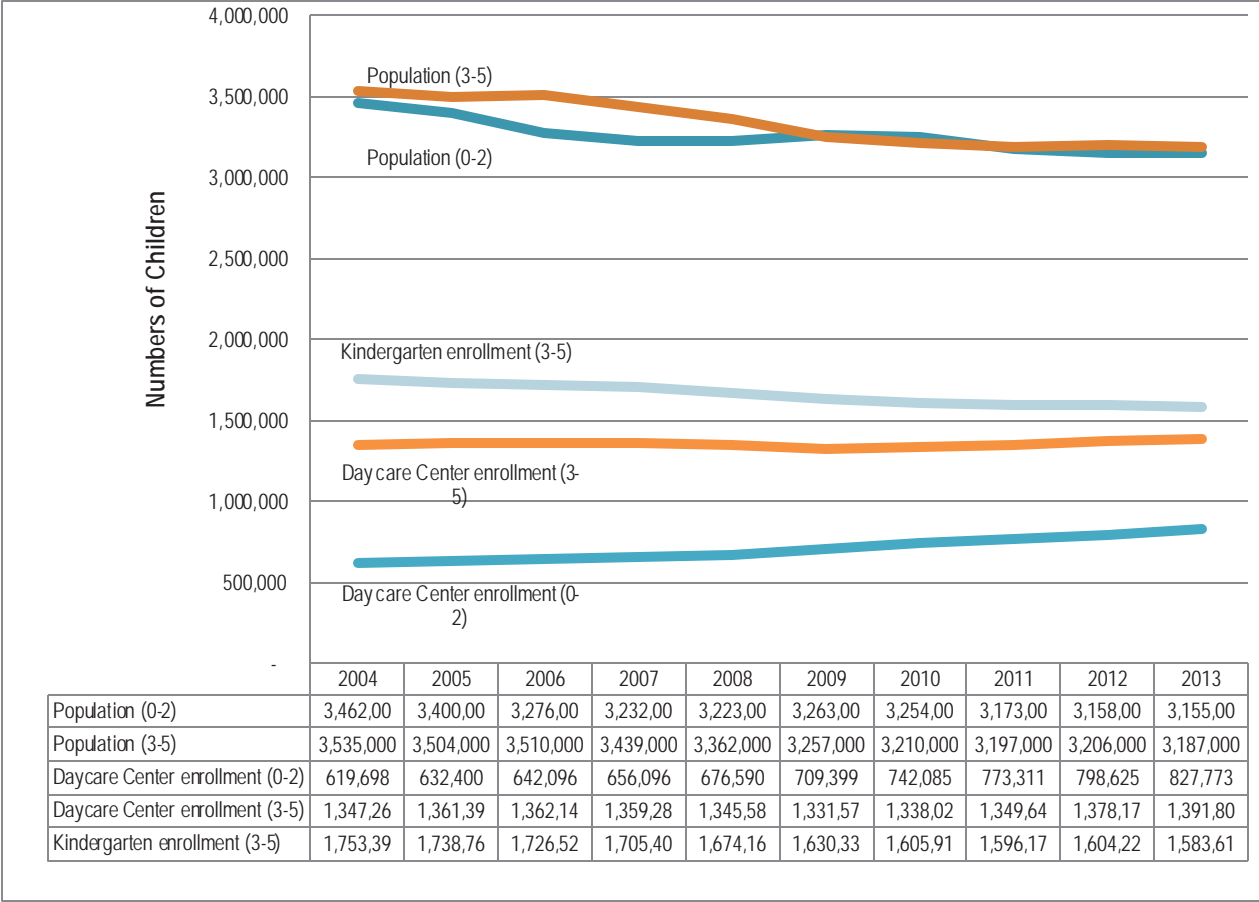
It was really reckless (that we did). It was unthinkable in a normal circumstance. If it was at a normal time, I don't think that we could have done it. There was no fence (around the facility). But, once the situation became like this, because everything became not normal, what can I say... We thought that it would be okay, if we could do the minimum stuff. First, we paid attention to sanitary conditions (of the facility) so that we could give children some peace in mind for a certain time (of the day)... It started as we could protect, or make sure of, minimum things... It wasn't like the situation that we had everything we needed. We couldn't wait for that (Ms. Endo, Hanamizuki Daycare Center).

Under such devastating circumstances, these childcare providers had to make out of what were available to them and adjust their curriculum and daily activities in order to provide

childcare programs for children and their families. The disaster changed the neighborhood landscapes, and the numbers of military and construction vehicles increased for recovery and reconstruction work. Because of both neighborhood and environmental safety concerns, children's outdoor activities, such as daily walks, were limited, or carefully chosen. Inside the facilities, some had to accommodate multiple age groups in the same classroom space, and carrying out age-specific activities became difficult. It might not have been perfect, or ideal, but there were not many choices to make, and they needed to manage and cope with the situation.

#### **4.2 YOUNG CHILDREN IN MAJOR DISASTER SITUATIONS**

Between 2004 and 2013, as Figure 11 shows, while the ages 0-2 and 3-5 children's populations decreased by 8.9% and 9.8% respectively, the enrollment in kindergartens also decreased in the similar fashion by 9.7%. However, both ages 0-2 and 3-5 children's enrollment in daycare programs increased by 33.6% and 3.3% respectively. This shows that, even though the child populations have been declining, demands on daycare services, especially for younger children (ages 0-2), have been getting higher in recent years.



**Figure 11.** Changes of Ages 0-5 Children's Populations and ECD Enrollments in 2004-2013

Note: Adapted from: a) For the population data, “人口推計: 各年 10 月 1 日現在人口 - 2011 年 [Population estimate: Current population as of October 1 by year - 2011],” by the Ministry of Internal Affairs and Communications, 2011; b) For the kindergarten enrollment data, “幼稚園教育の現状 (平成 24 年 5 月 1 日現在: 学校基本調査) [Current situation of kindergarten education (As of May 1, 2012: From the School Basic Survey)],” by MEXT, 2012b; and c) For the daycare center enrollment data] “保育所関連状況取りまとめ (平成 24 年 4 月 1 日) [Summary of the daycare center related situations (As of April 1, 2012)],” by MHLW, 2012a.

In Iwate, its 2011 population of children at ages 0-5 was about 60,000 (Iwate Prefecture, 2010a), and about 26,000, or 43 % of these young children were enrolled in daycare centers, and away from their parents’ care. As literature often discussed, these young children could face various harms and become vulnerable at the time of an emergency (Tran, 2011). Thus, what did these daycare children experience before, during and after the 2011 disaster? In this section, I highlight the following insights learned from my on-site fieldwork and interviews with daycare

personnel: 1) how these young children had prepared for a disaster like the 2011 earthquake and tsunami; 2) how the disaster affected them; and 3) why it was important for them to access daycare programs after the disaster.

#### **4.2.1 Children's disaster response skills and abilities**

Daycare children, ages 0 to 5, are at early stages of their cognitive and physical development. Thus, in order to ensure their safety in an emergency situation, adults, daycare personnel in this case, must provide proper guidance and assistance to them. It was not a simple task because childcare workers needed to consider age appropriate disaster risk reduction (DRR) measures and practices suitable to children's abilities. For infants and toddlers, they had to prepare themselves to carry and assist these young children physically in drills. They discussed among themselves what specific additional assistance infant class teachers would need from other staff members. (e.g., changing children's clothes, putting their jackets on, setting up evacuation buggies, or carrying the emergency bags). They had even decided who would carry which baby or child so that they would not waste time at an actual crisis event. Ms. Rikimoto of Sumire Daycare Center, who was in charge of infant class, described that because she had known that it would take more time to prepare babies for evacuation she had started changing children's clothes as quickly as possible.

For older children, childcare workers teach them how to protect their heads from falling objects, how to follow their teachers, and how to run to safer locations. For younger children, daycare staff used safety-walking ropes that children could line up with and hold on to while following their teachers. Sometimes daycare directors timed how fast children could run and

reach to safe areas, made drills more fun, and motivated children to do better and faster next time.

In addition to drills, daycare centers commonly used various learning materials as disaster awareness and prevention education tools. The survey results indicated that learning materials like children's books, picture-story show, and videos and films were commonly used to educate children on earthquake risks (87% of all daycare centers in Iwate), but not many used materials on tsunami. Even in tsunami-affected municipalities, only one third, or 33%, of daycare centers responded that they had used the materials about tsunami risks prior to the disaster.

Many daycare centers regularly invited firefighters, or police officers, to interact with children and organize learning activities (e.g., disaster awareness talk, fire fighting demonstration, joint evacuation exercise, or general security demonstration). Some daycare centers arranged field trips to local fire department buildings or disaster prevention centers. Literature supported the importance and effectiveness of learning about hazards even for young children:

Despite their vulnerability, young children do have the capacity to anticipate, cope with and recover from hazard impacts. ... Children's resilience increases with their understanding about risks in the surrounding environment and knowledge of what to do when a disaster strikes (Tran, 2011).

All the above activities seemed to have helped young children to get familiar with emergency preparedness and disaster prevention at daycare centers.

Every year some new and different children would join in daycare programs, and evacuation drills needed to be re-introduced or started over. Childcare workers had to take children's physical abilities into consideration when planning and practicing, including: how many infants and toddlers would need to be carried by adults; and how many children had

special needs (physical and cognitive). In drills, children sometimes joked around. However, daycare personnel often observed that, when adults acted seriously, children became serious and followed their instructions well.

Ms. Inui of Asagao Daycare Center, which had been conducting an extra monthly drill specifically for tsunami, described that the goal of drill for older children was to be able to “run (or flee) on your own feet.” She explained that it was especially crucial for children of *current* generation to have strength in their lower bodies, because most were given rides between home and daycare center daily, rather than by traveling on foot.

In the interviews, many daycare directors described that the evacuations on the day of the disaster had gone well as in drills. A few explained that the reason for the successful evacuation was because it was the end of the school year and children were familiar with the evacuation procedures. They expressed their concerns of how it could have been different if the disaster happened at the beginning of a school year when children were not familiar with the teachers’ instructions or their surroundings. Ms. Endo of Hanamizuki Daycare Center gave the credit to children’s abilities to follow and listen to their teachers. Because children knew the procedures from drills, they just needed to follow their teachers’ instructions and made the evacuation smooth and successful.

Ms. Egami of Hamanasu Daycare Center, on the contrary, stressed that it was her staff’s prompt actions that had successfully evacuated their children, while only eight households out of total 600 buildings in its surrounding neighborhood survived the tsunami. She further explained that it was critical for daycare teachers to pay close attention to children’s individual capacities in daily activities (e.g., how quickly they could follow teachers’ instructions, move from one



location to another, or change clothes) so that they could assist those children who would need additional help at the time of a crisis.

These findings show to what extent childcare providers considered details of children's capacities to develop and incorporate their disaster preparedness measures. This was especially crucial because children in daycare centers were young and small, at early stages of their physical and cognitive development, and would require different guidance and assistance from adults. These detailed planning, preparation and practices helped childcare workers to focus on safety of children and managed to evacuate them from the disaster.

#### **4.2.2 “Tsunami-gokko” – Psychological effects on children**

When the earthquake happened, children initially made noise because of the sudden event. However, most daycare personnel told me that they did not make much fuss during the evacuation or complain despite the conditions. Some even noted that, when they heard some children crying at evacuation locations, they were not of their daycare children, but of elementary school pupils or other babies. They observed that some children were tense but seemed to be aware of the seriousness of the situation, and remained quiet. Nonetheless, when they reunited with their parents after long hours of waiting, many children finally burst into tears out of relief.

During the evacuation, childcare workers tried not to let children to see the tsunami. Some of the children who left with their families might have seen, or even experienced, it. No matter whether these children witnessed the tsunami or not, nevertheless, the entire disaster experience affected every child to some extent. For example, some got panicked or unstable, or cried in the nights, even at home with their parents. At daycare centers, although they appeared

to be healthy and normal, some children became very sensitive to, or easily upset by, aftershocks, or even to the sound of wind.

Himawari Daycare Center was located in central area of the municipality. There were embankments, which were erected to protect the town from the ocean. However, the tsunami came over those concrete walls, and devastated the central town, which was followed by fire outbreaks. Himawari Daycare Center was flooded up to the floor level. Many of its children were from the neighborhood, and lost their homes in the tsunami. After the disaster, they were forced to stay at evacuation centers or other temporary housing arrangements (e.g., relative's home). The director, Mr. Omi, initially noticed that children looked still, without much facial expression, and he later realized that it was because of their home situations.

Ms. Egami of Hamanasu Daycare Center told me the stories of two children who had difficult times at her daycare center in the beginning. One child could not drink a glass of water for a week, because he had been covered with the muddy water up to his shoulders on the fourth floor of hospital. Another boy had cried every day for 10 days, thinking that another earthquake would come if he took a nap at daycare center. In fact, on the day of the disaster, his mother could not come, and he was still afraid that she would not come when another earthquake happened. Even after a few months passed, the director overheard him telling his peer: "You know, at that time (of the disaster), your mom came for you (while my mom didn't)." No matter how small or big their disaster experiences were, children remembered, and might have been affected by, what they had gone through in different manners.

There was one common play or game that children at daycare centers engaged in after the disaster. It was known as *tsunami-gokko*, or tsunami play, in which children recreated the tsunami, or their disaster experiences, by 'playing tsunami.' According to child psychotherapists,

this was a normal, or common behavior among children after difficult experiences (Japan Association for Play Therapy [JAPT], 2012). Children gradually did less tsunami-gokko after a few months, but it came back around the one-year anniversary of the disaster. Adults might be worried to see children recreating the tsunami experiences, but literature said that children were dealing with, or expressing their memories by imitating the experiences, and that it was part of their healing processes (Ibid.).

Many daycare personnel, nonetheless, were hopeful that, by coming to daycare facilities, playing with friends, and participating in different activities and events, children's anxieties or fears would gradually go away. At the same time, some of them were concerned about whether these children's psychological effects might remain with them or not, and who would look after their psychological needs as they grew older. In Iwate, the prefectural education department established continuous psychological state assessment systems so that each school could continuously identify and assist their individual pupils and students who might need psychotherapy, counseling, or other assistance in later years (Iwate Prefectural Board of Education, 2014).

#### **4.2.3 Significance of childcare programs in crises**

We want to make children's daycare experiences enjoyable, and to switch their minds to forget about the disaster. This (new) place (where the daycare center was relocated) is surrounded by nature, so ... children could play in the field every day. They were very energetic and healthy mentally and physically, and they didn't look like the children who had experienced the disaster. They were full of energy and didn't skip classes until the beginning of winter.

We've provided good daily lunch to children. (...) Even though it may not be a "complete" meal, they ask for seconds and empty their plates. Their attendance has been better than ever. (I think that) it is due to the quality of our daycare program. Young children may not comprehend (the situation), even if we explain them verbally. So, we

think that it would be the best for children that we, childcare workers, give them lively and fun daycare program (Ms. Chiba, Nanohana Daycare Center).

The disaster brought many changes and challenges to daycare environments, homes, and communities. Because their facilities were damaged by the tsunami, daycare centers had to temporarily or permanently resume daycare programs in new locations. Some of their temporary facilities might not be suitable, or designed, for daycare use (e.g., community centers or temporary pre-fabricated buildings). Because resources and materials that were required to operate daycare programs were not easily accessible, childcare providers could offer limited services (e.g., half-day services, lunch boxes to be brought from home, or no late afternoon or evening services due to no electricity or heating systems). There were some personnel changes, such as transfer, retirement, resignation, personal or sick leaves, or moving away.

At homes, children experienced different home and community environments. Some of them had to move into crowded evacuation centers. Their familiar neighborhoods were destroyed by the tsunami, and both indoor and outdoor play areas were limited. This limitation might have affected children's physical exercise and development opportunities (JCU, 2014; UNICEF, 2009b). Also, challenging living environments might have caused children psychological distress (IASC, 2007).

In such changing and challenging environments, re-establishment and sustainability of childcare support activities like daycare programs is critical for children: not only to help children go through the changes and adjustments in their post-disaster situations; but also to regain normalcy in their lives and continue accessing critical developmental opportunities.

#### **4.2.3.1 Safe and secure places at the chaotic time**

We were not sure whether we should reopen our daycare center at the same facility (after it had been partially flooded). But there was no place to go, and all community centers

and elementary schools were full of evacuees, like villages. We couldn't risk putting small babies into those messy places. If only with children of ages 4 and 5, we might have considered using one of the rooms at shelter to resume daycare program. But, for younger children, it was not feasible.

We wondered a lot what we could do. We called the health department and asked them what we should be careful of if reopened the facility. We also consulted the local welfare official. We thought that it would be better for children and staff to reuse our building than staying at evacuation centers. ... Of course, we didn't plan to stay here for a long time. But, we thought that there had to be a place where we could ensure children with even two hours of free time (from their post-disaster situation) (Ms. Endo, Hanamizuki Daycare Center).

The above quote revealed how daycare personnel had come to the decision to resume their childcare program, while they struggled with the idea of using the once-flooded facility. At the same time, they realized that other limited options were not safe or conducive for daycare purposes, especially to provide safe and secure environments for young children. This was evident throughout my interviews, in which many daycare personnel described their efforts to make their daycare center as "a place that children can feel easy" or "a place where children can play safely" even under the post-disaster circumstances. Despite the devastating conditions and limited available resources, childcare providers in tsunami-affected areas focused on the importance of providing spaces where children could feel safe and have peace of mind.

Initial measures that these daycare centers took after the disaster might not have met the governmental standards, but returning to daycare environments itself was significant for children. As playing with friends and spending time with teachers, children were relaxed, away from their difficult living conditions at evacuation centers or in the devastated communities. At daycare facilities, childcare workers could stay with children all the time so that they could feel safe and protected.

In crisis situations, daycare centers could become additional safe spaces for children. Evacuation shelters, or even children's own homes, might not be the most ideal environments for

children in the post-disaster situations. Ms. Rikimoto who had worked as head childcare worker at Sumire Daycare Center, which had been located in 500 meters, or 0.3 mile, away from the shore, described her assessment of children's states after the disaster:

Perhaps, there might be something that children couldn't solve just by being at home with their parents. But, by doing realistic tsunami-gokko together with other children (at the daycare center), they were expressing themselves (or their disaster experiences). I thought that when they were in a group (of children at the daycare center), they were expressing the pain in their hearts (Ms. Rikimoto, Sumire Daycare Center).

Many childcare workers tried not to talk about the disaster with or in front of children, not to remind them of the experiences. At Kantsubaki Daycare Center, Ms. Maehara shared her observation that while adults were afraid of talking to them about the disaster, children closely observed their parents and daycare teachers and wanted to know what adults were thinking. She felt like children were asking: "*Sensei* [Teacher], we are thinking like this (about the situation), so what shall we do?," and looking for solutions or answers from adults. It might be difficult for young children to fully comprehend what had happened and explain what they thought or felt about it. However, these insights of daycare providers indicated that daycare environments had become safe spaces for children to express themselves or share their concerns with trusting adults. This would not only help children's healing processes but also maintain their healthy psychosocial development (JAPT, 2012).

#### **4.2.3.2 Normalcy - "Usual daycare programs, normal lives"**

It had not yet passed one week because the disaster, but, when we visited them at home or evacuation shelter, children had waited for us. When we saw them, they came to jump onto us. Because of such a (difficult) situation, it was important, but also necessary, for them to be with their parents for the time being. But we also thought that children needed to have their *usual* place where they could play freely (Ms. Endo, Hanamizuki Daycare Center).

Many children lost their homes, and stayed at evacuation centers or their relatives' homes. Their daily routines and familiar environments were suddenly lost. Many childcare workers realized the urgent needs to re-establish daycare spaces for children to regain or maintain some sense of normalcy even under such difficult circumstances.

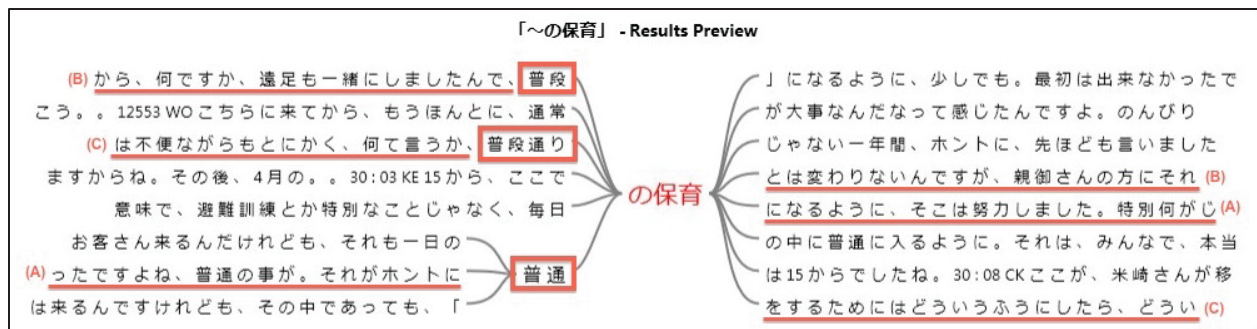


Figure 12. Text search result of "保育 or *hoiku* [childcare/daycare (program)]" in NVivo

In the interviews, many daycare personnel often used the adjectives in Japanese like “normal,” “regular,” “usual,” “ordinary,” and “everyday” to describe what kind of childcare programs they had tried to provide to children after the disaster. Figure 12 was the text search result of “保育 or *hoiku* [childcare or daycare (program)]” in the interview transcripts, generated in NVivo. The following are three (3) examples in which daycare personnel used the adjectives of “normal,” “regular,” or “usual”<sup>26</sup> in relation to *hoiku* or childcare [italics added]:

- (A) “We couldn’t do *normal* stuff at the beginning. We really made efforts to make a *normal* childcare program (Ms. Ota, Satsuki Daycare Center)”;
- (B) “... we did a field trip (and other activities) together (with our sister center), so it was same as our *regular* childcare program, but children’s parents might not think the same (Mr. Umemura, Yamabuki Daycare Center)”;
- (C) “We (daycare staff) came together as a group and thought what we could do to make our daycare activities *usual* (like before) even under such an inconvenient circumstance (Ms. Mochida, Sumire Daycare Center).”

<sup>26</sup> Often these Japanese vocabularies for “normal,” “regular,” “usual,” or “ordinary” are interchangeable.

Each response indicated how important it was for these childcare workers to provide “normal,” “regular,” or “usual” daycare programs to their children. Ms. Ota (A) described how it had not been easy for them to do the *normal* daycare activities because of the post-disaster environments and frequent visits of humanitarian groups and researchers. Mr. Umemura (B) was worried about parents’ perceptions of their temporary arrangement, which might appear to be different from their *regular* program. Ms. Mochida (C) further explained: “We (childcare workers) thought that letting children have *usual* experiences would be one step close to their *regular* lives.”

Despite the challenges to adopt the new “not normal” environments, childcare providers made extra efforts to make their daily daycare activities as normal as possible so that children could get back to their usual routines and daily lives. For example, Yamabuki Daycare Center, which was in the crowded neighborhood of downtown, was hosted by its sister daycare facility, while its once-flooded building was repaired. During that time, teachers worked together to integrate the curricula from both daycare programs so that all children could enjoy familiar and new activities together. It had not been easy for childcare workers to make things as normal as they used to be, Ms. Egami of Hamanasu Daycare Center said. They became flexible and adjusted to what were available to them in the given circumstances. It seemed that many childcare providers had realized that, as challenging as it could be, doing “usual” or “normal” things, which do not need to be extraordinary, helped children feel a sense of normalcy in such chaotic and changed environments (Aguilar & Retamal, 2009; Machel, 1996; UNICEF EAPRO, 2005).

#### **4.2.3.3 Continuous access to development opportunities**

Even though our childcare program was reopened in a temporary building, there would be nothing ‘temporary’ about it for children. It’s one year of each child. Children would



get older in their normal year (or pace) despite the disaster experience (Ms. Maehara, Kantsubaki Daycare Center).

Many daycare centers could initially operate partially, but it was important for children to have spaces to play safely and freely, even only for a couple of hours a day. Once they could provide lunch and operate for a full day, childcare workers noticed positive changes in children. A few directors noticed such changes that, after they started to eat lunch and take a nap at daycare centers, children gradually returned to their “*usual*” conditions, and looked healthy and relaxed.

Standard lunch (and snack) services at daycare centers seemed additionally significant for children in the post-disaster situations. Food provided at evacuation centers might not always, or at all, meet the nutrition requirements for the healthy growth of young children (MHLW, 2013b; Okayama Prefecture, 2012). Even at home, families had difficult times to access regular grocery for a long time because local businesses were also affected by the disaster. As part of its Emergency Response Programme, for example, the Japan Committee for UNICEF (JCU) provided supplementary nutritious food assistance to daycare centers in tsunami-affected areas until regular food supply systems were re-established (JCU, 2013). There was a nutritionist usually hired by daycare center as part of the childcare standard, and she or he could manage the daily menus for lunch and snacks. Thus, at daycare centers, children could at least have adequate nutritious food, which might not be readily available to them at homes or shelters.

In addition to meeting children’s nutritious needs, it was important for daycare providers to provide different opportunities for children to learn and grow despite the challenges and limitations that they faced in the post-disaster situations. However, some daycare directors expressed their concerns of whether and how these limits might affect, or had affected, children’s learning experience and physical growth for the future. Text search of the term “*経験* or *keiken*

[experience]” in NVivo highlighted the following interview responses from daycare personnel [italics added]:

- (A) “We (childcare workers) thought that letting children have usual *experiences* would be one step closer to their regular lives (Ms. Mochida, Sumire Daycare Center);”
- (B) “Now we don’t know what will be the results. But we thought that there were many things that we were not able to let them *experience* (Ms. Yamanaka, Kinmokusei Daycare Center);” and
- (C) “In regards to their age specific *experience* or development, we were certainly anxious to supplement for each of them (Ms. Seto, Mikan Daycare Center).”

As the response (A) was already mentioned in the previous section, Ms. Mochida emphasized the importance of children’s normal experiences at daycare center as a step forward to the recovery from the disaster. However, both Ms. Yamanaka (B) and Ms. Seto (C) expressed their concerns that because of the limited resources and challenging environments, they could not have been able to provide normal and sufficient opportunities for children to learn, grow and experience. Childcare workers were concerned how children’s post-disaster “normal” care and development experiences, or lack thereof, would affect their futures, such as getting ready for formal education and having suitable capacities to keep up at elementary schools and beyond.

A few childcare workers observed some positive outcomes of the challenging situation. For example, older children looked after or showed more empathy toward younger ones. Children managed to adjust to the changed, and constantly changing, environments, but seldom complained about the situations. As literature discussed, children can be “agents of their own development who, even during times of great adversity, consciously act upon and influence the environments in which they live (Boyden, 2003).” It seemed that, despite the challenging and limited environments, children demonstrated their resilience to stay healthy and grow alongside with their familiar friends and teachers at daycare centers.

### 4.3 CHILDCARE WORKERS' RESPONSES TO THE DISASTER

As the demands for daycare services increased, the roles of childcare workers have become more significant for the lives and growth of young children in Japan. The *taiki-jido*, or wait-list children, problem has become a serious concern for the working families with young children. In 2013, the Ministry of Health, Labour and Welfare (MHLW) developed a package of initiatives to solve this problem, and one of them was a measure to hire more childcare workers (MHLW, 2013e). The childcare professional society also stressed the same issue to be solved immediately (Japan Day Nursery Association, 2014). Hiring more childcare workers should be considered along with other concerns related to the current working conditions of childcare workers. For example, one report described that the ratio of temporary hired, or contracted, childcare workers increased among the full-time daycare staff (National Childcare Council, 2012). Another survey study indicated that there were gaps in employment and sustainability problems in employees (Japan Day Nursery Association, 2014). Some of the college students majoring in childcare or early learning did not even apply for childcare worker's jobs. At the same time, while some of the reasons why childcare workers resigned were: marriage; childbirth and childcare; and other family matters, others also listed: preferences for other jobs; staff relationships; hardships; and loss of confidence at work.

The work of childcare workers, indeed, is not an easy one. They are demanded, or expected, to fill the care and growth needs of young children. Even in an emergency situation, they could be expected the same, or might have to do so even more. In this section, I will review what and how these daycare personnel responded to provide the protection to young children in the 2011 disaster.

#### **4.3.1 Sense of responsibility for children's safety**

As described earlier, the survey showed that almost all daycare centers had integrated monthly evacuation drills in their programmes. Additional interviews revealed how these daycare personnel went “the extra mile” to prepare themselves to protect children from crisis events like natural disasters. Many of them thoroughly examined each component of their emergency response measures, including evacuation plans, routes, and locations. They reviewed both children's and their own performances after each drill. In case of evacuation off the premises, they took children for a walk along the evacuation routes to get familiar with the surroundings and check children's physical strengths. Ms. Rikimoto of Sumire Daycare Center described that they had repeatedly practiced and examined all the elements of their evacuation plans and drills until they felt confident about the safe evacuation of children. For Ms. Yoshii, the director of Botan Daycare Center, it was the fear of disasters that had driven her to make sure that their emergency preparedness and drills were thorough and in order. Botan Daycare Center used to be just 250 meters away from the nearest fishing port, and when the tsunami struck, her daycare center was completely submerged and only the roof of the building was floating away. As a contrast, Mr. Omi of Himawari Daycare Center said that they had not paid too much attention to who does what or what to take in an emergency, because their only focus was “protecting children's lives.”

On the day of the disaster, daycare personnel carefully but quickly assessed the situations and decided the actions to take based on children's utmost safety. For example, Ms. Kariya, the childcare worker of Ajisai Daycare Center, described that, when they begun the evacuation, daycare staff checked the surroundings and found that a nearby sidewalk fence had collapsed. Instead of going to the pre-determined evacuation location, they chose a safer route to the nearby

kindergarten facility, which was located a few meters higher than Ajisai Daycare Center. At Nanohana Daycare Center, which had been within the Estimated Tsunami Inundation Areas, Ms. Chiba, the director, immediately thought, when they heard that the initial tsunami warning was 50 cm (just below 20 inches): “Even a 50 cm (tsunami) is not safe (for children), so we must evacuate.” What Ms. Chiba further said exemplified how these childcare workers focused on the safety of children: “We (childcare workers) would take the best and safest means for children.”

These childcare workers took the extensive evacuation with young children, and some had to carry small children on their backs, and ran or climbed the steep hills. They kept consoling children to make them feel safe and told that it would be okay and their parents would come soon. Once the situation was settled, daycare staff went around on foot to children’s homes, evacuation centers, and government offices to look for children and their families and find out their safety. Even in these very challenging environments, they quickly attempted to resume daycare services so that children and their families could recover their normal lives.

The sights and experiences of such giant earthquakes and tsunamis (and subsequent fires) frightened many daycare staff, but a few explained that because being with children, they had to be determined and evacuate as quickly as they did. Some even told that if only among adults, they might have overestimated themselves and stayed behind longer. In fact, a few staff stayed behind to wait for children’s parents, to check the facilities, and to lock the doors and windows. Ms. Ota, the director of Satsuki Daycare Center, described that childcare workers might tend to feel, and act, like a “super-hero,” thinking that “I must protect these children even by sacrificing my own life.” She realized that it was equally important for the adults to be safe and alive so that they could protect children when needed.

Childcare workers, nonetheless, seemed to have the strong determination and commitment for children's safety, and it was highlighted in the accounts shared throughout this research. They were constantly conscious of the risks that children might face and made critical decisions based on what would be the "best and safest" options for children even when facing the disaster. These childcare workers seemed to have a strong sense of responsibility to keep children safe and sound, or protect them from any harm, while they were under the care of daycare programs. The head childcare worker of Katakuri Daycare Center, which was the largest daycare center affected by the disaster in Iwate, Ms. Emura described that childcare workers might need to become like children's parents, if necessary, to give them peace of mind at daycare center:

The first thing is to provide a sense of security (to children). Of course, we cannot entirely become like their parents, but, if anything happened, we will try to be like their parents, and make them feel safe while at daycare center (Ms. Emura, Katakuri Daycare Center).

Her comment summarized that childcare workers had understood and taken their 'in loco parentis' roles seriously so that they could focus on protecting and taking care of daycare children during the disaster.

#### **4.3.2 Disaster effects on caregivers**

The 2011 disaster not only brought serious challenges and changes to daycare centers but also impacted childcare workers at personal levels in one way or the other. Many lost their homes, belongings (including their personal vehicles to commute between home and work), and family members, and these were extremely devastating experiences for them personally. From my interactions with daycare personnel just one month after of the event, it was clearly noticeable,

and understandable, that some of them were in states of complete shock and loss, with overwhelming sadness, or even anger.

Even though they had experienced such personal tragedies, these childcare workers immediately returned to work. They went around to look for children and their families and checked out their safety and whereabouts. Some of the daycare personnel helped at the local evacuation centers, like looking after children, assisting other evacuees, or cooking meals. However, a few government-hired daycare staff had to take on emergency civil service duties, such as operation of evacuation shelters or registration of burials, which made difficult for them to return to their usual daycare work.

To reopen or relocate their daycare centers, personnel repeatedly cleaned the tsunami-devastated facilities and tried to find anything that they could salvage. Even after reopening daycare centers, or moving to temporary facilities, they were constantly worried about the safety of childcare environments and surroundings in the affected communities. In the mean time, these daycare staff also looked after their personal matters, such as looking for the lost items or missing family members, staying at evacuation shelters, and recovering and rebuilding their homes.

These daycare centers in tsunami-affected area, furthermore, received frequent outside visitors. Some of these visits were to assess the conditions of daycare centers and provide the assistance in their recovery needs, and others came to raise daycare children and personnel's spirits, or "cheer them up." However, these visits sometimes altered the daily activities of their daycare programs. At Satsuki Daycare Center, which used to be located in the crowded downtown neighborhood, Ms. Ota had to ask her staff to "entertain" such numerous visits at least for the first year of the disaster. These visits were out of generosity, and many daycare directors

expressed their appreciations for the visitors’ kindness, but childcare workers often needed to adjust their daily programs and curriculum to accommodate such visits.

While I reviewed and coded the interview transcripts using the qualitative research analysis software NVivo, a few worth-noting overlapping themes emerged (See Table 13). For example, 34 interview responses of the total 61 entries coded as “disaster effects on caregivers” were also coded for “post-disaster recovery challenges.” This may not be a definitive relation, but it shows that while many childcare workers were personally affected by the disaster, such as loss of their family members, houses and belongings, they also faced the responsibilities and challenges to recover and rebuild their daycare centers. For example, even though some of them did not know, or could not find out, what happened to their own families or houses, daycare staff stayed with children until their parents arrived. Despite losing their vehicles to the disaster, they also walked long distances, or hitch-hiked, to find out children’s safety. While they were coping with their own losses and suffers, these childcare workers made extra efforts (e.g., cleaning the flooded classroom floors, looking for an alternative facility) to resume their daycare programme for children and their families as soon as possible.

**Table 13.** Overlapping nodes with “3.2 Disaster effects on caregivers”

	3.2 Disaster effects on caregivers	
	No of sources coded (s=15)	No of references coded (r=61)
1.3 Post-disaster recovery challenges	12	34 (55.7%)
2.2 Psychological support needs of children	6	11 (18.0%)
3.1.2 Sense of responsibility for children's safety	7	13 (21.3%)



Despite less frequent than the first example, many daycare personnel were concerned of children's psychological well-being because of their disaster experiences. They were constantly worried about and watching carefully how children were doing. In addition, a few told me that even after the disaster was over, they still thought about they could have hurt daycare children if they had acted differently. Clearly the disaster affected these childcare workers both psychologically and physically (e.g., worried, concerned, nervous, tired, or exhausted), and because of the disaster, they seemed to be more concerned of, and taking more seriously about, children's safety and well-being.

Because of the disaster, these childcare workers had been constantly under different stresses, psychologically and physically. At my field visits, I often noticed that many daycare personnel seemed exhausted from the overwhelming situations. JCU and the Japan Association of Play Therapy (JAPT) provided trainings on psychosocial support for young children in an emergency to childcare workers in the tsunami-affected region. However, it came to our attention that those adults who provide care to children needed to be first assessed on their own psychological support needs. Ms. Egami of Hamanasu Daycare Center remembered that a clinical psychotherapist had advised her staff to take a break or a day off when they realized themselves becoming tired or exhausted. However, it had not been easy for any of them to take a day off because someone else had to fill in and no one wanted to burden others, she explained.

After the disaster, a few daycare providers could not fill the vacancies, which also became additional burden to the existing personnel. This was a serious concern in the tsunami-affected municipalities, because the population outflows increased and the housings and accommodations were limited in their region. To attempt to ease the stressful situations, JCU developed a series of projects to deploy volunteer certified childcare workers from the other parts

of the country to the tsunami-affected daycare centers in Iwate (JCU, 2012). The projects were carried out in the partnerships with the Childcare Workers Committee of the Tokyo Council of Social Welfare (CWC-TCSW) as well as the Japan Overseas Cooperative Association (JOCA). Initially, the CWC-TCSW sent its member childcare workers to the Iwate's coastal daycare centers for a few days to a week. Later, the JOCA deployed its alumni members, who had worked as childcare specialists in the overseas projects, for longer assignments (from one month to a few months).

This study does not explicitly show any gender effects in their response and coping capacities, although the majority of the childcare workers that I met were female. Not particular to their gender compositions, I observed differences among the tsunami affected daycare centers in how their personnel were overcoming, and coping with, their disaster experiences. At some daycare centers, different 'degrees' of their individual disaster experiences and impacts, such as losses of family members, affected the relationships among peers. At other daycare centers, personnel managed to overcome together the difficult times and challenges at both homes and daycare centers. Ms. Kitano, the director of Ayame Daycare Center, explained:

It was because everyone was in the same position. ... Because everyone was affected by the disaster, because everyone shared the same feeling (of devastation), things turned to be okay. I'm sure that each of us had difficult challenges at home, but everyone had same problems. ... At the graduation ceremony, I thought that I was really glad to be in this line of work. If this were a *normal* job, I would have already given it up (Ms. Kitano, Ayame Daycare Center).

Ayame Daycare Center used to be in the location only 100 meters away from the beautiful beach where children used to take a walk or play. Ms. Kitano seemed to value her job as 'special,' not only because they managed to protect young children from the serious disaster, but also because all the co-workers shared the difficult experiences and overcame such extraordinary situations together. Although everyone was affected by the disaster, their individual experiences and

coping processes could be largely different, which might become problems at these work places. Some daycare centers sought help of counseling from clinical psychotherapists, but others seemed to have managed among themselves. Either way, these processes were emotional for many, and the states of these daycare personnel could also influence children's psychosocial well-being.

Many daycare personnel expressed that returning to their own work and working alongside their co-workers after the disaster had significant meanings to them. Having children back at daycare centers also became the important encouragement and motivation for them to continue working hard for children. It seemed to be extremely challenging, but critical, for these childcare providers to and maintain the supportive relations among peers, and to (re-)establish healthy working environments for themselves to help each other for both individual and collective recovery from such a devastating event.

#### **4.3.3 Issue of staff allocation**

Many directors shared their concerns of whether or not the current staff allocations of childcare workers, or *hoikushi*, per daycare program would be adequate to protect all the daycare children at the time of another crisis. In the interviews, although it was not significantly different, the directors of public daycare centers tended to discuss their concerns of the staff allocation situations. According to the government's standards, currently one childcare worker was allocated for 3 children at ages 0-1, for 6 children at ages 1-3, for 20 children at ages 3-4, for 30 children at ages 4-6 ("The Standards for the Equipment and Management of the Child Welfare Facilities," 1948 [Last Amendment: May 31, 2012]). There were additional administrative and cooking staff per daycare center, and a few childcare providers were assigned as Childcare

Support Center<sup>27</sup>, in which extra childcare workers were allocated. These extra hands were always needed, especially in younger age classes. Infants and toddlers, or children with disabilities, could not walk or run, or suddenly climb hills, at the time of an emergency, and completely depended on the adults. Most agreed that the more adults were in place the more children could be assisted in the evacuation.

Even for older children, Ms. Inui of Asagao Daycare Center, suggested that, perhaps, the staff allocation should be reviewed based on the states of “today’s children.” She explained that many present-day children were raised among few or no siblings, and their socialization skills or cognitive development might differ from the past standards and require additional assistance.

Although many daycare personnel were regretted to have let children go with their parents before the tsunami’s arrival, they also explained that they might not have been able to save the lives of all children in their daycare centers, if those parents did not come and take children away. For the governments, this should be one of the critical issues that they need to closely consult with childcare providers for appropriate direct and alternate solutions.

#### **4.4 FAMILIES AND DAYCARE RELATIONS**

In Iwate, as discussed in the earlier section, the user number of daycare centers increased while the number of enrolments in kindergartens decreased for the last decade or longer (Iwate Prefecture & Iwate Prefectural Board of Education, 2005). This was supported by the recent changes in household compositions, such as 1) the increase of woman’s participation in

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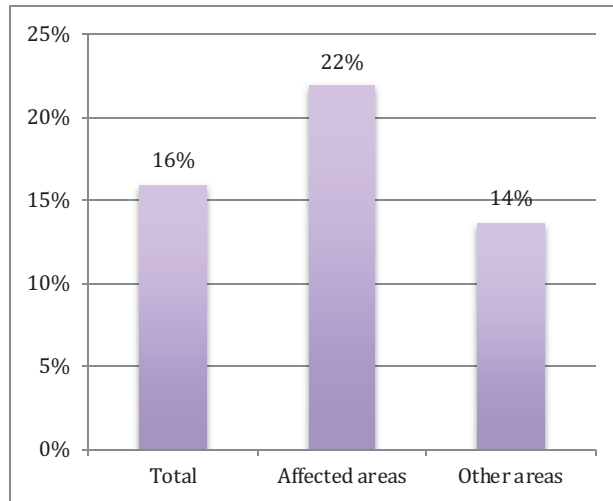
<sup>27</sup> According to the Ministry of Welfare, Labour and Health, Childcare Support Center, which is part of the Special Childcare Project, is the community-based service where the families with small children have access to various childcare supports, including 1) a place for informal gathering; 2) consultation; 3) information sharing; and 4) workshops (Ministry of Health Labour and Welfare, 2012b).

workforce, resulting in both parents working; 2) the increase of single-parent families, especially those with mothers as household heads; and 3) the decrease of household sizes (e.g., changes from extended families to nuclear families) (Iwate Prefecture, 2010b).

These trends were generally seen across the country, including in the coastal region of Iwate. For working parents, these daycare programs play crucial roles to supplement or fulfill their children's care and educational needs. Both parents and childcare providers must work together to best support young children's healthy development and well-being. In the case of a crisis situation, this close relations between parents and childcare providers would become even more critical to ensure the safety and security of children all the time, and to help smooth transitions between home and daycare environments. In this section, I will discuss a few issues aroused from their 2011 disaster experiences in regards to how children's parents and daycare providers helped each other to focus on the safety of young children in the crisis situation.

#### **4.4.1 Safe return of children to families**

The survey results indicated that, prior to the disaster, only 16% of the daycare centers in Iwate had carried out evacuation drills with children's parents or other family members (See Figure 13). Daycare staff explained that most parents could not attend because of their work schedules. Some daycare centers attempted to schedule drills during the hours when parents pick up children. At least, most daycare providers informed children's families of their annual evacuation drill activities in writing or verbally, but not many had shared or discussed with families about their detailed emergency response procedures.



**Figure 13.** Survey result: % of daycare centers that carried out evacuation drills with parents

On the day of the disaster, immediately after the earthquake happened, parents and other family members rushed to collect their children from daycare centers. After they were reunited with children, many families headed back home or to other locations before the tsunami's arrival. Unfortunately, a few of the children who left with their families lost their lives in the tsunami, while there were no casualties among the children who evacuated with childcare providers.

According to the daycare personnel that I interviewed, although some daycare centers have provided pick-up and drop-off services in recent years, it is also a common practice that parents are assumed, or responsible, to drop off and pick up their children at daycare facilities. Furthermore, it had been common understanding between families and childcare providers to immediately hand over children to their parents or family members in case of a crisis. As for the duty as daycare provider, Ms. Rikimoto of Sumire Daycare Center explained: "We thought that, if we could not give children back to their families, we did not fulfill our responsibilities." Many described that, prior to the disaster, they had thought that children would be safe with their families, and that, the more children were back with their families, the fewer children they had to protect from an emergency event. Whether they lost any children in the disaster or not, most

daycare personnel expressed their regrets to have returned children to their families and let them leave. They struggled with the thoughts of what they could have done differently, or that there could have been more casualties of children if the situations were different.

Another situation that daycare personnel had not expected was that parents would not be able to come for their children. The massive destruction damaged the transportation systems, including roads and vehicles. Many parents had to walk long distances, or cross over some mountainous areas, to reach their homes or look for their children. Because some daycare centers had to move from one evacuation location to another, it became more difficult for family members to locate their children. Moreover, parents from the same families arrived for their children at different times, and they could not find each other after they headed homes or shelters. They were separated for an extended time after the disaster. It took a few days for some families to reunite.

After they handed over children to their parents, daycare providers faced additional challenges to re-connect with children and their families due to the breakdown of the communication systems. Daycare personnel searched for children at homes or evacuation centers on foot, looked for their names in the governmental lists of evacuees, or put up posters. Once the cellphone lines were repaired, they could use the e-mail communication systems with families (e.g., e-mail list services). Yet, a few had difficult time to locate children and their families in such a chaotic time. Especially, as one director noted, some families, such as single-parent families or those without extended family support, could become vulnerable and isolated under such hostile environments. In post-disaster situations, childcare providers could play critical roles not only to check the safety and whereabouts of all children and their families, but also to monitor their individual situations and identify their assistance needs.

Based on these experiences, childcare providers reviewed and revised their emergency response policies and procedures in regards to the pick-up of children at the time of a crisis. Most of the daycare providers whom I interviewed had decided not to hand over children to their families while any disaster notice or warning was in effect. Even if parents came for children, families must evacuate first with daycare personnel. Furthermore, childcare providers noted that parents might put their own safety at risk to come for children. They requested children's families to take safe refuge first for themselves, and come for children after the situation was confirmed as safe. Throughout the year after the disaster, these daycare centers discussed with and disseminated to the families about detailed information on their revised emergency response procedures. A few daycare centers even provided evacuation maps to the families or took children's parents to the evacuation locations to get familiar with their emergency procedures. They ensured parents to know that their priority would be to immediately evacuate children to safe areas in case of an emergency. Ms. Chiba of Nanohana Daycare Center stressed: "At daycare centers, we would choose the best options for children. Even for a small tsunami, we would take the safest measure for them."

#### **4.4.2 Daycare programs and families' early recovery**

When we have children at our daycare center, their mothers will come to pick them up. Then, we could see how their mothers look or ask how their home situations are. When some families did not come out (after the disaster), we visited them at home to see how children were doing. If their mothers seemed to hold on to their children at home, we gradually told them that their children would like to play with friends (at the daycare center).

In addition, some families were worried about the fees. So, we asked the child welfare official about the fee reduction, and informed parents about it. We encouraged children (and their parents) to come out to the daycare center and have fun, not just to



remain at home. Once children came out, we could also see the states of their parents (Ms. Inui, Asagao Daycare Center).

Many of these childcare providers not only looked after children but also carefully watched the states of their parents and home situations. Even immediately after the disaster, some daycare personnel volunteered to look after children at evacuation shelters so that their parents could look for their homes and personal belongings or search for their missing family members. When daycare centers were reopened, childcare workers encouraged a few uneasy parents to let children come out and play with friends. Some other parents were worried about daycare fees. Especially, many disaster-affected families were suddenly in financially challenging situations, and accessing the daycare services could mean additional expenses to the families. Daycare personnel informed such families about the government's guidelines for temporary fee exemption or reduction so that they could send their children to daycare services.

At Shakunage Daycare Center, Ms. Ueda, who had retired as its director one year after the tsunami, shared several stories how daycare centers could support children's parents in the post-disaster situations. She noted that one of the children's fathers specifically asked the same and familiar teachers to look after his children. Ms. Ueda was also worried about a few parents who had faced additional challenges after the disaster: One mother took care of her teenage nephews and elderly parents because of the loss of her sibling; and another father became a single parent after losing his spouse. She seemed to have closely observed each family situation and thought about any help that her daycare center could offer to such families in need.

Ms. Endo of Hamanasu Daycare Center also observed the similar concern:

These mothers (and fathers) will become unstable from now on (one year after the disaster). So, as long as these families are with our daycare center, we (daycare staff) will be involved in every child (on behalf of their parents).

These childcare providers seemed to pay close attentions to children's conditions as well as the family situations, which could have major effects on the states of children.

Having children in daycare centers might not only have positively influenced the psychological well-being of both children and their parents (e.g., ease the stress), but also helped families to recover and rebuild their lives (e.g., start looking for housings and jobs). Ms. Seto, the former deputy director of Mikan Daycare Center, which had been flooded up to more than 1 meter high on the ground floor, explained:

These children have to rely on the daycare center – they are betting on the childcare program. So, it is important that everyone enjoys the time together, without any worry. Then, we think that their parents could work peacefully, which would impact on their lives as well (Ms. Seto, Mikan Daycare Center).

In post crisis situations, to help children get back to their normalcy could also help their families to quickly rebuild their lives and return to their work. Although it may not be definitive, the table below could be another indicator of the same (See Table 14). Among the 26 references coded under the node of “families’ early recovery,” 12 references were also coded to the nodes of “psychological support needs of children” and “significance of ECD programs” each respectively. Some of the daycare personnel emphasized that if children returned to daycare centers and enjoyed spending time with friends and teachers, their parents could focus on their family recovery. Moreover, while congested shelters or small temporary housing units could not be comfortable for anyone, parents could have peace in mind that daycare centers looked after their children in the safe and protected, and spacy and sanitary, environments.

**Table 14.** Overlapping nodes with “4.3 Families’ early recovery”

	4.3 Families' early recovery	
	No of overlapping sources coded (s=13)	No of overlapping references coded (r=26)
2.2 Psychological support needs of children	8	12 (46.2%)
2.3 Significance of ECD programs	8	12 (46.2%)

I still remember the day when Kantsubaki Daycare Center, which was submerged up to the ceiling height by the tsunami water, resumed at a temporary school building, which was assisted by the Japan Committee for UNICEF (JCU). It was such a symbolic day because the parents who dropped off their children looked so relieved to see their children with familiar teachers and friends, and they could then focus on rebuilding their own and family lives. In post-emergencies, the re-establishment of childcare and educational institutions like daycare centers should be the first step, and one of the priority areas, to achieve the rapid recovery and rebuilding of family lives in the affected communities.

After the disaster, daycare providers developed safer emergency evacuation policies and procedures to share with the families. As for parents, they paid more careful attention to the emergency response measures at daycare centers. Many daycare personnel commented that parents had become more actively involved in the activities at daycare centers (e.g., parent associations, volunteering) and communicated more with daycare personnel about their family situations and children’s conditions at homes. These closer and stronger relations between childcare providers and parents should be noted as one of the critical elements to make sure of protective environments for children between homes and daycare facilities at the time of a crisis.

## 4.5 COMMUNITY COOPERATION

Prior to the disaster, I had never traveled to the coastal area of Iwate, let alone to Morioka, the prefectural capital. It has the unique and beautiful coastlines facing the Pacific Ocean. The region is part of the Sanriku coast, which was well known for its rich fishing grounds and established fishery industries. However, the recent demographic changes, including 1) declining populations; 2) declining birthrates; and 3) aging communities, have heavily affected these remote fishery communities (Iwate Prefecture, 2011b). Furthermore, the economic development in the northern and coastal areas of Iwate remained slow, and their individual income averages continued to be lower than the central and southern regions (Iwate Prefecture, 2008).

Tohoku, or northeastern regional, people are often described as being reserved and humble. It could take time for outsiders to get to know them or earn their trust. After the disaster, moreover, the true characters of these communities were masked by the senses of loss and grief. Most of the people whom I met in the tsunami-affected area looked completely lost, devastated, heavily stressed, frustrated, and angry. At the beginning, it was equally difficult for me: to imagine how these coastal communities had looked before the tsunami; and to ‘figure out’ how these communities used to interact with each other. However, the more time I spent with them, the more comfortable and familiar the local partners and counterparts became with me (and the organization for which I worked, the Japan Committee for UNICEF [JCU]).

I gradually learned that each of these communities was a small, tight knitted community where everyone knew everyone, and they valued the protection of their children, future generations of the communities. This was highlighted at one community meeting that JCU organized to discuss the future of children in the communities. At the meeting, local participants, including (grand-)parents, teachers, childcare workers, and community leaders, described that

they always felt like “the community is raising children in the neighborhoods.”<sup>28</sup> This showed how strong their neighborhood ties were in these remote and small tsunami-affected communities.

In such local environments and cultures, the cooperation with and support from the local communities would be one of the formulas for daycare providers to ensure the protection of young children in the local neighborhoods. In an emergency, without these protective relations with the communities, small children of daycare centers might be exposed to safety risks or other harm. In this section, I will exemplify the importance of community relations for childcare institutions in crisis situations.

#### **4.5.1 Watchful eyes of local residents**

The coastline municipalities in Iwate were prone to tsunami risks when earthquakes occurred in the Pacific Ocean. Local governments organized annual evacuation drills in which daycare personnel also participated. Some neighborhood communities formed self-administered disaster response groups to manage community-level activities, such as drills, development of disaster response manuals, and installation of emergency stock storages. Prior to the disaster, a few daycare centers had some community volunteers who could assist in their drills (e.g., community guard/watch group, or *mimamori-tai*, at Mikan Daycare Center), but many found it difficult to identify the local residents who could help. Most of the neighborhood residents worked during the day. Even if there were any, they were often assigned to other emergency duties, such as

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<sup>28</sup> From the meeting note prepared after the community meeting to discuss the reconstruction assistance for children [子どものための復興支援を考える青空座談会], at the Kissho-ji temple, Kirikini, Otsuchi, on June 30, 2011 (15:00-17:00).

members of the neighborhood self-governing bodies or community fire fighter volunteers. Moreover, those who remained at homes during the day were often elderly.

On the day of the disaster, nonetheless, many community members helped the evacuation of daycare children in one way or another. Neighborhood residents, nearby office workers, or local middle school students assisted young daycare children by holding hands, helping them climb the steep hills or fences, or pushing buggies packed with toddlers. Local firefighters and neighborhood emergency response teams guided the evacuation of daycare groups. Some local residents gave children rides to evacuation locations or opened their homes for them to take refuge.

There were a few remarkable stories that the community's disaster risk awareness led to save children's lives. At Omoto Elementary School in Iwaizumi-cho, neighborhood residents noted that the school's original evacuation route was not safe because it passed the Estimated Tsunami Inundation Area. Subsequently, their discussion with the municipality's authority resulted in the construction of evacuation stairs that connected straight from the school buildings to the higher ground. On the day of the disaster, a total of 88 school pupils safely evacuated through the stairs (Iwate Prefecture, 2013). This was a great example that the community initiative could impact the safety of children in emergencies.

As the seriousness of the disaster became evident, evacuation centers were quickly established. Many local residents, including evacuees themselves, volunteered to manage the shelters, set up the rules of how to use the facilities, take turns as night guard to keep everyone safe, and prepare food. At shelters, young children were given the priority in the room assignments as well as the distributions of food, water, blankets, and heaters, if available. Many local residents gave them candies, snacks or even hand warmers for comfort. If any doctors were

present at shelter locations, they frequently checked on children and responded to their medical needs if necessary. In the testimonies by daycare personnel, there were many such examples that the communities looked after daycare children during the emergency evacuation.

#### **4.5.2 Risks in massive evacuation**

The 2011 disaster caused massive evacuations of local residents, which could have become additional harms or risks to young and small children of daycare centers. First, large-scale evacuation could cause confusion during evacuations and separate the groups of daycare children and personnel. Ms. Emura of Katakuri Daycare Center described that, because the nearby elementary school groups had been also evacuating on the same routes, some daycare children followed those elementary school pupils to the different locations. Furthermore, a few daycare groups were also temporarily separated during their evacuations (e.g., Nanohana and Hamanasu Daycare Centers). Local residents kindly provided rides to daycare personnel and children to shelters, but, because they had to be divided into different vehicles, drivers were confused and some of them arrived in different locations.

Second, there were risks for young children to be pushed, or become vulnerable to injuries in massive and sudden movements of large evacuee groups. For example, Ms. Inui of Asagao Daycare Center explained that they had kept their children stay outside until it became dark. Although neighborhood residents took refuge inside the temple, she was fear of the aftershocks that might trigger the other evacuees to suddenly move and crush or injure children. The other daycare personnel also agreed that they had moved their children away from the crowds due to the fear for children's safety.

Third, daycare personnel constantly evaluated the shelter environments. Most of the daycare centers that took refuge in community evacuation shelters experienced the deterioration of sanitary conditions (e.g., no electricity to pump water, or overflowed and clogged toilets). Daycare staff often assessed that it was not safe for children to use the sanitary facilities at shelters. In addition, due to the limited availabilities of (emergency) food and drinking water, some of the daycare groups did not have enough food and drinking water for their children. There were a few reports that some children had become sick from dehydration.

Massive evacuation of local populations could be additional risks for anyone, but especially it became a serious concern for childcare institutions, like daycare centers, which cared for young and small children. Luckily, although facing the various challenges, there was no serious accident or injury that involved children of daycare centers under the chaotic and harsh evacuation conditions. A few daycare personnel stressed the importance of cooperation with other childcare and educational facilities in the same neighborhoods, like schools, kindergartens, and other daycare centers. In addition, they also suggested that community evacuation shelters should be equipped with adequate emergency stocks and child-friendly facility environments. Childcare institutions like daycare facilities should carefully consider of risks in the neighborhoods and coordinate and prepare with local partners, such as neighboring schools and community leaders, to manage the safety of children in case of massive evacuation.

#### **4.5.3 Mutual relations with communities**

The interviews re-emphasized the importance of community support and cooperation for daycare centers in their disaster risk reduction (DRR) measures. As discussed above, it is critical for each community to identify a safe evacuation shelter location(s) with: indoor spaces with essential



facilities (e.g., toilets and water access); and emergency stocks (e.g., food, drinking water, blankets, and heaters), which are suitable for most vulnerable members of the communities, including young and small children. Especially, this would help childcare providers to focus on assisting the safe evacuation of young children, not to worry about post-evacuation measures, such as shelter spaces and emergency stocks. Moreover, it was also suggested to make these shelter facilities to be ‘small child friendly,’ such as toilet facilities for young children, separate spaces for children (and other vulnerable groups, e.g., elderlies and people with special needs) emergency food for babies, and stocks of baby diapers.

After the disaster, a number of local meetings were constantly held in the affected community to discuss their temporary living conditions and community reconstruction and relocation plans. Some of these meetings were led by the municipalities, and others were by the communities themselves, or by the civil organizations. One of such meetings was focused on the issue of childcare support systems in the affected community and participated by the governmental officials, NGO/NPO workers, and local residents. These forums were crucial opportunities for all the concerned stakeholders to discuss and share the important values of creating more child-friendly and protective community environments.

In addition to these community forum opportunities, some daycare centers also attempted to strengthen their relations with the local communities to make sure of the safety for children. Ms. Maehara of Kantsubaki Daycare Center, which had been temporarily relocated in a different neighborhood, considered coordinating with the community self-governing body in regards to neighborhood’s emergency response measures and evacuation plans once they were settled in a permanent location. At Kinmokusei Daycare Center, which provided childcare services to the remote peninsula community, the director, Ms. Yamanaka, was planning to discuss with local

business owners about the neighborhood safety for children. Furthermore, the local neighborhood group discussed and included a new location plan for Hanamizuki Daycare Center in their community reconstruction and relocation planning as one of the priority items.

Many daycare personnel valued their relations with the communities, not only because the communities helped daycare centers to reopen, rebuild and sustain after the disaster, but also because the re-establishment of daycare centers helped the recovery and healing processes of local communities. As they resumed their daily programs, childcare providers re-connected with local businesses and communities. They invited local residents to their annual events, like summer fairs, athletic competitions, or plays. Initially, they hesitated to carry out such events, because the entire communities were grieving. However, as children enjoyed these events, the local residents who attended these events seemed to be encouraged by the healthy and energetic children. Ms. Egami of Hamanasu Daycare Center explained:

We were not sure whether we should be doing our usual school events like the “evening breeze” gathering and fireworks in the summer or the athletic competition. Many people died in this neighborhood, and there were a lot of people still living in the temporary housing units. But, once we did it, people in the community came from the distance temporary housing locations and enjoyed themselves (watching our children). They were genuinely laughing and smiling as they saw how energetic and healthy “*our neighborhood kids*” were. So, we thought that we should do our daycare program as normal as possible (for children and the community) [*italics added*].

Another director of Botan Daycare Center, Ms. Yoshii, agreed.

This time (at the disaster), neighborhood people took care of us on many occasions. So, we invited them to our events and held appreciation gatherings for them. We thought that it was truly necessary (for daycare center) to have very close relations with neighborhood people. It was good that we had (the relationship with the community).

Daycare providers also seemed to value the opinions that community members had about their childcare programs. Ms. Tonda, the newly appointed director of Ajisai Daycare Center, explained that it was important for her to know “how people around the neighborhood see the

daycare center.” She was pleased to hear how one community member had been impressed by the way that daycare children had followed teachers’ instructions and evacuated orderly on the day of the disaster.

As discussed, the communities assisted daycare centers in drills, helped children evacuate from the tsunami, assigned separate spaces at shelters, provided emergency food and water, or identified rooms at shelters for temporary daycare use. In return, daycare providers were keen to have good impressions and influences to the local communities. It seemed that, after their disaster experiences, these childcare providers realized the importance of neighborhood relations and valued the community support mechanisms to ensure the safety and security of their daycare children at the time of a crisis.

#### **4.6 EXTERNAL ASSISTANCE TO AFFECTED COMMUNITIES**

When a major disaster happens, the Government of Japan would immediately establish formal emergency response mechanisms for relevant governmental agencies to readily respond to the urgent situation ("Basic Act on Disaster Control Measures," 1961). When the first earthquake happened on 11 March 2011, as in the law, the headquarters for emergency disaster countermeasures were immediately established at all levels of the governments, and different disaster response agencies were deployed, including the Self-Defense Forces, local police and fire departments, and emergency medical teams. Soon after, large amounts of help and assistance started pouring into the affected region from the other parts of the country as well as from overseas.

In this section, I will focus on a few of the impacts that external assistance, including international and national organizations, non-governmental and non-profit organizations (NGOs and NPOs), and volunteers, had brought into the 2011 tsunami disaster relief operations in Japan. The surveys and interviews with daycare providers in Iwate did not provide explicit insights to this subject, but the following include the accounts based on my field observation and experiences of working for one of the external humanitarian organizations in Iwate.

#### **4.6.1 Influx of civil organizations**

A total of 29 countries, regions and international organizations dispatched their rescue teams and disaster response specialists to Japan, and 163 countries and regions and 43 international organizations offered emergency supply and monetary assistance, including the total relief fund of more than 17.5 billions Japanese Yen (Government of Japan, 2012; Government of Japan & World Bank, 2012). The Japanese Red Cross Society (JRCS) and other national and international civil organizations also raised emergency funds and donations and established response structures.

Hundreds of, if not a thousand, civil organizations, such as non-governmental or non-profit organizations, known as NGOs or NPOs, participated in the emergency responses and humanitarian assistance. These NGOs and NPOs were registered as *corporations* (e.g., non-profit corporations, public service corporations, incorporated foundations, religious corporations) with the government. Some of these organizations specialized in the development and humanitarian assistance programs overseas, including in-country fundraising and advocacy activities, and the others worked as community-based organizations within the country. As of January 2012, although the registration with the network was not mandatory for relief agencies,

the Japan Civil Network for Disaster Relief in East Japan (JCN) had registered a total of 712 organizations and groups working in and for the tsunami-affected communities (Government of Japan & World Bank, 2012).

Many of these organizations had capacities to raise funds, do advocacy work, and implement programs in their specialized areas. For examples, JCU and the Japan Platform (JPF) raised more than 4.8 billion Japanese Yen by end 2013 and 7.1 billion Japanese Yen by March 2014 for their East Japan Disaster Emergency Response Programs respectively (JCU, 2014; Japan Platform, 2014). Moreover, these organizations often had pools of personnel with extended professional experiences in the field of emergency response and humanitarian assistance. Otherwise, they had their own recruitment systems to hire necessary personnel to fulfill their program requirements.

It is worth noting that, in addition to the contributions from foreign countries and civil organizations, a total of 1,110,000 volunteers from the different parts of the country had worked in the three (3) tsunami-affected (Iwate, Miyagi and Fukushima) from March 2011 to September 2012 (Reconstruction Agency, 2012). These volunteers registered themselves at local Disaster Volunteer Centers, which were managed by the Social Welfare Councils. They were often assigned to various tasks, such as debris and mud cleaning, moving and storing emergency supplies, and helping at shelters and kitchens (Iwate Prefecture, 2013). The numbers could be higher, because many volunteers were also registered with and dispatched by NGOs and NPOs.

#### **4.6.2 Coordination for effective humanitarian assistance**

In an emergency situation where humanitarian assistance is required, the State is responsible to meet the urgent needs of the affected populations and to coordinate required actions (UN General

Assembly, 1991). In the contexts of international relief operations, as discussed in Chapter 2, the United Nations and other international agencies could assist host nations to coordinate with various humanitarian organizations to respond to emergency needs of the affected. In Japan, however, as an industrial nation, its governments were assumed to lead the emergency response coordination. The post-disaster report noted that “there were no coordination mechanisms in place that functioned properly on the ground,” and the reason was given as “the municipal governments have quite limited experience in working with CSOs (civil society organizations) (Government of Japan & World Bank, 2012).

This lack of coordination was evident from my experiences of working in Iwate. Each agency had to find a way to coordinate with relevant government offices or other organizations to deliver their assistance to the affected communities. For example, JCU initially started with building contacts and sharing information with individual partners (e.g., JCU and Save the Children Japan [SCJ] discussed to divide the operational areas to avoid duplication). Then, JCU and JPF jointly called for a first coordination meeting among the NGOs/NPOs.<sup>29</sup> Later, the Children and Family Division of the Iwate Prefectural Government finally organized an information-sharing meeting with the civil organizations, universities and other specialized groups. This prefectural level initiative was attended by about thirty (30) organizations and groups, and became the periodical events to discuss the program progresses and concerns focusing on children in the tsunami-affected areas.

There were other initiatives in which local and external civil organizations came together to form coordination networks on the ground. For example, the NPO Iwate Fukko Collaboration

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<sup>29</sup> The list of organizations that attended the first meeting included the following ten (10) organizations: Campaign for Children in Palestine; Japan Committee for UNICEF (JCU); Japan Platform (JPF); Kokkyo naki Kodomotachi; Good Neighbors Japan; Nippon International Cooperation for Community Development; NPO Corporation Neos; Peace Winds Japan; Save the Children Japan (SCJ); and World Vision Japan.

Center was established and assigned to facilitate that the emergency response assistances would meet the needs of the affected populations. For another example at the central level, the East Japan Earthquake and Tsunami Disaster Children Support Network was established to promote and respond to the needs of children in the disaster affected areas. Both networks were “spontaneous coalition(s) for coordination (Government of Japan & World Bank, 2012)” and aimed to fill the gaps between the governmental policies and responses and affected populations’ needs and concerns through information sharing and coordination of activities.

In the 2011 disaster in Japan, there were large numbers of NGOs and NPOs with different capacities and resources to assist local governments to respond to emergency needs of the affected populations. These external resources could be vital to fill the gaps that governments could not fill. At the same time, these external organizations might not be familiar with crucial local contexts. The governments at all levels should invest and prioritize the establishment of coordination mechanisms, in which the critical local knowledge can be shared and vital external assistance can be maximized for the overall emergency response capacities.

#### **4.6.3 “Do no harm” – Respect local social contract relations**

As they often came from the outside into the affected region, many external humanitarian organizations needed to learn the local contexts as they went. It was the same for the organizations like the Japan Committee for UNICEF (JCU), which worked closely with both local authorities and individual childcare and educational providers. It was important for humanitarian actors to work *with* them, not to work *for* them, because relief agencies were there to support local capacities to respond to the emergency and recovery needs and re-install and rebuild their community mechanisms. For this, humanitarian workers had to carefully make

several operational and program decisions, not to undermine the existing local social contract structures.

For example, one of the operational decisions that JCU made in Iwate was to assist the building of *temporary* daycare facilities, instead of (re-)constructing *permanent* buildings for tsunami-affected childcare providers. Limited availability of ‘safe’ land spaces after the disaster was the serious issue in the saw-toothed coastline of Iwate, where the local populations had been concentrated at the shore areas, instead of inlands. During the first year of the disaster, the local governments did not allow any new permanent buildings to be (re-)built in the once-tsunami-flooded areas. This was because the land safety and usability assessments had to be thoroughly done and reconstruction and relocation plans needed to be finalized and agreed. Without such plans, or without knowing where the local communities would settle, it was not feasible for tsunami-affected childcare providers to rebuild, or relocate, their permanent daycare facilities. As an assisting organization, JCU instead chose a temporary measure of building pre-fabricated school facilities, considering of the urgency to provide the best and safest daycare environments to children based on the given circumstances.

Because local services and businesses were also impacted, for another example, JCU had to explore all possible supply procurement and service capacities at all levels: locally, regionally, and nationally. At the beginning, we sought the supply procurement capacities outside the tsunami-affected areas. As post-disaster recovery was moving forward, we could use local business and service suppliers. By doing so, JCU could in turn help the larger community recovery and development. Because relief organizations brought external resources into the affected communities, their humanitarian assistance activities could affect the local service and business capacities. Thus, humanitarian actors should carefully assess the situations and seek the



local knowledge of wisdom, if necessary, to help, but not undermine, strengthen the social contracts and networks within the affected communities.

One of my field encounters could exemplify the case where external actors could interfere the local relations to protect children from harm and violence. While operating an after-school care center in the tsunami-affected community, a staff of one NPO noticed that one boy seemed experiencing domestic abuse. This NPO contacted our organization, JCU, for guidance. We recommended that, if they did not have the capacity, or were not authorized, to deal with such domestic cases, they should not directly intervene in the family, but should consult local authorities, such as child protection official or local police department (from the researcher's fieldnote). This showed that external humanitarian actors could encounter, or might be even engaged in, such local and domestic issues involving children, especially when they directly interacted with the local populations. They should align with the local systems to deal with any local legal and protection issues that would affect the individuals whom they work for in the field.

#### **4.7 GOVERNMENTAL ROLES IN PROTECTING CHILDREN FROM DISASTERS**

Iwate Prefecture is located some 300 miles away from Tokyo, and its economy has relied on agriculture and fishery. The installment of the Tohoku Bullet Train Line and Tohoku Expressway helped its recent successes to bring manufacture industries into the inland southern part of the prefecture. Yet, its economic growth has been slow to impact the income levels of the Iwate's population. In 2007, the individual income average of Iwate Prefecture was at the 40th among the total 47 administrative divisions of the country (Iwate Prefecture, 2010c). As discussed in the previous section, the economic development in the northern and coastal areas

had stagnated, and the individual income averages had been lower than the rest of the prefecture (Iwate Prefecture, 2008). For the communities that were economically vulnerable and prone to natural disasters, like the Iwate coastal region, governmental roles and capacities would become critical for their survival and sustainability. In this section, I will review to what extent the governments supported childcare institutions like daycare centers to prepare for and cope with such a severe disaster.

#### **4.7.1 Disaster prevention standards and guidance**

Many local governments had taken various emergency countermeasure initiatives, because their geographical areas were prone to certain natural disasters. Many coastline municipalities annually carried out area-wide emergency drills with local residents for tsunami risks. Estimated Tsunami Inundation Areas were marked within the municipality parameters. Local radio systems were installed to broadcast public notices or warnings for any extreme weathers, disasters, or other emergency situations. According to daycare personnel, some municipalities showed computer simulations of tsunami to the communities in recent years to raise public awareness.

On the day of the disaster, most of the daycare personnel heard the first tsunami-warning, but later the public radio systems were shut down. Furthermore, the tsunami reached beyond the marked Estimated Tsunami Inundation Areas. This shows that emergency events, including natural disasters, could happen outside the places, timings, and scales that people expected. The following are some of the key roles and responsibilities that the governments played, or could have played, to help childcare institutions like daycare centers and the communities prepare for and to respond to the unexpected severe disaster event like the 2011 tsunami.

***Disaster preparedness standards:*** As discussed earlier in this chapter, monthly drills clearly contributed to the safe evacuation of daycare children in Iwate in the 2011 disaster. It was part of the national standards, and the survey result indicated that almost all daycare centers in Iwate had conducted monthly evacuation drills prior to the disaster (See Section 4.1.1). Other emergency disaster preparedness and response standards may not be explicitly stated in the same governmental ordinance that includes the standards on evacuation drills. However, they are often part of the local government's standards and auditing items for childcare institutions. Governments are responsible to audit each daycare center every year, including (but not limited to) the following safety requirements and emergency disaster prevention items:

- 1) earthquake resistance for buildings;
- 2) safety measures inside the facilities (e.g., anti-fall measures for furniture and equipment; anti-shatter measures for window glasses and lighting fixtures; emergency exits);
- 3) evacuation measures (e.g., routes; locations; emergency stocks; emergency trolleys; 'walking ropes'; baby carriers); and
- 4) emergency procedures (e.g., personnel roles; emergency contact lists).

The survey showed that not all the measures were incorporated at all the daycare centers in Iwate. Installing these disaster prevention measures could be costly. In the interview, Mr. Umemura of Yamabuki Daycare Center, which was a private provider, mentioned that they had to allocate the general operational budgets to fulfill such requirements and he wished that governmental assistance could be available for them to install necessary disaster preventive measures and equipment. Ms. Seto of Mikan Daycare Center also noted that some of the suggested measures by the authorities might not be relevant in certain situations. For examples,

their evacuation route had a steep slope, which was not suitable to use trolleys, but childcare workers could use baby carriers instead.

Crises may not happen every day, but it should be a critical concern for every daycare provider. At the same time, each daycare center may face different challenges in emergency preparedness and evacuation measures. Thus, some of the standards could be mandatory, but others should be carefully evaluated for necessary assistance required for both individual and general cases. Nevertheless, governmental authorities must guide and assist daycare centers to meet the emergency preparedness standards as a critical issues to protect children's safety and security within the childcare programs.

***Emergency manuals and guidance:*** In order to ensure daycare centers to be well-prepared for any emergency or disaster situation, it is important for personnel to develop emergency response manuals and to receive technical guidance by local authorities or disaster prevention specialists. The interviews discovered that most of the daycare centers had emergency response manuals that had been developed by them and revised over time. Not many used external manuals or reference materials given by governments, and only a few used the manuals developed and shared by the neighborhood communities. Because the scale of the 2011 disaster was bigger than what they had assumed within the scope of their emergency manuals, many felt that manuals would not be useful in such severe disasters where unexpected situations could arise. Ms. Ota of Satsuki Daycare Center expressed her concern that manuals might not be sufficient to respond to unexpected events like the tsunami in 2011:

We had a manual before the disaster, and it was well written, covering earthquakes, fires. ... But, after we experienced the disaster, I thought: "What is a manual?" Did we follow the manual? Not exactly. I've been worried how useful this 'excellent' manual could be in future, when something happened. After we moved here, I couldn't complete the development of a manual for this (new) location. I'm worried that an ordinary manual

like the one before wouldn't be enough (for next disaster) (Ms. Ota, Satsuki Daycare Center).

At the same time, many credited to the manuals, and knowing and having practiced what to do in case of an emergency, which had helped them respond to unexpected situations. If there were no concrete organizational response structures and procedures arranged and agreed in advance, the situations could have been even more chaotic and confusing. Especially this could be a serious issue for daycare providers, because their priority should be protecting children from harm. Procedural details should be pre-determined and agreed among concerned adults, and should not become problems in the middle of such chaotic situations.

As part of their disaster risk reduction (DRR) measures, childcare providers were closely engaged with local fire departments. Their emergency response plans must be submitted to and approved by the fire departments or other concerned local authorities. Once or twice a year, fire department officials oversaw their evacuation drills, and firemen interacted with daycare children to talk about fire, disaster, or other hazards.

Many daycare directors explained that these occasions also benefited their staff. They could ask fire department officials questions about their disaster risks and response measures. Furthermore, a few recounted that on the day of the disaster, local firefighters had assisted their evacuation. Having close relations with local fire departments helped these childcare providers with their emergency preparedness as well as at the actual evacuation.

Based on their 2011 disaster experiences, many daycare directors expressed that it could have been more helpful if governmental authorities had given them clearer and more concrete emergency response guidance, such as clear public announcement of disaster information and warnings and concrete 'orders' for evacuation. Ms. Rikuta, the director of Suzuran Daycare Center, another private provider, explained that this was particularly important for her who was

in the position to make such critical decisions to order the evacuation within her daycare center. This seemed to be a more serious concern for the directors of private daycare centers, because they were the heads of institutions. Many interview responses corresponded with this.

Whether private or public, nevertheless, clear governmental guidance on disaster preparedness and response measures, with consideration of different crisis scenarios, could help daycare providers to make prompt and appropriate decisions at the time of a crisis. Furthermore, such official governmental guidelines could be shared as agreed emergency measures with children's parents by childcare providers.

This study revealed how much these daycare center directors had thought about their responsibilities to make sure of protecting children in crisis events. Local authorities, including fire departments and other relevant government offices, must support and reinforce these efforts. Their support should include, but not limited to: 1) identifying childcare providers' concerns and assistance needs; and 2) providing them with necessary and relevant knowledge and skills, to respond to emergencies and focus on the protection of children in crises situations.

#### **4.7.2 Leadership in post-disaster recovery**

In addition to disaster prevention measures, governments are expected to take leadership roles in emergency response and recovery and reconstruction efforts at the time of major crises. However, the local governments, including the social welfare offices, were directly affected by the disaster and completely overwhelmed by the large scales of disaster impacts to the local populations. These stressed conditions often limited their capacities to provide timely guidance and assistance to the affected childcare institutions and to facilitate incoming aid and other activities to the affected communities.

In the interviews, for example, several daycare directors remembered that there were initially no guidance or assessment from the local welfare offices on how they could resume their childcare programs. As their daycare facilities were directly affected by the disaster, timely and appropriate guidance could have been most help for these childcare providers to determine on the temporary measures to re-establish the programs, such as: a) facility (re-)locations; b) procurement of equipment and supplies; c) temporary program arrangements and operational hours; d) fee exemptions or reduction; and e) emergency recovery budget (re-)allocations.

Local governments' capacities to coordinate and facilitate the situations largely made difference among tsunami-affected daycare providers to access additional resources for their recovery efforts. For example, Kosumosu and Yamabuki Daycare Centers were temporarily merged to their sister daycare centers, where their childcare workers were also reassigned, by their parent organizations. A few municipalities also facilitated the identification and assignment of available facilities for tsunami-affected daycare centers. Without such umbrella organizations or municipality support, a few independent private childcare providers had to handle the devastating situations on their own. If they could not figure out the ways to re-establish, they would have laid off the staff and closed the programs. This could have been not only a serious concern of daycare providers, but also a long-term problem for local governments in their childcare support capacities available to the families and communities.

As discussed in the previous section, there were lack of governmental guidance and coordination capacities, which could affect effective relief activities by external humanitarian groups. Affected populations were already overwhelmed and confused by the massive influx of external groups, like humanitarian agencies and research groups. This was evident from my interviews and field observation that there was no coordination for external research groups to

conduct their assessments or researches. As a result, a number of similar assessment or research activities became burdens to the affected communities (e.g., they had to repeat their disaster stories). Local, or prefectural, authorities could have coordinated these incoming assistance and activities to avoid duplications, ensure equal distributions for those in need, and prevent overstressing the affected populations.

Finally, there were some operational gaps among the governments at all levels: local, prefectural, and central. For example, although the Ministry of Education set up temporary emergency assistance measures to allocate additional funds for recovery activities, local tsunami-affected education offices were not aware of such decisions. The bureaucratic systems in the governments hindered these counterparts to proactively interact each other, and to share the same urgency in the situations. Such information and operational gaps among the governmental bodies could affect critical local response capacities.

Another example was that the existing administrative divisions created different, or unequal, responses to different service providers. In Iwate, the municipalities' welfare offices administered both public and private daycare programs, the local education boards managed public schools and kindergartens, and the general affairs department of the prefectural government was in charge of private schools and kindergartens. In the coastal area, schools were mostly public, and their emergency and recovery needs were quickly assessed and responded. However, the similar needs of affected daycare centers and private kindergartens were somehow delayed, and they often relied on external assistance in the private sector. This was because, while the public school systems were well aligned, the childcare support program was only one of many services in the welfare sector, and, for private kindergartens, there was no administrative accountability at local level.



Although some challenges in the governmental response capacities and structures were uncovered, there were some cases of good coordination and collaboration work between governmental agencies and civil organizations. For example, JCU supported a “Back to School” program in Iwate immediately after the disaster. In this program, the Iwate Prefectural Board of Education and Iwate Prefectural Teachers’ Union coordinated with their regional and local counterparts to assess the situations, and JCU and the Iwate Consumers’ Co-operative Union (Co-op) supported the distribution of individual stationary packages for a total of 17,152 elementary school pupils in the affected areas. This was one of the instances that governmental leadership and coordination with civil organizations worked well under such challenging situations.

To the contrary, the following fieldnote summary exemplified how governmental guidance and facilitation had affected the recovery condition of one daycare center:

After its facility was washed away by the tsunami, Botan Daycare Center, which was run by the local municipality, was relocated to the nearby elementary school. This school had been a shelter for local evacuees for more than six (6) months. Its school building did not have a kitchen, toilet facilities suitable for daycare-age children, or appropriate outdoor spaces. Later, the building was assessed for demolition as part of the municipality’s reconstruction plan. The prefectural government office expressed its concern about safety of the building, and advised either to look for an alternative facility or to improve the situation to meet the childcare service standards. JCU also offered to assist in building a temporary daycare facility. However, the local authority’s decision was delayed. Even after both the school itself and all the evacuees vacated the building, Botan Daycare Center remained in the facility under the same conditions for a total of two years (From the summary of the researcher’s fieldnote entries).

In the end, Botan Daycare Center managed to stay safe in the school building, and moved to a temporary school building supported by another organization. However, Ms. Yoshii, the director, was constantly worried about the safety of children inside the facility, including: aftershocks and emergency evacuation; arrangement with evacuees; sanitary conditions; outsourcing their lunch preparation; and lack of playground. If the local social welfare office, which was in charge of

Botan Daycare Center, had taken a more proactive leadership and coordination role in this specific matter, they could have found a solution to provide safer daycare environments to children and childcare workers much earlier.

Timely governmental leadership and facilitation could affect the early recovery of disaster-affected communities, including their childcare support capacities. By coordinating with incoming humanitarian groups, governments could have maximized their own relief capacities to meet the urgent needs of affected populations. For external organizations, furthermore, clear governmental guidance and coordination could allow them to access critical local knowledge to verify where and what the relevant needs were and legitimize their relief activities for their own accountabilities. Such cooperation would help relief agencies focus on the humanitarian principles (as discussed in Chapter 2, “humanitarian imperative,” “neutrality,” and “impartiality”[, and perhaps “Do No Harm”]) to ensure equal access and avoid duplications of their assistance.

In such major disasters, all relevant parties should immediately focus on reinforcing or re-installing the local governmental response capacities to lead and coordinate relief operations on the ground. In the end, these capacities could affect the recovery and rebuilding of affected communities, including childcare support systems. The focus in emergencies, or even in normal situations for the matter, should be to respond to the essential survival and development needs of the (affected) populations beyond their bureaucratic limitations.

### **4.7.3 Child-friendly disaster resistant community planning**

The 2011 disaster exposed the local populations in Iwate, including young children and personnel of daycare centers, to various unexpected risks. In addition to the earthquake, tsunami

and fire, a few rural coastline or peninsula communities along the Pacific Ocean faced serious risks of isolation from the rest of the region. In the remote areas in Iwate, some communities had only one accessible road, which was damaged and closed down by the disaster. The populations in such communities became isolated and could not access to the emergency services. Ms. Yamanaka of Kinmokusei Daycare Center shared her experience of being temporarily isolated in the rural peninsula community: Daycare children and personnel, together with local residents, evacuated to a mountain top inn from the tsunami and subsequent fire outbreaks, and they were inaccessible by road, only next day rescued out by helicopters. To make their communities more disaster resilient, it is critical for local authorities to assess unique risks and consider additional safe road access to prevent isolation and inaccessibility of these rural coastal communities at the time of a crisis.

Even though they managed to avoid the giant tsunami safely, some daycare centers had to make their way by climbing the fences, crossing over the mountains, passing the railway tracks, or walking long distances with small children. Many of the extended evacuations that they took were not suitable or safe for young children of daycare centers. Local governments should ensure the installation of safe and proper evacuation routes, including appropriate steps and slopes to higher grounds and designated passages safe for small children, as part of local disaster prevention measures in these disaster prone-communities.

As for evacuation locations, the conditions of many shelters did not appear to be appropriate for small children, without adequate emergency stocks or functioning sanitary facilities. The main problem was that those assigned evacuation centers could not handle the sudden and massive evacuation of local residents. It was noted that most of these evacuation facilities were not considered to be 'young child friendly'. Government-assigned evacuation

centers must be equipped with appropriate emergency stocks (e.g., baby food and milk, diapers) and facilities (e.g., toilets for small children) for small children to safely take refuge.

At the time of the interviews, tsunami-affected municipalities and communities were still discussing over their post-disaster reconstruction plans. While each municipality was developing their specific plans, the Iwate Prefecture Government (2011d) outlined its overall reconstruction frameworks under the following three principles:

- 1) **Ensuring safety** through disaster-preventative community planning (including coastal protection facilities, safe living environments and land-use planning, and cultural measures) and stronger transportation networks;
- 2) **Rebuilding lives** including housing, employment, health and medical care, welfare systems, nursing structures, education and culture, regional communities, and administrative functions; and
- 3) **Regenerating industries** through constructing production systems, developing infrastructure, and financial and systematic support to encourage production activities.

Although it did not explicitly focus on children's safety and security, the plan of "ensuring safety" included "(allowing) people to live safely and securely" and "(promoting) *people-friendly* community planning based on a philosophy of universal design" [italics added]. Different safety and security risks and needs of all the local residents should be considered in rebuilding disaster resilient communities. Especially for those in need of assistance, including young children (and elderlies and people with special needs), special consideration should be given to ensure their safety and security even at the time of a crisis.

The reconstruction planning experiences highlighted different initiatives that promoted children's participation in the processes, especially at the community and municipality levels.

For example, international NGOs like SCJ and JCU supported the initiatives to promote children's participation in rebuilding their own communities (JCU, 2014; Save the Children Japan [SCJ], 2014). These child participation activities not only provided children with the opportunities to express themselves to local, and national, authorities about what they would expect their communities to be, but also promoted their sense of ownership in the reconstruction process. Nonetheless, these children's contributions should be considered as opportunities for the governments to integrate the concept of more child-friendly and disaster resilient community development into their reconstruction planning.

The affected communities, in addition, should consider new locations of childcare service providers as one of the priority areas in their reconstruction and relocation planning. In the interview, Mr. Omi of Himawari Daycare Center, whose floors were covered by the tsunami water, expressed his concern that the numbers of enrolments had declined after one year since the disaster. Many local residents, including the daycare users, moved out of the neighborhood to the temporary housing units or outside of the town center. Possible relocation of local residents might not only affect his daycare program but also completely change the picture of childcare service demands in the neighborhood.

This example showed that the disaster itself and its subsequent post-disaster situations could affect the operations and survivals of these childcare providers as well as the landscape of local childcare support capacities in tsunami-affected communities. Ideally, the safer and more appropriate childcare services were available, the more families with young children would consider staying in or moving to the communities. In turn, these families would contribute not only to the recovery of disaster-affected communities and but also to the further development of local businesses and industries. Survival and future of tsunami-affected daycare centers should

not be individual concerns of the service providers, but should be considered as an interest of the whole communities and for the protection of next generations.

#### **4.8 SUMMARY**

Based on the thorough data collection and field observation, this chapter described the disaster experiences of the daycare centers in Iwate. Although the mixed methods were employed, the qualitative and descriptive analyses helped this study offer detailed portrayals about the roles and meanings of early childhood development (ECD) programs for young children in the disaster-affected situations. Furthermore, the study findings highlighted critical roles and relations among the concerned stakeholders to ensure and sustain children's access to their care and development opportunities during and beyond the challenging time of the disaster.

To synopsise all the detailed findings presented in this chapter, I borrow the eight dimensions of the Landgren's Protective Environment Framework model (2005) (See the descriptions of the eight dimensions in APPENDIX B) as examples to highlight some of the protective capacities of the disaster-affected communities in Iwate revealed in this study as follows:

For example, the 2011 disaster experience proved that the governmental law and standards, and their auditing mechanisms, for the disaster prevention measures in daycare programs had clearly worked ("2. Protective legislation"; and "8. Protective monitoring, reporting, and oversight"). At the same time, the study unveiled some weakness in the governmental coordination capacities to deal with massive external relief contributions and

organizations, despite their well-established internal emergency response mechanisms and relief capacities (“1. Protective government commitment and capacity”).

This study also revealed that even young children at daycare centers had demonstrated their abilities to cope with the disaster (“5. Protective children’s life skills, knowledge, and participation”). Furthermore, it reaffirmed that to access the crucial childcare and educational services, like daycare programs, had brought back the normalcy to children’s lives, given them the environments where they could feel safe and protected, and secured their continuous care and development opportunities even in the chaotic community conditions (“7. Protective essential services”).

In this study, it was shown that the local community shared the value of protecting “(their) neighborhood children” in the disaster (“3. Protective culture and customs”) and there were constant opportunities for them to express and discuss their concerns in regards to protection of children in the disaster-affected communities (“4. Open discussion”). In addition, while the disaster-affected family and community situations had significant effects on children, the states of children also had impacts on the recovery capacities of families and communities (“6. Protective capacity of families and communities”).

These only represented the brief extracted summary of the immense descriptive findings generated in this study. In the conclusion chapter, I will first recap the detailed highlights of the study findings based on the eight (8) dimensions of the Protective Environment Framework. Emerged from there, I will then analyze the research outcomes in relation to how these findings would contribute to and expand, or challenge, the conceptual frameworks presented earlier in this dissertation as well as the past practices in the field of education and ECD in emergencies.

## 5.0 CONCLUSIONS

The purpose of this study was to understand the roles of early childhood development (ECD) programs in protecting children and their childhood experiences in emergencies. The previous chapter portrayed comprehensive pictures of the 2011 disaster, focusing on daycare centers in Iwate. It highlighted the detailed situations that young children had faced before, during and after the disaster. It also detailed the roles and relations of their caregivers and stakeholders, such as childcare workers, families, communities and governments, in saving these children and providing protective environments for them. Their efforts to re-establish daycare programmes immediately after the disaster resulted in ensuring children's regular courses of healthy growth and development. At the same time, this research revealed how early recovery of the childcare support systems had directly and indirectly influenced families and communities to bounce back from their disaster experiences.

In this final chapter, I first summarize the research findings in line with the eight (8) dimensions of the Landgren's Protective Environment Framework. Second, I re-organize and re-examine these research outcomes by theme, as follows:

- 1) ECD programs to protect children in emergencies (See Section 5.1.1);
- 2) ECD programs to protect children's continuous development and well-being (See Section 5.1.2); and



- 3) ECD programs to protect sustainable development and generational security in post-disaster communities (See Section 5.1.3).

Third, I propose a few recommendations for actions for those who are concerned about ECD and education programs in emergencies, in both Japan and the international community. Last, I discuss the contributions, and limitations, of my study in terms of theories, research methods and future research possibilities.

## 5.1 DISCUSSIONS OF RESEARCH FINDINGS

As discussed in the conceptual framework chapter, Pais emphasized that protecting children's rights and ensuring their well-being and development should require a multi-disciplinary and cross-sectoral approach (1999). During the research analysis process, I closely followed the Landgren's Protective Environment Framework (2005), which proposed comprehensive components, or dimensions, that can be critical to protect children. Although my research findings may not be exactly or equally applied to each dimension of the framework, I attempted to rearrange the highlights of my research findings based on its eight (8) dimensions as follows, and the table is organized by timeframe: *before*, *during*, and *after* the disaster (See Table 15):

**Table 15.** Summary of research findings based on the Protective Environment Framework

<i>Dimension</i>	<i>Disaster preparedness (before the disaster)</i>	<i>Emergency response and evacuation (during the disaster)</i>	<i>Post-disaster recovery and reconstruction (after the disaster)</i>
1 <i>Protective Government Commitment and Capacity</i>	<p>Local municipalities implemented disaster preparedness measures (e.g., disaster radio systems; Estimated Tsunami Inundation Areas; evacuation locations and shelters; community-wide emergency drills; tsunami awareness using computer simulations)</p> <p>Local fire departments provided technical guidance and emergency disaster risk awareness training to daycare centers</p>	<p>The disaster damaged community radio systems, and the tsunami reached beyond marked Estimated Tsunami Inundation Areas</p> <p>Evacuation shelters did not have adequate emergency goods and facilities to accommodate massive evacuees</p> <p>Assigned evacuation centers were not equipped to be young child friendly, such as toilets for toddlers or emergency baby food</p>	<p>Governmental assistance were limited or delayed to respond to recovery and reconstruction needs of daycare programs (e.g., technical, material, financial); Often they were not prioritized, and relied on external assistance</p> <p>Local governments did not have adequate capacities to coordinate with external assistance agencies (c.f., prefectural and national governments to immediately support local governmental capacities)</p> <p>Reconstruction planning should be focused on child friendly and disaster resilient community development.</p> <p>Children’s participation in community rebuilding planning should be promoted</p>
2 <i>Protective Legislation and Enforcement</i>	<p>Policies and standards of emergency disaster prevention measures for childcare institutions were developed</p> <p>Daycare centers implemented emergency preparedness measures as per the standards, especially evacuation drills</p>	<p>Daycare centers successfully executed emergency response measures, including evacuation procedures</p> <p>Drills were proven as effective at the actual evacuations</p>	<p>Governments should provide relevant guidelines and standards to resume daycare programs in post-disaster situations, including temporary measures to operate under difficult circumstances</p>

**Table 15.** (continued)

<i>Dimension</i>	<i>Disaster preparedness (before the disaster)</i>	<i>Emergency response and evacuation (during the disaster)</i>	<i>Post-disaster recovery and reconstruction (after the disaster)</i>
3 <i>Protective Culture and Customs</i>	Limited community members participated daycare centers' evacuation drills as community guard/watch group	Local residents assisted evacuation of daycare children (e.g., holding hands, helping them climb hills)  Communities prioritized children to access spaces and emergency goods at shelters	Community reconstruction planning included relocation of daycare center  Local residents shared the value of protecting children in post-crisis conditions (c.f., local residents considered daycare children as "their neighborhood children")
4 <i>(Protective) Open Discussion</i>	Daycare centers had consultations with community leaders and residents about evacuation measures in the neighborhoods  Daycare personnel could seek technical advice from local fire departments about disaster risks and evacuation measures  Daycare personnel shared their concerns about disaster risks and discussed ways to improve their preparedness practices		Communities included daycare centers in reconstruction and relocation planning discussions  Local residents actively participated in community forum opportunities to discuss their concerns of children's safety and future  At daycare, personnel shared their disaster experiences and concerns among peers
5 <i>Protective Children's Life Skills, Knowledge, and Participation</i>	Daycare children learned about disaster risks through disaster awareness education, and acquired abilities to follow teachers' instructions in drills  Daycare centers carried out special drills for tsunami risks, and made	Children demonstrated their ability to follow teachers' evacuation instruction and cope with extremely challenging situations during the evacuation  Children were affected by the disaster in many ways (e.g., lost their parents,	Children showed different signs of psychological effects, (e.g., <i>tsunami-gokko</i> , regression, aggression, nightmare, bed-wetting)  Children could play freely, feel easy, and express themselves as daycare environments

**Table 15.** (continued)

<i>Dimension</i>	<i>Disaster preparedness (before the disaster)</i>	<i>Emergency response and evacuation (during the disaster)</i>	<i>Post-disaster recovery and reconstruction (after the disaster)</i>
	children familiar with tsunami Childcare workers paid special attention to additional assistance needs of younger children and children with special needs during drills	family members, houses, friends, belongings; experienced or witnessed the disaster; long separation from their families)	represented normalcy and provided safe and secure spaces
6 <i>Protective Capacity of Families and Communities</i>	Family participation in daycare centers' emergency drills was limited, because most parents worked during the day  Limited cooperation from neighborhood residents; many worked outside, and only a few helped as community guard/watch group	Many families immediately arrived for children, but a few lost their lives to the tsunami after they left for home  Other families were unable to come for their children, and daycare personnel had to stay with them for extended hours and days  Many families lost homes and moved to shelters or relatives' homes, and daycare staff had to travel long distances on foot to find out about children's safety and whereabouts  Local residents assisted evacuation of daycare children  Massive evacuation of local populations could become a serious safety hazard for young children (e.g., en route, at shelter)	Daycare centers and families renewed their shared understanding of emergency safety measures (e.g., agreed procedures, evacuation maps)  The disaster affected children's families, and unstable home environments also affected children  Re-establishment of daycare programs helped families' recovery (e.g., returning to work) and recovery and healing process of affected communities (e.g., generating local businesses and services, a symbol of "hope")  Local forums included discussions on (re-) building young child friendly disaster resilient community environments as part of reconstruction planning (e.g., safety measures at evacuation routes and shelters, evacuation procedures)

**Table 15.** (continued)

<i>Dimension</i>	<i>Disaster preparedness (before the disaster)</i>	<i>Emergency response and evacuation (during the disaster)</i>	<i>Post-disaster recovery and reconstruction (after the disaster)</i>
7 <i>Protective Essential Services</i>	<p>Daycare providers ensured their emergency disaster prevention measures, especially evacuation drill procedures</p> <p>Disaster awareness education and training with local fire fighters were provided to daycare children</p> <p>Families relied on daycare programs to support caring for children, and childcare workers had strong sense of responsibility toward children's safety/lives</p>	<p>Daycare providers responded to the disaster situation as they had done in trainings and drills; In Iwate, all the children who were with daycare personnel evacuated safely</p> <p>Childcare workers demonstrated their risk awareness skills during the actual evacuation (e.g., "Children's safety was the No.1 priority"; "the best and safest for children")</p> <p>Childcare workers showed their strong sense of "in loco parentis" as children were temporarily separated from parents</p> <p>All daycare centers across Iwate, whether damaged by the tsunami or not, were affected by the disaster (e.g., disruption of basic utility systems, constrain in food and fuel supplies)</p> <p>Childcare workers were also affected by the disaster; Their well-being could affect daycare children (e.g., importance to care caregivers)</p>	<p>Daycare providers made extra efforts to immediately resume daycare programs; many had to begin with temporary measures (e.g., half-day services, no lunch or snacks, no heating)</p> <p>Affected daycare facilities faced various challenges (e.g., unsafe environments, health and sanitation concerns, limited available buildings, disruption of basic utility and supply chain systems)</p> <p>Daycare providers did not receive either timely or clear governmental guidance or assistance on temporary measures to resume daycare programs; Many relied on external assistance</p> <p>Daycare programs:</p> <ul style="list-style-type: none"> <li>- brought normalcy back to children's lives;</li> <li>- provided safe and secure environments for children (e.g., addition, or alternate, to their homes); and</li> <li>- made children access continuous care and development opportunities</li> </ul> <p>Childcare workers valued their job as "special" and</p>

**Table 15.** (continued)

<i>Dimension</i>	<i>Disaster preparedness (before the disaster)</i>	<i>Emergency response and evacuation (during the disaster)</i>	<i>Post-disaster recovery and reconstruction (after the disaster)</i>
			were motivated to care for children; they were also often exhausted in difficult conditions
			Existing staff allocation standards might not be sufficient in the event of an emergency; concerned stakeholders should consider what and how to fill or supplement the gap
8	<i>Protective Monitoring, Reporting, and Oversight</i>	Governmental auditing was regularly conducted to ensure disaster prevention measures in place at daycare facilities	Local governments should carry out immediate thorough assessment (e.g., RALS, damage assessment) and continuous monitoring to provide timely and appropriate assistance to daycare providers

Chapter 4 presented the immense and detailed insights of daycare centers' experiences and concerned stakeholders' roles and relations in providing protection to children during the 2011 disaster. The above table exhibited the key extracts of: how daycare centers in Iwate had prepared for such a severe catastrophe; how they responded to and coped with the disaster; and what challenges they faced and overcame to ensure rebuilding protective environments for young children.

In the following, I re-organize the highlighted research findings and examine them in relation to the conceptual frameworks that were presented earlier in this dissertation. Some findings were consistent with such frameworks and past experiences, and others might contribute

new, or better, understandings of the situations that this research was focused on. To attempt to synopsise them, I draw three main thematic concerning areas as follows: 1) early childhood development (ECD) programs to protect young children from emergencies; 2) ECD programs to protect children's continuous development and well-being; and 3) ECD programs to protect sustainable development and generational security. Each sub-section consists one or more significant subjects that emerged from this study.

### **5.1.1 ECD programs to protect children in emergencies**

- *Ensuring the disaster risk reduction (DRR) measures for ECD programs and their children*

In emergency situations, children, especially younger children like those in daycare programs (ages 0-5), could become vulnerable and face additional hazards, because they require adults' assistance (Nantchouang, 2011; Tran, 2011). To ensure children's safety at the time of a disaster is a serious concern for childcare institutions like daycare centers, which care for large numbers of young children. This is why it is critical for childcare, or educational, institutions to consider and take thorough emergency preparedness, or disaster risk reduction (DRR), measures based on their assessed risks.

This study confirmed that the DRR, or disaster preparedness, measures that the Iwate's daycare providers had taken were very effective against the 2011 earthquake and tsunami. The survey result indicated that almost all daycare providers in the prefecture, whether in the tsunami-prone area or not, had conducted monthly emergency evacuation drills, which was the governmental standard for childcare institutions ("The Standards for the Equipment and Management of the Child Welfare Facilities," 1948). Many daycare personnel whom I

interviewed credited that these drills had been very effective and their immediate evacuations on the day of the disaster were “perfect.” Moreover, this research indicated that, although younger ones needed assistance from their caregivers, children demonstrated their ability to follow teachers’ instructions and, therefore, survived the terrifying and uncertain situations. This was certainly a result of the regular drills, and perhaps various disaster risk awareness activities, such as use of story and picture books and interactions with local firemen, through which these young children had built the resiliency to cope with the crisis event like the 2011 disaster (Tran, 2011).

The interviews with daycare personnel unveiled the detailed efforts that these childcare workers had made to prepare for a disaster situation. These personnel not only carried out drills regularly but also repeated and examined them thoroughly “until they felt confident” of ensuring children’s safety. During the actual evacuation, they promptly made critical decisions on every action that they took based on the safest options available for their children. It is evident that these childcare workers had strong sense of responsibility for children’s lives, and such protective capacities that they had demonstrated should be further strengthened through relevant disaster response and risk awareness measures and trainings.

As extensively discussed in the previous chapter, this research also stressed that it was important for the governments to provide appropriate technical guidance and standards to support and strengthen daycare centers’ capacities to ensure the safety of children in emergencies. Without such measures, childcare and educational institutions, which accommodate large numbers of children, could become serious safety risks for children inside the facilities (Kirk, 2008). In any emergencies, whether natural or man-made disasters, those institutions should be safe and secure spaces for children, and caregivers and educational personnel must be



trained to be aware of safety hazards and risks and provide protective, or protected, environments for children in these facilities.

- ***Strengthening the cooperation of families, communities and governments to protect young children in the disaster***

Daycare personnel expressed their strong sense of responsibility toward children's safety, but also spoke about their fears that they could not have saved all the young children's lives if they had to do it by themselves. Some shared their concerns of the existing staff allocation limits. Even though it was revised in 2012, the staff distribution standards were based on the *regular* time, and not on emergency conditions. This issue of staff allocation appeared to be a critical gap, or challenge, that these childcare providers remained to be concerned of.

Through the field observations and numerous formal and informal interactions with daycare personnel, I came to deeper understanding of the important daycare-family relationships in regards to their disaster experiences. Many daycare personnel acknowledged that it had been their shared understanding and practice to hand over children to their families in the case of an emergency. Some described: "We thought that children were safe with their families"; and "We thought that, if we could not give children back to their families, we did not fulfill our responsibilities." Nonetheless, the 2011 disaster taught an important lesson to both daycare personnel and children's families not to risk their lives and to focus on their mutual safety. It became clear that these childcare providers and families needed to share the sense of risks and dangers and build better cooperative relations to keep everyone safe at the time of a crisis.

As many conflict- or natural disaster-affected foreign communities had already proven (Davies, 2005; Glad, 2009; Mathieu, 2006; M. Smith, 2010), this research also re-stressed the essential roles of local communities and governmental authorities in helping daycare centers

protect children in emergency situations. The communities and local authorities together could ensure developing appropriate community disaster risk reduction (DRR) measures, which were also young-child friendly. These measures could include, but not limit to, the establishment of community evacuation centers with adequate emergency food, water and equipment as well as (young) child-safe evacuation routes and locations. Especially, these community efforts would allow daycare providers to primarily focus on immediate physical safety of children in emergencies. Furthermore, close coordination with neighborhood residents, local authorities, and nearby schools and businesses would prevent daycare children from possible harms that could be caused in massive evacuation.

### **5.1.2 ECD programs to protect children’s continuous development and well-being**

- *(Re-)establishing ECD programs for physical, cognitive and psychosocial protection of young children in post-disaster*

The 2011 disaster experience was anything but what children in Iwate had dreamed of. Some of them directly experienced or witnessed the disaster; and some others lost their parents, family members, friends, homes, or neighborhoods. Their familiar environments were suddenly, and violently, taken away from them, and everything became “not normal.” Their lives were changed. It was clear that the giant tsunami disaster had affected these young children in many different ways. Some children were psychologically distressed, e.g., nightmares, bedwetting, aggression, regression and more. They also became sensitive to their caregivers’ conditions and surroundings.

Delaying, or neglecting, crucial assistance to these young children who experienced the serious crisis event could result in serious consequences, such as delay in their physical and

cognitive development as well as negative effects to their psychosocial well-being (CGECCD, n.d.; CGECCD & INEE, n.d.; Landers, 1998; Vargas-Barón, 2005). If these critical child development processes were delayed, many of the capacities required for later healthy development could be compromised or altered, and it would be difficult to reverse (CGECCD & INEE, n.d.; Mustard, 2005). As research in the field of ECD in emergencies suggested, this study agrees that it was important for tsunami-affected daycare providers to quickly resume their childcare programs and re-establish safe and familiar environments for their children after the disaster.

The stories told in the interviews highlighted that these young children had demonstrated the resiliency under such chaotic and challenging circumstances, and it was because they could access and enjoy protective, or protected, environments like daycare programs. This research reiterated that, as various literature discussed, the Iwate's daycare centers had: 1) become safe and secure spaces for children in tsunami-affected communities (Aguilar, 2001; UNICEF, 2009b; UNICEF & University of Pittsburgh, 2004); 2) brought back normalcy, daily routines, and familiarity into their lives (Aguilar & Retamal, 2009; Machel, 1996; UNICEF EAPRO, 2005); and 3) ensured these children could access continuous development opportunities, both cognitive and physical (Nicolai & Triplehorn, 2003; UN General Assembly, 1989). Despite the initial difficulties to provide their "regular" programs, daycare centers in Iwate became the child-friendly spaces in practice, where children had access inclusive and integrated essential services (Aguilar, 2001; UNICEF, 2009b; UNICEF & University of Pittsburgh, 2004). This suggests that the (re-)establishment of childcare, and educational, programs should be the crucial strategy to ensure children's physical, cognitive and psychosocial protection needs for their survival, development and well-being in the crisis-affected situations. Moreover, it is critically important

that this strategy should be considered and incorporated as emergency response and humanitarian assistance (Aguilar & Retamal, 2009; Sinclair, 2002; UNESCO, 2000). By doing so, it would prevent delays or gaps for children to pursue their continuous development opportunities and utmost potentials in their post-disaster lives.

- *Assisting ECD programs as a critical strategy to support family and community recovery*

This study suggests that the relations among children, their families (or parents) and daycare programs were mutually important in their recovery processes. Daycare centers not only provided protection to children during and after the disaster on behalf of their parents, but also helped families recover from the disaster by making childcare support services available to them. When children had access safe and familiar environments like daycare programs, their parents could start rebuilding their lives, return to work, and support their families again.

Children's well-being influenced the states of caregivers, both their parents and childcare workers. At the same time, as young children closely observed their immediate caregivers, the states of adults also influenced the conditions of children as well. As Vargas-Baron described, the situations of "families drive the trends for child survival, development and school readiness (2005, p. 4)." As other literature also agreed (Heroman & Bilmes, 2005; Nantchouang, 2011; Tran, 2011), the re-establishment of childcare programs could help families to provide adequate care to their children and promote healthy child-to-caregiver relations in the crisis-affected communities.

Similarly, resuming childcare support programs and educational activities became an early symbol of recovery for tsunami-affected communities as a whole. As Machel (1996) explained, "education" not only "gives shape and structure to children's lives" but also "can instill community value" and "enhance (...) stability (p. 54)." Re-introducing childcare and

educational activities in the crisis-affected situations could represent not only “a state of normalcy for children” but also “hope for the community” (IASC, 2002; UN General Assembly, 1991). In Iwate, the neighborhood residents were happy to see that daycare children were healthy and active, and the local businesses also resumed their dealings with daycare centers. Thus, it could become one of the positive and significant humanitarian assistance strategies to accelerate the recovery of affected communities in emergency situations.

These described connections between the re-installment of daycare programs and recovery of children’s families and local communities were some of the important findings in this study. In humanitarian assistance, governmental agencies and other relief organizations tend to mind their own specialized operational activities. However, it should be their common strategic focus that ensuring the protection of children in emergencies could generate, and even accelerate, positive and sustainable recovery and reconstruction impacts to their families and communities.

- ***Strengthening both international cooperation relations and local social contract capacities***

The Government of Japan and World Bank’s joint report (2012) pointed out that there were no coordination capacities at local or prefectural levels to deal with the massive influx of external assistance, including civil humanitarian organizations and private sector aid. Lack of coordination might not have affected the overall humanitarian response capacities in a devastating way. However, it caused enough confusion and frustration at the field level, which was evident from the interviews of daycare personnel and my field experience as a humanitarian worker. External assistance, both international and domestic, is a great asset to local relief and recovery response efforts in emergencies. Without timely and strong (governmental) leadership and coordination, external assistance could only go as far as where their donors and partners

wanted their contributions to be used without consideration of local assessment or priorities. To ensure and maximize the humanitarian assistance to reach those in need, with the humanitarian principles (including *humanitarian imperative*, *neutrality*, and *impartiality*, as discussed in Chapter 2) in mind, local leadership and coordination capacities should be carefully examined and strengthened so that all incoming aid could be monitored and facilitated for better and more effective distribution of assistance. In turn, this will also encourage external aid groups to demonstrate greater commitments and accountabilities for their humanitarian assistance activities and contributions.

Without governmental leadership and coordination, external actors might risk “undermining the social contract between citizen and state,” as described by Burde (2004b, p. 73). It could be easy and quick for civil organizations, such as NGOs and NPOs, to directly work with the communities, but the sustainability of their inputs might rely on the local relations and capacities of both affected communities and local authorities. Furthermore, working and coordinating with the governments would benefit external agencies with crucial local knowledge and assessments of the situations, and help them focus on the humanitarian principles to ensure their contributions reach those in need.

In the field of international cooperation, there were wide-ranging experiences in the coordination of humanitarian assistance, especially in the UN systems. In Japan, the UN presence was not operational because the country had not required development assistance from the UN agencies for decades. Japan also had extensive earthquake and other disaster response experiences and expertise. Nevertheless, the country could have applied the international models of coordination mechanisms in its 2011 disaster response. Humanitarian assistance could be an appropriate field to ‘borrow’ and learn valuable lessons and references from the international

experiences, including coordination, rapid responses, minimum standards, humanitarian principles, and many others, in both natural disaster and armed conflict contexts.

### **5.1.3 ECD programs to protect sustainable development and generational security in post-disaster communities**

- *Making the establishment of protective environments for children in the communities as a priority*

The daycare programs that were reviewed in this research managed to provide physical, psychosocial, and cognitive protection for children in the affected communities (Nicolai & Triplehorn, 2003; UN General Assembly, 1989). At the same time, the disaster exposed some critical child protection concerns in relation to both the disaster effects and pre-existed problems, including childcare support, home environment, and domestic violence issues. While the situations were moving from recovery to reconstruction, daycare centers could actively work with families, neighborhood residents and local authorities to (re-)build more (young) child-friendly, and disaster resilient community environments for the current children and future generations. Moreover, these daycare programs, and other educational programs, should become a central part of the community child protection systems. These child-focused programs have great potential to become the spaces where families and communities could identify, discuss and take appropriate preventive actions on different child protection concerns in their neighborhoods. In the case of Iwate, daycare providers began to develop closer partnerships with all concerned stakeholders to re-build and enhance protective environments for children in tsunami-affected communities.

Humanitarian assistance and development activities have often been considered separate enterprises (Pigozzi, 1999), which caused gaps in the transition from the former to the latter (Brannelly et al., 2009). Ensuring “emergency assistance (...) provide ways that are supportive of recovery and long-term development (UN General Assembly, 1991 [cited in Aguilar & Retamal, 1998],” the protective environment framework approach seems to be able to bridge these two phases: not only responding to children’s immediate essential protection needs in emergencies; but also building continuous and sustainable protective capacities in the communities. As protecting a child, and his or her rights, requires a multi-disciplinary and cross-sectoral approach (Pais, 1999), a strategy that focuses on the protection of children and their childhood experiences has a great potential as a harmonizing approach, rather than as a parallel one. The value of ensuring protective environments for children in a crisis should be shared and understood by all the concerned stakeholders in order to build a culture of safety and resilience (UNISDR, 2005), and promote the generational protection and sustainability of the disaster-affected communities (Aguilar & Retamal, 2009; McClure & Retamal, 2010; UNISDR, 2005; Vargas-Barón & McClure, 1998).

## **5.2 RECOMMENDATIONS FOR ACTIONS**

Based on the above summary discussions, which highlighted the research findings and their subsequent analyses, I recommend the following actions in the context of Japan, specifically in Iwate but also for the rest of the country in general, and of international humanitarian assistance for other crisis-prone nations:



**Recommendation 1:** Ensure ECD programs provide protective environments for young children at the times of emergencies

For Japan (Iwate specifically, and the rest of the country in general):

- Continue and reinforce child-safe disaster risk reduction (DRR) measures in ECD programs, such as daycare centers and kindergartens (e.g., facility safety measures, emergency response procedures, manuals, drills, equipment)
- Involve families, community and local authorities in the development of community-wide child-friendly DRR measures (e.g., safe evacuation routes and locations assigned, and child-friendly evacuation shelters)
- Include financial and material assistance requirements for DRR measures in childcare institutions as public sector budget plans (e.g., training, technical assistance, facility safety measures, equipment)

For other crisis-prone nations and humanitarian organizations:

- Develop, implement, monitor, and update DRR measures and standards, appropriate to the locales and abilities of children, for ECD programs and other educational institutions
- Provide appropriate technical and financial assistance to train the program personnel and install emergency response equipment and safety measures in the facilities
- Promote community involvements in planning and implementation of emergency response measures

**Recommendation 2:** Assist immediate (re-)establishment of ECD programs, or safe spaces that support care and development activities, for continuous protection of young children and their childhood experiences during and after emergencies

For Japan (Iwate specifically, and the rest of the country in general):

- Ensure and provide immediate assistance to recover and resume ECD programs, like daycare centers and kindergartens (e.g., alternative facilities, supplies and equipment, additional personnel)
- Consider strategies to protect children as critical steps for the recovery of affected families and communities
- Re-install and reinforce local governmental leadership capacities to provide appropriate and timely guidance and assistance to affected childcare providers in emergency response and recovery measures
- Support and strengthen governmental coordination capacities at all levels to guide and facilitate external assistance, including civil groups (NGOs/NPOs), to respond to the critical humanitarian needs of affected in an effective and timely manner
- For external organizations, support and reinforce social contract relations between the local authorities and populations (e.g., close consultation with the local governments and community leaders)
- Share the common values of protecting children's safety and security among all stakeholders (e.g., policy development, community discussion)

For other crisis-prone nations and humanitarian organizations:

- Include immediate (re-)establishment of ECD programs as emergency response and recovery strategies to ensure young children's access safe and secure environments, return to normalcy, and continue their un-interrupted healthy growth and development opportunities
- Encourage community participation in the process of establishing protected spaces, both outdoor and indoor, for young children within the affected communities and share experiences and values of protecting children among local communities
- Focus on and support immediate (re-)installment of local capacities to respond to the critical relief needs of affected communities and provide the guidance to and work closely with the humanitarian assistance community
- Establish strong coordination systems led by host governments to re-constitute social contract relations between the populations and authorities

**Recommendation 3:** Expand and strengthen ECD programs to promote and protect sustainable development and generational security in post-crisis communities

For Japan (Iwate specifically, and the rest of the country in general):

- Consider (young) child-friendly, disaster resilient community planning as a sustainable development and generational security strategy for tsunami-affected communities and beyond
- Continuously support and strengthen the initiative of ensuring protective environments for children in daycare centers as preventive measures for various child protection issues at homes and in the communities
- Coordinate, and/or consolidate, among governmental bodies concerned with childcare and development (e.g., MHLW, MEXT) for more effective technical and administrative assistance to childcare and educational programs in the country

For other crisis-prone nations and humanitarian organizations:

- Plan and build sustainable protective environments for children based on ECD programs or safe spaces established as emergency and recovery response
- Apply multi-disciplinary and cross-sectoral approaches to bring all concerned stakeholders to develop and execute child-friendly crisis resilient community plans

**Recommendation 4:** Support assessment, evaluation and research capacities for better understanding of and more effective responses to emergency situations

For Japan (Iwate specifically, and the rest of the country in general):

- Continue monitoring and documenting post-disaster conditions of tsunami-affected daycare programs and children, using various research instruments (e.g., survey, interview, observation)
- Apply the findings to strengthen both local and national disaster preparedness mechanisms and capacities for daycare centers and their young children
- Disseminate the disaster experience good practices and lessons learned widely within the country and with other nations to inform culturally-responsive local emergency plans

For other crisis-prone nations and humanitarian organizations:

- Apply different inquiry methods, both qualitative and quantitative, for situational analyses, program evaluation and research
- Adapt qualitative inquiry approaches to better understand complex contexts presented in various emergency situations for more effective and relevant responses
- Share the knowledge developed from emergency experiences globally to improve crisis preparedness and response capacities

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### 5.3 SIGNIFICANCE OF THE STUDY

Education in emergencies is a fairly new sub-field of international development education. Tomlinson and Benefield noted: “while there are clearly research gaps in what is a new and developing field, the biggest gap is that between research and practice (2005, p. 8).” This is especially true for the field of early childhood development (ECD), or early learning, in emergencies. Nonetheless, more needs to be done in this emerging field, including assessments of current practices, empirical and theoretical researches, policy and program development, training, and advocacy. Thus, this study is an empirical observation and analysis of Japan’s

emergency disaster experience that informs and contributes to this growing field. At the same time, the research methods employed in this study share numerous critical lessons for future research in the field of humanitarian assistance. In the following, I discuss my dissertation's theoretical contributions and methodological advantages in the research field of education and ECD in emergencies and share some limitations that present in my research.

### **5.3.1 Theoretical contributions**

Japan has been prone to major and chronic natural disasters, but has established the disaster prevention and response structures. This case study provides comprehensive understandings of how childcare and educational institutions like daycare centers prepared for, responded to and coped with the serious disaster. What they learned in the 2011 disaster is the shared interest not only within the country itself for future events, but also with the nations in the world that are concerned of their own crisis risk reduction and response capacity development for similar calamities or other emergency situations.

This study reaffirmed the significance of protective, or protected, environments, like daycare programs, where young children could be continuously attended for their care and development needs in difficult situations. This is the primary reason why the education and ECD sector(s) should be considered as critical part of humanitarian assistance for the crisis-affected communities. Childcare support and educational activities give children order in their lives and sense of normalcy in unstable environments. Even though the long-term impacts of such programs need to be continuously monitored and evaluated, the courses of children's healthy growth and developments are protected, or at least interruption can be minimized, after experiencing a tragic event like natural disaster or even armed conflict.

The research also revealed how those childcare workers had acted *in loco parentis* for daycare children during the emergency evacuations as well as in the post-disaster conditions. Their strong senses of responsibility towards children's safety and security significantly contributed to maintaining children's psychosocial well-beings in the unstable environments. Moreover, the study indicated that the states of children had influenced the recovery of affected families and communities. For humanitarian agencies, focusing on the child protection strategies from the beginning will not only help (re-)build protective environments for children but also contribute to the recovery and continuous development of affected communities. Thus, protecting children and their childhoods in emergencies should be considered as a central strategy for long-term and larger community development. For this, the study also stressed that it was critical for the humanitarian community to support and reinforce, rather than undermine, existing social contracts between the populations and local authorities. Hence it would lead to more self-reliant sustainable development of the affected communities in post-crisis situations.

International comparative educationists urged further research on education in emergencies, especially in relation to (human) security and child protection (Davies, 2005; Tomlinson & Benefield, 2005; Williams, 2000). In my study, security appeared to be necessity, not only in regards to physical protection, but also about individual, or *human*, security (University of British Columbia, 2005). This security includes the protection of children's rights to survival, development, participation, and protection (Aguilar, 2001; Nicolai & Triplehorn, 2003). For the affected communities, security meant collective and generational. Through this research, I learned that starting from early childhood care and development interventions in emergencies could generate positive effects to families and communities, and contribute to the generational security of local populations.

### **5.3.2 Methodological benefits**

As discussed in this dissertation, education in emergencies is a fairly complex field (Davies, 2004), and, because of being multidisciplinary and intersectoral in its nature, the field of early childhood development (ECD) in emergencies is even more complicated. For better understandings of such complex fields, multiple inquiry methods could be useful and effective as I did in this research. The case study on the disaster experiences in Iwate exemplified benefits of both quantitative and qualitative research methods to study the challenging and complicated situations that daycare providers had to face.

In this dissertation research, the survey questionnaires were proven as practical methods to reach out larger groups of study samples in the limited time. However, I found that it was challenging to simplify, but still structure, the formats and questions, because interpretation of the questions relied on respondents. Bhattacharjee (2012) pointed out that survey research could present some systematic biases, such as non-response bias, sampling bias, social desirability bias, recall bias, and common method bias. Especially my multiple-choice survey was formulated in the way to limit how and what to answer, while making easy to measure, or quantify, the responses. This simplified, and somehow quantifiable, survey tool seems to be more suitable for the inquiries to examine ‘expected’ or ‘feasible’ variations of the responses from study sample groups.

While the multiple-choice survey provided the wide-ranging data of the shared experiences among all the daycare centers across Iwate, the open-ended survey and semi-structured interviews were focused on more specific and detailed complex disaster experiences of the targeted groups. These qualitative, and descriptive, inquiry methods not only helped me access detailed insights of the complicated and difficult disaster situations, but also gave study

participants some spaces, or freedom, to describe and express themselves, rather than limiting and controlling their responses. This became one of the crucial methodological benefits in this research. These qualitative accounts of the study not only complimented the quantified situational analyses, but also unveiled hidden realities and relations in the complex disaster-affected communities, which may not be obvious through quantitative inquiries.

I do not claim my dissertation study as ethnography, but ethnographic inquiry training helped me prepare and situate myself to better understand the complex and challenging conditions of the disaster-affected communities in Iwate. “(B)eing *in situ* (Spindler & Spindler, 1997a)” and “(using) some model of cultural process in both the gathering and interpretation of data (Spindler & Spindler, 1997b, p. 50)” resulted in “the ethnographic research cycle (Spradley, 1980).” These ethnographic approaches are not only useful for actual research activities but also when working in a multi-cultural environment that often consists complex cultural conditions. Application of ethnographic inquiry methods, such as: direct and participant observation; continuous formal and informal interactions with local populations; and repeating the inquiry cycles, helped me realize emerging important issues and subject matters that became critical findings of this study. Although each research method presented some challenges, it appears that all the research instruments that were applied in this study complemented one another, and supplemented each other’s limitations.

### **5.3.3 Study limitation**

As discussed earlier, some of my data collection activities were designed to serve dual purposes: 1) my dissertation research; and 2) the survey study that was supported jointly by the Japan Committee for UNICEF (JCU) and Iwate Prefectural Government. While these arrangements



might have influenced my research capacities, the situations of the study site and researcher's relation to the study subject also presented some limitations to its scope and structures. In the following, I discuss some of the specific limitations that I faced throughout my research processes:

*Scope of the Study:* I spent one year after the 2011 disaster in the study site, Iwate, while working as a humanitarian worker. This duration of the time in the study site allowed me to “be there” and take part of the “cultural process” in the tsunami-affected communities (Spindler & Spindler, 1997a). Furthermore, the targeted surveys and interviews were carried out after the one-year anniversary of the disaster. It was somehow the right timing: 1) after the study participants, of whom many had been directly affected by the disaster, should be given suitable time and space before participating in the research on their disaster experiences; and 2) before they would forget the details of their experiences.

These data collection activities produced massive volumes of the information and data for this study. Due to the time and financial limitations, it was not feasible for me to stay on in the study site and carry out additional data collection activities, except for some follow-up correspondences with the interview participants remotely from the US. Despite the great progress during the first year, additional fieldwork and research could have been valuable to further investigate how the initial emergency and recovery responses had impacted, or were translated, to the subsequent reconstruction and continuous development of the disaster-affected communities.

As the study was focused on the disaster experiences of daycare centers in Iwate, its research instruments were developed to target the groups of daycare personnel, especially directors and head childcare workers, as study informants. During my time in the field, I had

numerous formal and informal interactions and discussions with those who worked in the childcare support field, such as daycare staff, government officials, social workers, civil group representatives, policy makers and other researchers. If the resources (e.g., time and finance) were available, I could expand my study sample groups to different stakeholders as listed above, and their different perspectives in regards to protective environments for children could be compared and contribute additional insights to the scope of my research.

*Sensibilities towards study participants:* Soon after I began working in the disaster affected area in early 2011, I found that it was extremely difficult and challenging to engage with the affected populations. Many of the local people who I met initially seemed to be completely devastated, and overwhelmed by huge grief, sadness, sense of loss, and even anger. It required time and space for me (or other humanitarian workers) to build any kind of trusting work relationships in the affected communities.

Even though the focused data collection exercises took place one year after the disaster, I still needed to be sensible when addressing questions about the disaster experiences. During the interviews, for example, I carefully observed reactions of the study participants. I often started with rather generic questions about disaster preparedness measures at their daycare centers, and, after they showed some comfort with me, I asked more specific questions about the disaster and their experiences.

I also respected the availabilities of interview participants, because interviews were carried out during their working hours. A few complained that there had been apparently a number of research and assessment activities carried out at their daycare centers, without much coordination between one another. The research community should be aware of the fact that, when their study participants were crisis-affected populations, they might relive their crisis

experiences through the research inquiry processes. Thus, conducting research or assessments about emergency situations should be carefully designed and coordinated, or consolidated, so as not to cause affected communities unnecessary stresses and burdens.

Asking questions about people's crisis experiences was not an easy task, and a few participants might have felt hesitant, or looked suspicious, of what I would ask them. However, having worked as a humanitarian worker in their communities seemed to have helped me build trusting relationships with them, understand better about small details of their situations, and carry out my research activities in the field smoothly. One daycare director confessed to me at the end of the interview:

I've never had a chance to talk about the experience this much until now. I haven't talked (about it) this much. I couldn't talk, even if I wanted. Even when I talked honestly (about the difficult experience), the people would dismiss me (because my daycare center did not lose any child in the disaster) (Anonymous participant).

Even though some had difficulties to talk about their experiences, others simply needed safe spaces to share their experiences, without someone else judging their actions on the day of the disaster. At the interviews, I explained to the participants the purpose of my study, which was not to evaluate their performances, but simply to learn what they had gone through before, during, and after the disaster. In the end, nevertheless, responses of the study participants were largely positive, and some respondents seemed to use my research exercises as opportunities to talk about their disaster experiences and share their related concerns.

***Researcher's subjectivity:*** As discussed earlier in this dissertation, I considered myself as an insider of the study subject, because I was from the country and shared similar sense of loss and sympathy in the country's disaster experience. However, I was also uniquely an outsider in my own country because I was a humanitarian worker and researcher. I often found myself being both an active participant and a passive observer in my fieldwork (Bhattacharjee, 2012).

Neutrality is one of the key humanitarian principles, but as Boyden described: “research is not a neutral exercise (2000).” By doing a descriptive and interpretive research, I could perhaps present the conditions, or voices, that might have been unnoticed, or not represented, like the situations that tsunami-affected daycare centers had faced.

These characteristics as a researcher may have translated to my own subjectivity in relation to the research subjects. For doing (qualitative) research, there is always a possibility that a researcher may bring his or her pre-existing notions or biases into the field observation and understanding of the subjects under study. Bhattacharjee explained that “qualitative analysis is heavily dependent on the researcher’s analytic and integrative skills and personal knowledge of the social context where the data is collected (2012, p. 113).” It may be difficult, or even impossible, for researchers to avoid their subjectivities from influencing their research, since each researcher is an individual being. However, researchers have an ethical responsibility to present their relations with the study subjects and acknowledge to the readers or audiences about where their subjectivities come from. Thus, they can transmit or deliver their research based on the shared understanding of how they situate themselves in the research paradigms.

#### **5.4 CONCLUDING REMARKS**

The East Japan Earthquake and Tsunami Disaster caused the estimated economic damage at 16.9 trillion Japanese yens, or 210 billion US dollars, to the affected region of the country. (Government of Japan & World Bank, 2012). In the Iwate coastline region, the damage to its capital stocks was about 3.5 trillion Japanese yens, and it recorded as the highest rate of loss at

47.3 % among all the affected areas<sup>30</sup> (Iwate Prefecture, 2013). Furthermore, the numbers of unemployed persons and welfare recipients were expected to increase due to the lack of employment opportunities in tsunami-affected region (Iwate Prefecture, 2011e). One year after the disaster, some progresses and improvements were seen due to the recovery and reconstruction work, but it was a long way to return to the pre-disaster conditions (Iwate Prefecture, 2012b).

In addition to these economic impacts, affected communities suffered population outflow after the disaster. For example, the populations of tsunami-affected coastline municipalities in Iwate decreased between 2010 and 2013 at the rates between 2.5 % and 22 % (National Institute of Population and Social Security Research [NIPSSR], 2013). The same report even estimated that the population decrease rates would reach up to an average of 41.6 % in 2040 (Iwate Nippo, 2014).<sup>31</sup> As for school age children, the numbers of elementary and junior-high school students who transferred out of the coastal municipalities significantly increased in 2011 (Iwate Prefecture, 2012a).

In Iwate, there was no casualty among children who had evacuated with daycare personnel in the 2011 tsunami disaster. This study documented that disaster preparedness measures at daycare centers had worked, and the dedication and courageous actions of childcare workers were the key to successful evacuation of young children in such a grave disaster. Saving children's lives was a heroic action itself, as such a crisis event could change the courses of children's lives. In the post-disaster situation, bringing back normalcy to children's lives was critically important for their protection and continuous care and development opportunities. In order to achieve such normalcy at a chaotic time, extraordinary action and special attention,

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<sup>30</sup> The estimate did not include various damages caused by the Fukushima Dai-ichi Nuclear Power Plant's accident.

<sup>31</sup> Based on the NIPSSR report, the selected data for the coastal municipalities in Iwate were extracted and summarized by the Iwate Nippo.

coupled with the principle of humanity, were required. In Iwate, childcare workers' commitments to rebuild daycare programs resulted in the continuity of children's access to care and development opportunities and provision of their familiar daily routines and safe and secure spaces. All other stakeholders, including children's families, local communities, external groups, and governments, supported daycare programs in the disaster preparedness, emergency response, early recovery, and reconstruction efforts.

This study also revealed the critical relations between protection of children's well-being and development and coping capacities of families and communities. These were mutually related: If there were no childcare support systems reinstalled, families would not be able to rebuild their lives; if families and communities were not recovering from the disaster, children's safety and security could be in danger; and if families left the affected municipalities because they could not ensure children's safety and security, local reconstruction and development prospects could be jeopardized. This is a critical generational survival and security issue not only for children, but also for their families and communities.

In the context of Japan, especially of the Iwate coastline region, protecting children is a critical area of concern for society, because of the persistent issues of declining populations, low childbirth rates, and aging communities. A serious adversity like the 2011 disaster could heavily affect local child protection capacities. The experiences in Japan could inform the significance of not only protecting children and their childhood experiences in emergencies, but also building protective environments and capacities for sustainable development of local communities. In addition to the existing childcare support systems in Japan, as Morita proposed, the country, and local municipalities, needs to carefully re-examine and strengthen the community childcare and child protection capacities: 1) to respond to diverse childcare support needs of families with

children; and 2) to make childcare and educational programs accessible and available to all young children (Morita, 2012). For the field of international development and humanitarian assistance, thus, such child protection policies should be considered as a critical strategy for the protection of children and their childhoods at the time of a crisis and for generational survival and sustainable development of the communities and nations.

## APPENDIX A

### RELEVANT ARTICLES OF THE INTERNATIONAL LEGAL FRAMEWORKS FOR THE CHILDREN'S RIGHTS TO EDUCATION

#### I. The Universal Declaration of Human Rights (1948)

##### *Article 26*

- (1) Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit.
- (2) Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace.
- (3) Parents have a prior right to choose the kind of education that shall be given to their children.

Source: UN General Assembly. (1948). Universal Declaration of Human Rights. General Assembly Resolution 217 A(III).

#### II. The Conventions on the Rights of the Child (1989)

##### *Article 28*

1. States Parties recognize the right of the child to education, and with a view to achieving this right progressively and on the basis of equal opportunity, they shall, in particular:
  - (a) Make primary education compulsory and available free to all;
  - (b) Encourage the development of different forms of secondary education, including general and vocational education, make them available and accessible to every child, and take appropriate measures such as the introduction of free education and offering financial assistance in case of need;



- (c) Make higher education accessible to all on the basis of capacity by every appropriate means;
  - (d) Make educational and vocational information and guidance available and accessible to all children;
  - (e) Take measures to encourage regular attendance at schools and the reduction of drop-out rates.
2. States Parties shall take all appropriate measures to ensure that school discipline is administered in a manner consistent with the child's human dignity and in conformity with the present Convention.
  3. States Parties shall promote and encourage international cooperation in matters relating to education, in particular with a view to contributing to the elimination of ignorance and illiteracy throughout the world and facilitating access to scientific and technical knowledge and modern teaching methods. In this regard, particular account shall be taken of the needs of developing countries.

### ***Article 29***

1. States Parties agree that the education of the child shall be directed to:
  - (a) The development of the child's personality, talents and mental and physical abilities to their fullest potential;
  - (b) The development of respect for human rights and fundamental freedoms, and for the principles enshrined in the Charter of the United Nations;
  - (c) The development of respect for the child's parents, his or her own cultural identity, language and values, for the national values of the country in which the child is living, the country from which he or she may originate, and for civilizations different from his or her own;
  - (d) The preparation of the child for responsible life in a free society, in the spirit of understanding, peace, tolerance, equality of sexes, and friendship among all peoples, ethnic, national and religious groups and persons of indigenous origin;
  - (e) The development of respect for the natural environment.
2. No part of the present article or article 28 shall be construed so as to interfere with the liberty of individuals and bodies to establish and direct educational institutions, subject always to the observance of the principle set forth in paragraph 1 of the present article and to the requirements that the education given in such institutions shall conform to such minimum standards as may be laid down by the State.

Source: UN General Assembly. (1989, 20 November). Convention on the Rights of the Child (resolution 44/25).

### **III. Geneva Convention (IV) Relative to the Protection of Civilian Persons in Time of War (Fourth Geneva Convention) (1949)**

#### **Article 24**

The Parties to the conflict shall take the necessary measures to ensure that children under fifteen, who are orphaned or are separated from their families as a result of the war, are not left to their own resources, and that their maintenance, the exercise of their religion and their education are

facilitated in all circumstances. Their education shall, as far as possible, be entrusted to persons of a similar cultural tradition.

The Parties to the conflict shall facilitate the reception of such children in a neutral country for the duration of the conflict with the consent of the Protecting Power, if any, and under due safeguards for the observance of the principles stated in the first paragraph.

They shall, furthermore, endeavour to arrange for all children under twelve to be identified by the wearing of identity discs, or by some other means.

#### **Article 50**

The Occupying Power shall, with the cooperation of the national and local authorities, facilitate the proper working of all institutions devoted to the care and education of children.

The Occupying Power shall take all necessary steps to facilitate the identification of children and the registration of their parentage. It may not, in any case, change their personal status, nor enlist them in formations or organizations subordinate to it.

Should the local institutions be inadequate for the purpose, the Occupying Power shall make arrangements for the maintenance and education, if possible by persons of their own nationality, language and religion, of children who are orphaned or separated from their parents as a result of the war and who cannot be adequately cared for by a near relative or friend.

A special section of the Bureau set up in accordance with Article 136 shall be responsible for taking all necessary steps to identify children whose identity is in doubt. Particulars of their parents or other near relatives should always be recorded if available.

The Occupying Power shall not hinder the application of any preferential measures in regard to food, medical care and protection against the effects of war which may have been adopted prior to the occupation in favour of children under fifteen years, expectant mothers, and mothers of children under seven years.

Source: ICRC. (1949, 12 August). Geneva Convention (IV) Relative to the Protection of Civilian Persons in Time of War (Fourth Geneva Convention).

## APPENDIX B

### EIGHT DIMENSIONS OF THE LANDGREN'S PROTECTIVE ENVIRONMENT FRAMEWORK

Landgren (2005) described each of the eight dimensions of protective environments for children as follows:

- 1) **Protective Government Commitment and Capacity** would include ratification of international conventions, without reservations; budgetary provisions for child protection; public declarations of commitment; explicitly "child friendly" policies; and support for public prosecutions.
- 2) **Protective Legislation and Enforcement** would include incorporation of relevant international standards; prosecution of violators; police and judiciary functioning without interference; accessible redress mechanisms; child friendly and confidential legal procedures; the availability of legal aid; no criminalization of victims; and a juvenile justice regime in place.
- 3) **Protective Culture and Customs** would include (among other illustrative examples) an environment in which women and girls face little discrimination; childcare practices do not involve corporal punishment; violence is not a key component of masculine identity; spouses are not required to have FGM/C or be underage; peaceful dispute resolution is valued; children are attributed with dignity; recourse to state institutions is common; harmful practices are not underpinned by religious beliefs; sexual exploitation of children is socially unacceptable; and children with disabilities or orphaned by AIDS are not stigmatized.
- 4) **Open Discussion**, including the engagement of civil society and media would require that harmful phenomena are recognized as such and are reported in the media; that protection failures are acknowledged at the community and national level; that young people are able to refer to such issues at home, at school, and with each other; that victims are not threatened or ostracized; and that NGOs and media are able to work with minimal interference.

- 5) **Protective Children's Life Skills, Knowledge, and Participation**, would include an environment in which children are aware that they have rights; are encouraged to form views and express them; are provided with necessary information; are taught problem solving and negotiating skills; have their self-esteem valued by adults; and are listened to within the family, school, and community.
- 6) **Protective Capacity of Families and Communities** would include parents and other caregivers observing protective childrearing practices; families supported for childcare needs; communities supporting and monitoring protection; and the existence of some demographic balance (no adult shortage).
- 7) **Protective Essential Services** would include (among illustrative examples) education that is free for all children, including refugees; nondiscriminatory provision of health care, including for sex workers and detainees; a functioning social welfare system, with social workers, shelters, and hotlines; trained teachers who are present and working; and safe and supportive classrooms.
- 8) **Protective Monitoring, Reporting, and Oversight** would include systematic collection of data, transparent reporting of data and review by policy makers; access by independent observers to children in traditionally marginalized groups; and encouragement of and respect for civic review.

Source: Landgren, K. (2005). The protective environment: Development support for child protection. *Human Rights Quarterly*, 27, 214-248.

## **APPENDIX C**

### **RESEARCH INSTRUMENT TEMPLATES**

The following materials were developed for this dissertation research and were submitted to the Institutional Review Board (IRB) for approval. All the research instrument templates were initially prepared in Japanese for the study implementation, and they were translated in English for the IRB submission. They include the following three (3) research instruments used in the study, presented in both Japanese original and English translation:

- Figure 14. Research instrument (1): Multiple choice survey questionnaire
- Figure 15. Research instrument (2): Open-ended survey questionnaire
- Figure 16. Research instrument (3): Interview process and questions

東日本大震災津波による保育所避難状況等調査

様式 1

市町村名: \_\_\_\_\_ 保育所名: \_\_\_\_\_ 記入者名: \_\_\_\_\_ (役職: \_\_\_\_\_)  
 電話: \_\_\_\_\_ ファックス: \_\_\_\_\_ email: \_\_\_\_\_

1. 通常(地震・津波発生前)の保育所の地震防災対策の状況

(1) 以下の保育所施設の耐震性や安全性の確認をしておりましたか？(複数回答可)

- 園舎の耐震診断を受けていた
- 地震や津波の危険性を認識して対策をたてていた
- 園舎内の出入口や避難通路などの安全点検をしていた
- 園庭などの室外における安全性を確保していた
- その他( \_\_\_\_\_ )

(2) 以下の地震防災対策をしておりましたか？(複数回答可)

- 大型備品や家具の転倒防止など対策
- ガラス窓の飛散防止対策
- 照明器具の安全対策
- 電化製品の配置や火元などの安全対策
- その他( \_\_\_\_\_ )

(3) 以下の地震(津波)防災のために整備・対策をしておりましたか？(複数回答可)

- 地震(津波)防災マニュアルの整備
- 災害時などに向けた保護者との緊急連絡体制の整備
- 職員の家族との連絡体制の整備
- 災害後に保護者が子どもを引き取りに来ない場合を想定した対策
- 近隣住民との連携
- 避難場所の把握とルート確認
- その他( \_\_\_\_\_ )

(4) 園児と職員の見守り訓練(防災訓練)は定期的におこなっておりましたか？

- 月に一回以下                       月に一回
- 月に一回以上                       実施していなかった
- その他(複数回答可)、
- 抜き打ちでも実施                       保護者と一緒におこなう
- 近隣住民と一緒に実施
- その他( \_\_\_\_\_ )

(5) 以下の防災教育活動をおこなっておりましたか？(複数回答可)

- 職員向けの防災講習
- 地震防災に関係した絵本の読み聞かせやビデオ視聴
- 津波に関係した絵本の読み聞かせやビデオ視聴
- その他( \_\_\_\_\_ )

(6) 保護者向けに地震(津波)災害時の対応の説明をおこなっておりましたか？

- 講習会をおこなう                       文書で説明
- 口頭で説明
- その他( \_\_\_\_\_ )

(7) 災害時のための備蓄と地震発生後の使用状況

	通常時に備えていた	地震発生後、使った
消火器	<input type="checkbox"/>	<input type="checkbox"/>
工具(かなづち、のこぎり、バールなど)	<input type="checkbox"/>	<input type="checkbox"/>
救急用品	<input type="checkbox"/>	<input type="checkbox"/>
消毒液	<input type="checkbox"/>	<input type="checkbox"/>
マッチまたはライター	<input type="checkbox"/>	<input type="checkbox"/>
避難誘導具(笛や拡声器など)	<input type="checkbox"/>	<input type="checkbox"/>
懐中電灯(予備電池を含む)	<input type="checkbox"/>	<input type="checkbox"/>
ラジオ	<input type="checkbox"/>	<input type="checkbox"/>
無線機	<input type="checkbox"/>	<input type="checkbox"/>
衛星電話	<input type="checkbox"/>	<input type="checkbox"/>
発電機	<input type="checkbox"/>	<input type="checkbox"/>
ヘルメット	<input type="checkbox"/>	<input type="checkbox"/>
防災ずきん	<input type="checkbox"/>	<input type="checkbox"/>
防寒用毛布	<input type="checkbox"/>	<input type="checkbox"/>
タオル	<input type="checkbox"/>	<input type="checkbox"/>
着替え(下着を含む)	<input type="checkbox"/>	<input type="checkbox"/>
おむつ	<input type="checkbox"/>	<input type="checkbox"/>
非常食	<input type="checkbox"/>	<input type="checkbox"/>
非常用飲料水	<input type="checkbox"/>	<input type="checkbox"/>
ミルク	<input type="checkbox"/>	<input type="checkbox"/>
離乳食	<input type="checkbox"/>	<input type="checkbox"/>
ビニールシート	<input type="checkbox"/>	<input type="checkbox"/>
テント	<input type="checkbox"/>	<input type="checkbox"/>
ロープ	<input type="checkbox"/>	<input type="checkbox"/>
ポリ袋	<input type="checkbox"/>	<input type="checkbox"/>
ちり紙	<input type="checkbox"/>	<input type="checkbox"/>
ガムテープ	<input type="checkbox"/>	<input type="checkbox"/>
軍手	<input type="checkbox"/>	<input type="checkbox"/>
プラスチックタンク	<input type="checkbox"/>	<input type="checkbox"/>
自転車・バイク	<input type="checkbox"/>	<input type="checkbox"/>
ガスコンロ(ガスボンベを含む)	<input type="checkbox"/>	<input type="checkbox"/>
非常持出袋	<input type="checkbox"/>	<input type="checkbox"/>
小銭	<input type="checkbox"/>	<input type="checkbox"/>
園児名簿	<input type="checkbox"/>	<input type="checkbox"/>
その他:		

ウラへ→

Figure 14. Research instrument (1): Multiple-choice survey questionnaire

2. 地震発生時の保育所の状況	3. 地震発生後の避難行動など																																														
<p>(1)平成23年3月1日時点の園児と職員数 園児：_____名 職員：_____名</p> <p>(2)平成23年3月11日の地震発生時に、保育所内にいた園児と職員数 園児：_____名 職員：_____名</p> <p>(3)保育所において地震が発生したことが分かりましたか？  <input type="checkbox"/> はっきり分かった  <input type="checkbox"/> なんとなく分かった  <input type="checkbox"/> 全く分からなかった</p> <p>(4)地震発生時、何をしていましたか？(複数回答可)  <input type="checkbox"/> 園舎内で保育中      <input type="checkbox"/> 園庭で保育中  <input type="checkbox"/> 園外で散歩中      <input type="checkbox"/> 昼寝中  <input type="checkbox"/> 掃宅準備中  <input type="checkbox"/> 保育業務終了(園内に子どもはいなかった)  <input type="checkbox"/> その他( )</p> <p>(5)地震発生時、園児・職員共に、最初に何をしましたか？(複数回答可)  <input type="checkbox"/> 机の下に潜ったり、伏せて頭を覆った  <input type="checkbox"/> 火元を止めた  <input type="checkbox"/> 園庭に出た  <input type="checkbox"/> 保育所内の様子を見て回った  <input type="checkbox"/> 何もしなかった  <input type="checkbox"/> その他( )</p> <p>(6)揺れが収まった時、何をしましたか？(複数回答可)  <input type="checkbox"/> 保育室で全員点呼・安全確認をした  <input type="checkbox"/> 外に出て全員点呼・安全確認をした  <input type="checkbox"/> 地震情報を聞いた  <input type="checkbox"/> 保護者に連絡をした  <input type="checkbox"/> 何もしなかった(保育に戻った)  <input type="checkbox"/> その他( )</p> <p>(7)地震・津波の情報はどのように確認しましたか？  <input type="checkbox"/> ラジオ      <input type="checkbox"/> テレビ  <input type="checkbox"/> インターネット      <input type="checkbox"/> 電話  <input type="checkbox"/> 近隣住民から  <input type="checkbox"/> その他( )</p> <p>(8)地震発生後の保育所設備の使用復旧状況</p> <table border="1" data-bbox="292 1407 795 1617"> <thead> <tr> <th></th> <th>使用可</th> <th>使用不可</th> <th>使用不可の場合、いつ復旧したか？</th> </tr> </thead> <tbody> <tr> <td>電気</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>固定電話</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>携帯電話</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>水道水</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>下水(トイレ)</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> <tr> <td>ガス</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td></td> </tr> </tbody> </table>		使用可	使用不可	使用不可の場合、いつ復旧したか？	電気	<input type="checkbox"/>	<input type="checkbox"/>		固定電話	<input type="checkbox"/>	<input type="checkbox"/>		携帯電話	<input type="checkbox"/>	<input type="checkbox"/>		水道水	<input type="checkbox"/>	<input type="checkbox"/>		下水(トイレ)	<input type="checkbox"/>	<input type="checkbox"/>		ガス	<input type="checkbox"/>	<input type="checkbox"/>		<p>(1)保育所の外に避難しましたか？  <input type="checkbox"/> 自治体が指定した一時避難場所まで避難した  <input type="checkbox"/> 事前に保育所で避難場所と決めていた場所まで避難した  <input type="checkbox"/> 園庭で待機した  <input type="checkbox"/> 保育所内にいた( <input type="checkbox"/> 保育所が避難場所)  <input type="checkbox"/> 別の場所に避難した  (理由: _____ )</p> <p>(2)一緒に避難した園児と職員は何人いましたか？ 園児：_____名 職員：_____名</p> <p>(3)何を持って避難しましたか？  <input type="checkbox"/> 園児名簿      <input type="checkbox"/> 救急用品  <input type="checkbox"/> 防災ずきんやヘルメット      <input type="checkbox"/> 防寒用毛布やタオルなど  <input type="checkbox"/> ラジオ、無線機、携帯電話など  <input type="checkbox"/> 小銭を含むお金  <input type="checkbox"/> その他( )</p> <p>(4)マニュアルに沿って行動ができましたか？</p> <table border="1" data-bbox="795 819 1289 987"> <thead> <tr> <th></th> <th>できた</th> <th>できなかった</th> </tr> </thead> <tbody> <tr> <td>避難誘導</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>火元の始末</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>全員点呼</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>保育所内の安全確認</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> <tr> <td>保護者への連絡</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </tbody> </table> <p>出来なかった場合の理由は？ ( _____ )</p> <p>(5)子どもを保護者等に引き渡したのはどこでしたか。また、何人引き渡しましたか？(複数回答可)  <input type="checkbox"/> 保育所で 園児：_____名  <input type="checkbox"/> 避難場所で 園児：_____名  <input type="checkbox"/> 避難ルートの途中で 園児：_____名  <input type="checkbox"/> その他( 園児：_____名)</p> <p>(6)最後の子どもを保護者等に引き渡したのはいつでしたか？  <input type="checkbox"/> 当日の業務時間内(例：午後7時までに)  <input type="checkbox"/> 当日中(午前0時までに)  <input type="checkbox"/> 翌日(3/12)      <input type="checkbox"/> 翌々日(3/13)  <input type="checkbox"/> その他( )</p> <p>(7)いつ園児および職員全員(休園児を含む)の安否確認を完了しましたか？  <input type="checkbox"/> 当日      <input type="checkbox"/> 翌日(3/12)      <input type="checkbox"/> 翌々日(3/13)  <input type="checkbox"/> その他( )</p> <p>(8)いつ保育所を再開しましたか？ _____月 _____日  どのように再開できましたか？  <input type="checkbox"/> 全日保育(給食を含む)      <input type="checkbox"/> 午前保育  <input type="checkbox"/> その他( )</p>		できた	できなかった	避難誘導	<input type="checkbox"/>	<input type="checkbox"/>	火元の始末	<input type="checkbox"/>	<input type="checkbox"/>	全員点呼	<input type="checkbox"/>	<input type="checkbox"/>	保育所内の安全確認	<input type="checkbox"/>	<input type="checkbox"/>	保護者への連絡	<input type="checkbox"/>	<input type="checkbox"/>
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保護者への連絡	<input type="checkbox"/>	<input type="checkbox"/>																																													

Figure 14. (continued)

**Multiple-choice Survey Questionnaire on Emergency Evacuation Measures by Nursery Schools in Iwate in the Great East Japan**

**Earthquake and Tsunami**

Form 1

Town: \_\_\_\_\_ Nursery School: \_\_\_\_\_ Name: \_\_\_\_\_ (Post: \_\_\_\_\_ )  
 Tel: \_\_\_\_\_ Fax: \_\_\_\_\_ email: \_\_\_\_\_

**1. State of pre-3.11 earthquake and tsunami disaster risk reduction (DRR) measures and preparedness at your nursery school**

<p>(1) Did you have your school assessed on the following earthquake resistance and other safety measures? (Multiple selections permitted)</p> <p><input type="checkbox"/> Had school buildings assessed/approved for earthquake resistance</p> <p><input type="checkbox"/> Took measures against earthquake and tsunami risks</p> <p><input type="checkbox"/> Conducted safety checks on entrances/exits in the school buildings and evacuation routes</p> <p><input type="checkbox"/> Secured safe outdoor spaces, such as play ground</p> <p><input type="checkbox"/> Others ( _____ )</p> <p>(2) Did you take the following DRR measures against earthquakes? (Multiple selections permitted)</p> <p><input type="checkbox"/> Measures on anti-fall of large equipment and furniture</p> <p><input type="checkbox"/> Measures on anti-scatter of window glasses</p> <p><input type="checkbox"/> Safety measures on light fixtures</p> <p><input type="checkbox"/> Safety measures on setting off electrical appliances and handling fire</p> <p><input type="checkbox"/> Others ( _____ )</p> <p>(3) Did you take the following measures and preparation for earthquake/tsunami disaster? (Multiple selections permitted)</p> <p><input type="checkbox"/> Developed an earthquake (tsunami) disaster response manual</p> <p><input type="checkbox"/> Developed an emergency contact system for children's guardians at the time of disaster</p> <p><input type="checkbox"/> Developed an emergency contact system for families of staff members at the time of disaster</p> <p><input type="checkbox"/> Prepared a specific measure based on the assumption in case when guardians could not pick up their children at the time of disaster</p> <p><input type="checkbox"/> Held cooperation/coordination with residences in the neighborhood</p> <p><input type="checkbox"/> Identified and made sure of the evacuation locations and routes</p> <p><input type="checkbox"/> Others ( _____ )</p> <p>(4) Have you implemented evacuation drills with children/staff regularly?</p> <p><input type="checkbox"/> Less than once per month      <input type="checkbox"/> Once per month</p> <p><input type="checkbox"/> More than once per month      <input type="checkbox"/> Have not implemented</p> <p>Others (Multiple selections permitted)</p> <p><input type="checkbox"/> Implemented by surprise</p> <p><input type="checkbox"/> Implemented with parents/guardians</p> <p><input type="checkbox"/> Implemented with residences in the neighborhood</p> <p><input type="checkbox"/> Others ( _____ )</p> <p>(5) Have you been doing the following disaster risk reduction (DRR) education? (Multiple selections permitted)</p> <p><input type="checkbox"/> DRR training for staff members</p> <p><input type="checkbox"/> Book reading and video viewing about earthquake DRR</p> <p><input type="checkbox"/> Book reading and video viewing about tsunami</p> <p><input type="checkbox"/> Others ( _____ )</p> <p>(6) Have you explained guardians about the DRR measures against earthquake/tsunami of your nursery school?</p> <p><input type="checkbox"/> Held workshops      <input type="checkbox"/> Explained in letters</p> <p><input type="checkbox"/> Explained verbally</p> <p><input type="checkbox"/> Others ( _____ )</p>	<p>(7) Stocks for the case of disaster and their usage at the 3.11 disaster</p> <table border="1"> <thead> <tr> <th></th> <th>Stocked regularly</th> <th>Used at the 3.11 disaster</th> </tr> </thead> <tbody> <tr><td>Fire extinguisher</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>Tools (hammer, saw, crowbar)</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>First aid kit</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>disinfectant</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>Matches/lighter</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>Evacuation guiding tools (whistle, loudspeaker, etc)</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>Flashlight (including extra batteries)</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>Radio</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>Radio phone</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>Satellite phone</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td>Generator</td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> 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Figure 14. (continued)



2. State of your nursery school when the 3.11 earthquake happened	3. Evacuation measures after the earthquake																																														
<p>(1) Numbers of children and staff as of Heisei 23.03.01 No. of Children: _____ No. of Staff: _____</p> <p>(2) Numbers of children and staff when the earthquake happened on Heisei 23.03.11 No. of Children: _____ No. of Staff: _____</p> <p>(3) Did you notice at your school that there was an earthquake?  <input type="checkbox"/> Clearly noticed  <input type="checkbox"/> Somehow noticed  <input type="checkbox"/> Did not noticed at all</p> <p>(4) What were your children doing when it happened? (Multiple selections permitted)  <input type="checkbox"/> Under care inside school    <input type="checkbox"/> Under care in the playground  <input type="checkbox"/> Taking for a walk outside    <input type="checkbox"/> Taking a nap  <input type="checkbox"/> Getting ready home  <input type="checkbox"/> Closed (no child in school)  <input type="checkbox"/> Others ( _____ )</p> <p>(5) What did your children and staff do when it happened? (Multiple selections permitted)  <input type="checkbox"/> Went down under tables or desk and cover heads  <input type="checkbox"/> Shut off fire origins  <input type="checkbox"/> Went out to the playground  <input type="checkbox"/> Checked around inside school  <input type="checkbox"/> Did nothing  <input type="checkbox"/> Others ( _____ )</p> <p>(6) When the tremor calmed down, what did you do? (Multiple selections permitted)  <input type="checkbox"/> Called the roll of all children and checked their safety inside classrooms  <input type="checkbox"/> Called the roll of all children and checked their safety outside  <input type="checkbox"/> Checked on the earthquake information  <input type="checkbox"/> Contacted children's guardians  <input type="checkbox"/> Did nothing (Got back to regular care work)  <input type="checkbox"/> Others ( _____ )</p> <p>(7) How did you confirm on the information of earthquake/tsunami?  <input type="checkbox"/> Via radio    <input type="checkbox"/> On TV  <input type="checkbox"/> Via the Internet    <input type="checkbox"/> By phone  <input type="checkbox"/> From the residence in the neighborhood  <input type="checkbox"/> Others ( _____ )</p> <p>(8) Conditions of the school facilities after the earthquake</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Usable</th> <th>Unusable</th> <th>If unusable, when did it come back?</th> </tr> </thead> <tbody> <tr> <td>Electricity</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Landline phone</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Cellular Phone</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Water supply</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Sewage water (toilet)</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> </tr> <tr> <td>Gas</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td></td> </tr> </tbody> </table>		Usable	Unusable	If unusable, when did it come back?	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No. of Children: _____ No. of Staff: _____</p> <p>(3) What did you bring when evacuated?  <input type="checkbox"/> Children's register    <input type="checkbox"/> First aid kit  <input type="checkbox"/> Protective hoods/helmets    <input type="checkbox"/> Blankets/towels, etc  <input type="checkbox"/> Radio, radiophone, cellphone, etc  <input type="checkbox"/> Money, including small change  <input type="checkbox"/> Others ( _____ )</p> <p>(4) Did you manage to take actions according to the manual?</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th>Did</th> <th>Did not</th> </tr> </thead> <tbody> <tr> <td>Guiding evacuation</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Putting out fire origins</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Calling the roll of children</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Safety check inside school</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> <tr> <td>Contact with children's guardians</td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </tbody> </table> <p>What were the reasons that you could not take the above actions? ( _____ )</p> <p>(5) Where did you return children to their guardians? How many children did you return to their guardians? (Multiple selections permitted)  <input type="checkbox"/> At nursery school    No. of children: _____  <input type="checkbox"/> At evacuation location    No. of children: _____  <input type="checkbox"/> On the evacuation route    No. of children: _____  <input type="checkbox"/> Others ( _____ )    No. of children: _____</p> <p>(6) When did you return the last child to his/her guardian?  <input type="checkbox"/> During the business hours on that day (e.g., by 7:00pm)  <input type="checkbox"/> During the same day (before midnight)  <input type="checkbox"/> Next day (03.12)    <input type="checkbox"/> Day after next day (03.13)  <input type="checkbox"/> Others ( _____ )</p> <p>(7) When did you complete checking the safety of all children and staff (including those absent on that day)?  <input type="checkbox"/> Same day    <input type="checkbox"/> Next day (03.12)    <input type="checkbox"/> Day after next day (03.13)  <input type="checkbox"/> Others ( _____ )</p> <p>(8) When did you reopen school? Month: _____ Day: _____ Under what condition did you reopen your school?  <input type="checkbox"/> Full-time care (including school lunch)  <input type="checkbox"/> Half-day care (no lunch)  <input type="checkbox"/> Others ( _____ )</p>		Did	Did not	Guiding evacuation	<input type="checkbox"/>	<input type="checkbox"/>	Putting out fire origins	<input type="checkbox"/>	<input type="checkbox"/>	Calling the roll of children	<input type="checkbox"/>	<input type="checkbox"/>	Safety check inside school	<input type="checkbox"/>	<input type="checkbox"/>	Contact with children's guardians	<input type="checkbox"/>	<input type="checkbox"/>
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Figure 14. (continued)

東日本大震災津波による保育所避難状況等調査

様式 2

市町村名: \_\_\_\_\_ 保育所名: \_\_\_\_\_ 記入者名: \_\_\_\_\_ (役職: \_\_\_\_\_)

1. 地震・津波発生当日の行動について

(津波に対応した避難行動をとった場合に、地震発生直後の状況等をご記入ください。)

時間	項目	説明
14:46	(地震前)	
	地震発生	
	(地震後)	

- ・各「項目」では、わかる範囲で時間を記入すること。
- ・原則として、保育中の児童を全員保護者等へ引き渡した時点までの状況を記入して下さい。
- ・「項目」例：園内に待機、移動開始、保護者への連絡、高台等に到着、所に帰還 など詳細に記入して下さい。
- ・「説明」の欄には、被災の状況や、園児の状態、保護者への引き渡しの状況、待機場所や避難先の具体的な場所や名称、食料事情など詳細に記入して下さい。

ウラへ→

Figure 15. Research instrument (2): Open-ended survey questionnaire

<p>2. 個別事項</p> <p>(避難を行った際、以下の事項について、その状況を記載してください。)</p>
(1) 避難手段
(2) 避難場所
(3) 食料事情(飲み水を含む)
(4) 防寒対策
(5) 衛生
(6) 職員の体制
(7) こどもたちの様子
(8) 被災時の情報収集
(9) 保護者等への引き渡し
(10) その他

Figure 15. (continued)

**3. 震災により気づいた点やご意見**

(ご自由に記入して下さい。例：震災前に準備すればよかったこと。震災後、改善したこと など)



**4. その他**

写真など、参考になる資料があれば添付ください。

以上の調査項目の記入欄が不足する場合は別様にて追加してください。

**Figure 15.** (continued)

!

**Open-ended Survey Questionnaire on Emergency Evacuation Measures by Nursery Schools in Iwate in the Great East Japan Earthquake and Tsunami**

Form 2

Town: \_\_\_\_\_ Nursery School: \_\_\_\_\_ Interviewee: \_\_\_\_\_ (Post: \_\_\_\_\_)

1. Actions taken on the day of the earthquake and tsunami (Please describe the situations, etc right after the earthquake happened, if you took evacuation actions for the tsunami.)		
Time	Subject	Description
	(Before the earthquake)	
14:26	At the time when the earthquake occurred	
	(After the earthquake)	

- Include timelines for each subject as much as possible.
- In principle, please fill out up to the point when you returned all children under care to their guardians.
- For the column of "Subject," describe in details as such examples as "Stand by at school," "Beginning of evacuation," "Contact with guardians," "Arrival in high ground," "Return to school," etc.
- For the column of "Description", describe in details about damages of nursery school, state of children, conditions of returning children to guardians, specific locations and names of evacuation points, food access, and others.

To the other side →

**Figure 15. (continued)**

!

<b>2. Other individual items</b> <b>(Please describe in details of the following subject's conditions, when you took evacuation measures and actions.)</b>
(1) Methods of evacuation
(2) Evacuation points
(3) Food access (including drinking water)
(4) Protection against the cold
(5) Sanitation
(6) Staffing
(7) Conditions of children
(8) Information access
(9) Returning children to their guardians
(10) Others

Figure 15. (continued)

!

**3. Reflections/opinions or any other notes after the disaster**

(Please feel free to write any. Example: Things that should have been prepared before the disaster; Things that your school has changed/improved after the disaster, etc.)

**4. Others**

Please attach any reference materials, such as photos.

If the above space is not enough to fill, please feel free to write your comments/descriptions in additional sheets.

**Figure 15.** (continued)

東日本大震災津波における岩手県内保育所避難状況記録集作成事業

ヒアリング調査内容

調査員: 近藤 智春(日本ユニセフ協会/ピッツバーグ大学)

1. 記録集調査の趣旨説明(5分)

- 記録集の目的、調査のなり方(アンケートおよび記述式調査票、ヒアリング/聞き取り)
- 調査員の自己紹介
- 同意書の説明、署名(\*この調査は、ヒアリング対象者の立場をリスク・危険にさらすものではないことを説明)

2. アンケートおよび記述式調査票の確認(5分)

もし、ヒアリング対象施設で既にアンケートおよび記述式調査票の記入を終了していれば、一通り回答の確認をして、ヒアリング調査で確認する点や詳細を聞き取る点などを確認する。

3. ヒアリング/聞き取り開始(40分)

質問事項(ヒアリング対象者それぞれに適した自由回答):

- 1) 東日本大震災以前は、どのような防災・災害対策をしていましたか? 以下のことについて、詳しくお話しください。
  - どのような防災マニュアルや防災関係資料を使用していましたか?(具体的なマニュアルの題名や資料先名など)そのマニュアルへの感想は?(例: 分かりやすい、使いやすい)
  - 具体的な防災・災害対策をしていましたか?
    - ✓ 保育所職員の役割(資格を含む)
    - ✓ 避難訓練の状況や避難経路の確認
    - ✓ 保護者や地域との連携状況
    - ✓ 施設内外の防災対策(家具や設備に関して)
- 2) 地震発生時の様子および直後の行動について
  - 以下のことについて、時系列で詳しく、お話し下さい。
    - ✓ 震災当日の様子(園の様子、どういう日でしたか?)
    - ✓ 地震発生時の状況(子どもたちはどういう状況でしたか?)
    - ✓ 避難待機・行動の状況(どのように避難したのか、子どもたちを避難させたのか?)
    - ✓ 保護者との連絡・引き渡し状況(どのように連絡をしましたか? どの時点で引き渡しをしましたか?)
    - ✓ 避難後、待機状況(どのように避難先で過ごしましたか?)
  - 震災発生当手を振り返って、震災前に日頃、取り組んでいた災害対策が活かした所、上手くいかなかったこと、全く使えなかったことなどありますか? 具体的にお話しください。
- 3) 震災後の保育所の状況、災害・防災対策改善への対応について

Figure 16. Research instrument (3): Interview process and questions



- 震災から一年、保育所の災害対策の中で変えたもの、改善をしたものがありますか？具体的にお話してください。
  - 災害・防災対策も踏まえた現在の保育所の状況、および津波警戒区域からの移転なども含む今後の保育所の再建計画など、お話しください。
- 4) その他、東日本大震災津波の経験について
- 震災発生時の避難行動などに関して、ご自身の考察や感想がありますか？その他、職員の中で話すことがありますか？
    - 上手くいったこと、上手くいかなかったこと(どうすれば良かったか)
    - 保育所として対応が出来たこと、出来なかったこと
    - 保育所以外の地域の人に助けられたこと、協力したこと、協力してもらったこと
    - 準備・対策をしておけばよかったこと
  - 行政への防災対策への要望や意見などはありますか？
- 5) 調査員の質問(これまでの質問の中で、以下の要素について、回答されていることを踏まえて)
- 震災から一年が経って来て、震災後の不安定な状況の中、子どもたちが保護される環境、子どもを守る環境とは何だと思えますか？身体的、心理精神的、および社会的の様々な側面を考慮したとき、子どもを守る確保するために最も必要なものは何だと思えますか？障害となるもの、難しい問題、挑戦しなくてはいけないことは何だと思えますか？
4. まとめ・確認(10分)
- 聞き取り内容は、調査員が書き出し、まとめ、内容確認目的として、後日、ヒアリング対象者にファックス等で送付、確認して頂く旨、説明、連絡先の確認
  - 同意書の内容、およびヒアリング対象者に何か確認したいことや質問などがあるかを確認
  - 写真などの関係資料があれば、一旦引き取り、後日、写しをとった後、郵送にて返却

**Figure 16. (continued)**

Documentation Project on Emergency Evacuation Measures by Nursery Schools in Iwate in the Great East  
Japan Earthquake and Tsunami

**Interview Process and Questions**

Researcher: Chiharu Kondo (Japan Committee for UNICEF/University of Pittsburgh)

1. Explanation of the study purpose of the documentation project (5 minutes)
  - Purpose of the documentation project and process of the study (including multiple-choice and open-ended survey questionnaires and interview components)
  - Self-introduction of the researcher
  - Explanation of the consent form and signature (\* Must explain/re-emphasize that the purpose of this study is not to place the interviewee at risk or in any danger)
  
2. Checking on the multiple-choice and open-ended survey questionnaires that were sent in advance (5 minutes)

\* If the multiple-choice and open-ended survey questionnaires were already completed at the interviewee's nursery school, the research will check the sheets and note any points to refer/discuss during the interview.
  
3. Start of the interview (40 minutes)

Interview questions (Open-ended questions to which individual interviewees can answer as they wish):

- 1) Before the Great East Japan Earthquake and Tsunami, how did your nursery school take disaster risk reduction (DRR) measures? Please describe the following in details.
  - What kind of DRR manuals or references were you using (specific manual or reference titles)?  
What did you think of those references?
  - Had you been taking any specific DRR measures at your nursery school?
    - ✍ Role distribution of nursery school staff (including specific certificate holders)
    - ✍ State of evacuation drills and checking of evacuation routes
    - ✍ State of cooperation with parents/caregivers and residences in the neighborhood
    - ✍ DRR measures inside/outside of school (including furniture and equipment)
  
- 2) Situation when the earthquake happened and action right after
  - Please describe the following chronologically
    - ✍ State on that day (state of the nursery school, how was the day so far?)
    - ✍ Situation when the earthquake happened (how were the children?)
    - ✍ Condition of stand-by and emergency evacuation (how did you evacuate? How did you have children evacuate?)
    - ✍ Contact with parents/care-givers and handing-over/returning of children (how did you contact children's parents/care-givers? At which point did you return children to parents/care-givers?)

Figure 16. (continued)

- ✍ Condition of stand-by after evacuation (How did you spend at evacuation locations?)
    - Looking back on the day of the disaster, do you notice that there are any things that worked or did not work of what your nursery school had taken as DRR measures before the earthquake and tsunami? Please describe them in details.
  - 3) Condition of nursery school and changes/improvements in DRR measures since the disaster
    - One year on since the earthquake and tsunami disaster, have you changed or improved any DRR measures at your nursery school? Please describe them in details.
    - Please describe the current state of your nursery school (including DRR measures currently in place), and any reconstruction plan of your school (including the move from the tsunami warning area).
  - 4) Other experiences and reflection in regard to the Great East Japan Earthquake and Tsunami
    - Do you have any self-analysis or reflection in regard to your evacuation action at the midst of the disaster? Do you discuss this subject with your staff members?
      - ✗ Thing that worked or did not work (What should have been done?)
      - ✗ Things that nursery school handled or could not handled
      - ✗ Things that any other residences in the neighborhood helped out, or cooperated with the nursery school
      - ✗ Things that should have been prepared or in place
    - Do you have any requests or opinions to the governments in regard to DRR measures?
  - 5) Researcher's own question (based on what were already answered as above in relation to the following contents)
    - After one year since the earthquake and tsunami, yet under unstable situations due to the disaster, what do you think protective environments for children are? Considering of children's physical, mental and social states, what are the most important elements to ensure of protecting children? Contrarily, what would be the obstacles, difficulties or challenges to do so?
4. Closing and final checking (10 minutes)
- Explain again that the researcher will transcribe and summarize the interview contents, and, on later days, will send the summary to the interviewee via fax or other method, only to double-check on what s/he discussed at the interview
  - Final check on the contents of the consent form, and ask the interviewee if there is anything that s/he want to check or ask
  - If there are any reference materials, including photos, keep them for filing, and will send them back to the school after scanning

Figure 16. (continued)

## APPENDIX D

### SUMMARY RESULTS OF THE MULTIPLE CHOICE SURVEY QUESTIONNAIRE RESPONSES

The below tables are the results highlighted from the multiple choice survey conducted for this dissertation research:

**Table 16.** Summary results of the survey questionnaire responses

1. State of pre-3.11 earthquake and tsunami disaster risk reduction (DRR) measures and preparedness at your nursery school

		Total (n=263)		Affected areas (n=73)		Other areas (n=190)	
		Number	%	Number	%	Number	%
(1) Did you have your school assessed on the following earthquake resistance and other safety measures? (Multiple selections permitted)							
a	Had school buildings assessed/approved for earthquake resistance	67	25.5%	16	21.9%	51	26.8%
b	Had measures against earthquake and tsunami risks	137	52.1%	44	60.3%	93	48.9%
c	Conducted safety checks on exits/doorways and evacuation routes	253	96.2%	69	94.5%	184	96.8%
d	Secured safe outdoor spaces (e.g., in the playground)	223	84.8%	57	78.1%	166	87.4%

**Table 16.** (continued)

		Total (n=263)		Affected areas (n=73)		Other areas (n=190)	
		Number	%	Number	%	Number	%
(2) Did you take the following DRR measures against earthquakes? (Multiple selections permitted)							
a	Anti-fall measures on large equipment and furniture	167	63.5%	41	56.2%	126	66.3%
b	Anti-shatter measures on window glasses	160	60.8%	48	65.8%	112	58.9%
c	Safety measures on light fixtures	173	65.8%	56	76.7%	117	61.6%
d	Safety measures on electrical appliances and handling fire	198	75.3%	53	72.6%	145	76.3%
(3) Did you take the following measures and preparation for earthquake/tsunami disaster? (Multiple selections permitted)							
a	Developed an earthquake (tsunami) disaster response manual	188	71.5%	54	74.0%	134	70.5%
b	Developed an emergency contact system for children's parents/guardians	180	68.4%	56	76.7%	124	65.3%
c	Developed an emergency contact system for families of staff members	86	32.7%	21	28.8%	65	34.2%
d	Prepared a specific measure in case when parents/guardians cannot pick up their children at the time of disaster	63	24.0%	19	26.0%	44	23.2%
e	Built cooperation/coordination mechanisms with neighbors	111	42.2%	28	38.4%	83	43.7%
f	Identified and confirmed of evacuation locations and routes	217	82.5%	56	76.7%	161	84.7%
(4) How often did you conduct regular evacuation drills with children/staff?							
A	Less than once per month	3	1.1%	1	1.4%	2	1.1%
b	Once per month	222	84.4%	62	84.9%	160	84.2%
c	More than once per month	36	13.7%	9	12.3%	27	14.2%
d	Have not implemented	0	0.0%	0	0.0%	0	0.0%
e	No answer	2	0.8%	1	1.4%	1	0.5%
(4)-2 Did you incorporate the following methods? (Multiple selections permitted)							
a	A surprise drill	150	57.0%	36	49.3%	114	60.0%
b	With parents/guardians	42	16.0%	16	21.9%	26	13.7%
c	With neighbors	39	14.8%	7	9.6%	32	16.8%

**Table 16.** (continued)

		Total (n=263)		Affected areas (n=73)		Other areas (n=190)	
		Number	%	Number	%	Number	%
(5) Were you doing the following DRR education? (Multiple selections permitted)							
a	DRR training for staff members	141	53.6%	34	46.6%	107	56.3%
b	Book reading and video viewing about earthquake DRR	229	87.1%	65	89.0%	164	86.3%
c	Book reading and video viewing about tsunami	43	16.3%	24	32.9%	19	10.0%
(6) How did you inform parents about DRR measures of your school? (Multiple selections permitted)							
a	Held workshops	8	3.0%	2	2.7%	6	3.2%
b	By writing	113	43.0%	33	45.2%	80	42.1%
c	Verbally	113	43.0%	30	41.1%	83	43.7%

2. State of your nursery school when the 3.11 earthquake happened

		Total (n=263)		Affected areas (n=73)		Other areas (n=190)	
		Number	%	Number	%	Number	%
(3) Did you notice at your school that there was an earthquake?							
a	Clearly noticed	255	97.0%	69	94.5%	186	97.9%
b	Somehow noticed	0	0.0%	0	0.0%	0	0.0%
c	Did not notice at all	0	0.0%	0	0.0%	0	0.0%
d	No answer	8	3.0%	4	5.5%	4	2.1%
(4) What were your children doing when it happened? (Multiple selections permitted)							
a	Under care inside school	89	33.8%	25	34.2%	64	33.7%
b	Under care in the playground	1	0.4%	0	0.0%	1	0.5%
c	Taking a walk outside	1	0.4%	1	1.4%	0	0.0%
d	Taking a nap	220	83.7%	56	76.7%	164	86.3%
e	Getting ready for home	4	1.5%	1	1.4%	3	1.6%
f	Closed (no children in school)	1	0.4%	0	0.0%	1	0.5%
(5) What did your children and staff do when it happened? (Multiple selections permitted)							
a	Went down under tables/desks and covered heads	230	87.5%	64	87.7%	166	87.4%
b	Turned off gas stoves/heaters	179	68.1%	47	64.4%	132	69.5%
c	Went out to the playground	62	23.6%	17	23.3%	45	23.7%
d	Checked around inside the school	156	59.3%	38	52.1%	118	62.1%
e	Did nothing	1	0.4%	0	0.0%	1	0.5%

**Table 16.** (continued)

		Total (n=263)		Affected areas (n=73)		Other areas (n=190)	
		Number	%	Number	%	Number	%
(6) When the tremor stopped, what did you do? (Multiple selections permitted)							
a	Carried out the roll-call and safety-check inside the buildings	165	62.7%	38	52.1%	127	66.8%
b	Carried out the roll-call and safety-check outside	126	47.9%	40	54.8%	86	45.3%
c	Checked the earthquake information	164	62.4%	36	49.3%	128	67.4%
d	Contacted children's parents/guardians	64	24.3%	6	8.2%	58	30.5%
e	Did nothing (Went back to regular care work)	0	0.0%	0	0.0%	0	0.0%
(7) How did you confirm of the earthquake/tsunami information?							
a	Via radio	187	71.1%	44	60.3%	143	75.3%
b	On TV	19	7.2%	4	5.5%	15	7.9%
c	On the Internet	8	3.0%	1	1.4%	7	3.7%
d	By phone	52	19.8%	9	12.3%	43	22.6%
e	From the neighbors	54	20.5%	24	32.9%	30	15.8%
(8)-1 Conditions of the daycare facilities after the earthquake (Yes="usable"; No="unusable")							
a	Electricity	2	0.8%	1	1.4%	1	0.5%
b	Landline phone	21	8.0%	4	5.5%	17	8.9%
c	Cellular phone	75	28.5%	10	13.7%	65	34.2%
d	Water supply	155	58.9%	16	21.9%	139	73.2%
e	Sewage water (toilet)	164	62.4%	24	32.9%	140	73.7%
f	Gas	171	65.0%	35	47.9%	136	71.6%

3. Evacuation measures following the earthquake

		Total (n=263)		Affected areas (n=73)		Other areas (n=190)	
		Number	%	Number	%	Number	%
(1) Did you evacuate outside the school compound?							
a	Evacuated outside the school compound (e.g., government-assigned evacuation locations, locations identified by daycare centers in advance, or others)	70	26.6%	36	49.3%	34	17.9%
b	Stayed inside the school compound (e.g., classrooms, playgrounds)	188	71.5%	33	45.2%	155	81.6%
c	No answer	5	1.9%	4	5.5%	1	0.5%

**Table 16.** (continued)

		Total (n=263)		Affected areas (n=73)		Other areas (n=190)	
		Number	%	Number	%	Number	%
(3) What did you bring when evacuated? (Multiple selections permitted)							
a	Registers of children	159	60.5%	45	61.6%	114	60.0%
b	First aid kit	124	47.1%	38	52.1%	86	45.3%
c	Protective hoods/Hard hats	14	5.3%	6	8.2%	8	4.2%
d	Blankets/towels, etc.	133	50.6%	38	52.1%	95	50.0%
e	Radio, radiophone, cellphone, etc.	132	50.2%	36	49.3%	96	50.5%
f	Money, including small change	34	12.9%	15	20.5%	19	10.0%
(4) Were you able to follow the evacuation manual? (Yes/No)							
a	Guiding evacuation	243	92.4%	65	89.0%	178	93.7%
b	Turned off stoves/heaters	249	94.7%	65	89.0%	184	96.8%
c	Roll calls of children	247	93.9%	63	86.3%	184	96.8%
d	Safety check inside school	225	85.6%	53	72.6%	172	90.5%
e	Contact with children's parents/guardians	63	24.0%	8	11.0%	55	28.9%
(5)-1 Where did you return children to their parents/guardians? (Multiple selections permitted)							
a	At nursery school	239	90.9%	62	84.9%	177	93.2%
b	On the evacuation route	63	24.0%	40	54.8%	23	12.1%
c	At evacuation location	17	6.5%	16	21.9%	1	0.5%
(6) When did you return the last child to his/her parents/guardians?							
A	During the business hours on that day (e.g., by 7:00pm)	199	75.7%	28	38.4%	171	90.0%
b	During the same day (before midnight)	19	7.2%	5	6.8%	14	7.4%
c	Next day (03/12/2011)	17	6.5%	17	23.3%	0	0.0%
d	Day after next day (03/13/2011)	12	4.6%	12	16.4%	0	0.0%
e	Others	8	3.0%	8	11.0%	0	0.0%
f	No answer	8	3.0%	3	4.1%	5	2.6%
(7) When did you complete checking the safety of all children and staff (including those absent on that day)?							
A	Same day	143	54.4%	18	24.7%	125	65.8%
b	Next day (3/12/2011)	41	15.6%	10	13.7%	31	16.3%
c	Day after next day (3/13/2011)	17	6.5%	7	9.6%	10	5.3%
d	Others	50	19.0%	33	45.2%	17	8.9%
e	No answer	12	4.6%	5	6.8%	7	3.7%



**Table 16.** (continued)

		Total (n=263)		Affected areas (n=73)		Other areas (n=190)	
		Number	%	Number	%	Number	%
(8)-1 When did you reopen school?							
a	Next day (3/12/2011)	83	31.6%	8	11.0%	75	39.5%
b	Day after next day (3/13/2011)	2	0.8%	0	0.0%	2	1.1%
c	3/14/2011	89	33.8%	20	27.4%	69	36.3%
d	3/15/2011	29	11.0%	6	8.2%	23	12.1%
e	Others	46	17.5%	36	49.3%	10	5.3%
f	No answer	14	5.3%	3	4.1%	11	5.8%
(8)-2 Under what condition did you reopen your school?							
a	Full-time care (including lunch)	123	46.8%	25	34.2%	98	51.6%
b	Full-time care (no lunch/bring own lunch)	27	10.3%	19	26.0%	8	4.2%
c	Half-day care (no lunch)	78	29.7%	16	21.9%	62	32.6%
d	Others (upon request, etc.)	27	10.3%	11	15.1%	16	8.4%
e	No answer	8	3.0%	2	2.7%	6	3.2%

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