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**Vietnamese Refugees' Perspectives on their Community's Resilience in the Event of
a Natural Disaster**

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Researchers have urged that community resilience be integrated in preparing for public emergencies to improve individuals' resilience. This study explored Vietnamese refugees' shared perspectives on their community resilience in the face of a natural disaster and factors that either facilitated or impeded their community resilience. Using ethnographic approach, 20 ethnic Vietnamese and Montagnard adult refugees living in North Carolina were interviewed, using a semi-structured interview guide. Three themes emerged from the data: (1) Greensboro is a good place to live, with many resources to draw on during a natural disaster; (2) The City can be trusted to respond effectively during a natural disaster especially because of the city government; and (3) The refugee community will face significant challenges. Future efforts should be directed to developing effective channels for refugees to access information, make connections with existing community resources, and facilitate collaboration among multiethnic groups when encountering a natural disaster.

Keywords: natural disaster, community resilience, Vietnamese refugees, ethnographic, public health

Introduction

Over the past 20-30 years, the concept of resilience has gained a revival of interest among researchers, accompanied by a redirection of focus from alleviating the consequences of stress and adversity to strengthening individual, family, and community resilience in order to overcome the difficulties (VanBreda 2001). A resilient individual can be characterized as a person who possesses the synthesized and sustained competence (e.g., skills, knowledge, insights, emotions, etc.) of dealing with stress that results from life-time stressful events like public disasters (Agaibi and Wilson 2005; Connor 2006; Connor and Davidson 2003; VanBreda 2001). In particular, a considerable number of studies have reported that individual resilience is a predictor as well as a moderator of mental health outcomes in the wake of a stressful/traumatic event (Campbell-Sills, Cohan and Stein 2006; Deegan 2005; Hjemdal et al. 2006). This is especially crucial for refugee populations because of their vulnerability to mental disorders due to their pre-migration, migration, and post-migration traumas (e.g., Barnes 2001; Carlson and Rosser-Hogan 1994; Fazel, Wheeler and Danesh 2005; Marshall et al. 2005). Lears and Abbott (2005:22) indicated that refugees were “the most vulnerable among us” as it related to mental health. The purpose of this study is to strengthen individual refugees’ resilience to a natural disaster through enhancing their community resilience to a natural disaster in their resettlement country so as to ultimately promote individual refugees’ disaster mental health.

Literature Review

Individual resilience, however, is not static. It is fostered by dynamic and multidimensional factors in a developmental process (Braverman 2001, Edward and Warelou 2005; Wolff 1995; Yates 2006). It is determined by the interactions and transactions not only between biological and psychological impacts, but also between an individual and his/her environment (Yates, 2006). Clauss-Ehlers (2008) recently indicated a quantified contribution of culture to resilience among 305 multi-racial female college students from a large northeastern university. The Cultural Resilience Measure was applied to assess the degree to which resilience can be influenced by cultural indicators and interpret how individual negotiation of attitudes and behaviors with stressors can be differentiated by an ethnic background, cultural values and sociocultural environmental factors. The availability of resources also has a direct or indirect association with resilience. Bonanno et al. (2007) examined the availability of four types of resources based on the Conservation of Resources theory: material resources (e.g., income), energy resources (e.g., health insurance), interpersonal resources (e.g., social support), and work resources (e.g., employment). Both variables of income loss and

social support loss implicate a statistically significant connection to low resilience. Social support is extraordinarily crucial for enhancing resilience. In the neurobiological perspective, a good utilization of social support networks may strengthen a person's resilience to stress through regulating the nervous and neuroendocrine system, and buffering the effects of genetic and environmental vulnerabilities (Ozbay et al. 2007; Ozbay et al. 2008).

As an individual living in a community, which applies the notion of community resilience, his/her resilience to a crisis can be empowered through community itself and its members' joint efforts to aid each other and ultimately enhance an individual's health and well-being (Ganor and Ben-Lavy 2003). Community resilience has been defined as "the ability of individuals and communities to deal with a state of continuous, long term stress which causes gaps between environmental stimuli and their functional coping behavior;" "the ability to find unknown inner strengths and resources in order to cope effectively;" and "the ability of a community to stick together and to help itself as group as well as families and individuals in its midst (Ganor and Ben-Lavy 2003:106)." Community resilience is also interpreted as the ability of a social system to mobilize, respond to, and recover from disasters (Cutter et al. 2008). Norris and Stevens (2007:321) concluded from research, the four fundamental capacities that were related to community resilience: "economic development, social capital, information and communication, and community competence," and these were nourished by increasing the accessibility and availability of resources, expanding social networks and enhancing social support, providing reliable and consistent information resources, and developing collective decision-making skills. Cutter et al. (2008) categorized community resilience into six domains: resilience of an ecological system, social resilience, economic resilience, institutional resilience, infrastructure resilience, and community competence resilience. Built on the previous literature, most recently, Chandra and her colleagues (2010; 2013) proposed five key components for enhancing community resilience: (1) assess and promote the population's overall physical and psychological health and ensure their access to high-quality health, behavioral health, and social services; (2) promote community's social and economic well-being; (3) ensure ongoing culturally relevant information to the community about disaster preparedness, response, and recovery; (4) develop strong partnerships within and between government and nongovernmental organizations and involve them in every aspect of pre-, during, and post-disaster; and (5) mobilize resource exchange, strengthen individuals' social connections, and increase their awareness of responsibility of participating in disaster planning, response, and recovery efforts.

Keim (2008) argued that public health professionals needed to increase the attention given to developing and strengthening human resilience to public disasters, particularly at the community level. Schoch-Spana (2008) also argued that when the notion of community resilience was introduced to public health catastrophes, residents were no

longer seen similarly as disaster victims; instead, they are well-prepared responders and resilient survivors. Moreover, Kimhi and Shamai (2004) stressed that community resilience was related to each community member's individual perspectives on whether the community would successfully survive a crisis. They examined the relationship between perceived community resilience and the impact of stress related to Israel's withdrawal from Lebanon. The point was to emphasize the need for developing community-based resilience programs to improve community members' perceptions of their community resilience and boost individual resilience to threat. The U.S. Department of Health and Human Services (2013) has included building community resilience as one of the two goals of the National Health Security Strategies, which is supported by ten strategic objectives (e.g., informed and empowered individuals and communities) in order to meet the society's urgent and focused needs.

Applying the concept of community resilience to improving refugees' individual resilience to a public disaster and their disaster mental health in their resettlement country, the current study uses an ethnographic approach to explore Vietnamese refugees' perspectives on their community resilience to a natural disaster in the U.S. Within the past 25 years, natural disasters have accounted for almost half of the disaster declarations (442 out of 902) (Science Daily 2007). In North Carolina (NC), from 1954 to 2010, 19 out of 46 declared major simple or complex disasters included hurricanes, 19 included severe storms, 10 included floods, and 5 included tornadoes (Federal Emergency Management Agency [FEMA] 2010). Also, based on the report of the Office of Refugee Resettlement (ORR) to the Congress (2007), from 1983 to 2007, about 32% of the total refugees who resettled in the U.S. were Southeast Asians, which remained the largest group of refugees. Of them, 470,709 refugees fled from Vietnam and represented the majority and the second largest refugee population in this nation. The number continues to grow. In NC, in the year 2006, the total number of arrivals of Vietnamese refugees was 735, and it was second only to California, which had the largest initial receptions (n=845) of Vietnamese refugees among the 50 states (ORR 2006). Both ethnic majority Vietnamese and minority Vietnamese (Montagnards) who had resettled in Greensboro, North Carolina (NC), were recruited. The study aims to accomplish three objectives: (1) to explore the Vietnamese refugees' shared perspectives on their community's resilience to a natural disaster; (2) to identify factors that either supported or impeded their community resilience, and (3) to provide public health professionals information on how to improve this population's disaster mental health through enhancing their community resilience in the event of a natural disaster.

Methods

Community

A community has been conceptualized as a geographic unit meeting basic needs for sustenance, a unit of patterned social interaction, and a symbolic unit of collective identity (Hunter 1975; as cited in Minkler and Wallerstein 2002). Greensboro, NC, the site of this study, is the largest city in Guilford County and is the third largest city in NC (U.S. Census Bureau 2000). The current area of Greensboro is approximately 84,320 acres, including 5,450 acres of parks, open spaces, and beautification areas, and a full-range of public and private facilities, such as 23 fire stations, 7 central library and branches, 12 recreation centers, and 113,611 housing units (City of Greensboro 2008; 2009).

The 2006-2008 American Community Survey reported that Greensboro had about 242,817 residents with a nearly equivalent number of males and females. Data from the U.S. Census Bureau (2008) indicated that the median family income was about \$54,218 (U.S. = \$63,211) with around 12.9% of families (U.S. = 9.6%) and 18.2% of individuals being below the poverty line (U.S. = 13.2%). It is a multicultural and multiethnic community with about 51.4% whites, 39.5% African-Americans, 3.3% Asians, and 6.9% Latinos.

Since 1979, multinational refugee populations (e.g., Vietnamese, Cambodians, Laotians, Russians, and Bosnians) have been resettling in Greensboro (Center for New North Carolinians [CNNC] 2008). In the late 1970s, Vietnamese refugees started being resettled in the Triad area of North Carolina (CNNC 2002). Other than the Vietnamese majority, there are four major Vietnamese minority groups in North Carolina, which include Chinese Vietnamese, Chams, Montagnards, and Khmers. From the fiscal year 1983 to 2007, approximately 9,730 Vietnamese refugees initially arrived in North Carolina (Office of Refugee Resettlement [ORR] 2007). They were resettled in multiple sites (e.g., Greensboro, Raleigh, Charlotte, Winston Salem, and High Point). Data for the last five years, which was requested from the North Carolina State Refugee Office, indicated that Vietnamese refugees resettled in North Carolina were nearly all Montagnards.

On average, from January 2003 to March 2008, each year, more than 440 Montagnard refugees with a ratio of 1.2: 1 male to female, came to the U.S., and resettled mainly in Greensboro, Charlotte, and Raleigh. Most notably, more than 7,000 Montagnards are now living in NC. Guilford County has around 5,000 Montagnards, which makes it the largest Montagnard community outside of Vietnam partly because they liked the County's natural environment. More than half of them reside in Greensboro (CNNC 2008). In Greensboro, a majority of the Vietnamese lives in rental apartment complexes, and many of them don't have a full-time job. They go to the Montagnard Dega Association, Glen Haven Community Center, Newcomers School, and local libraries to learn English in their spare time. Senior Vietnamese often spend their time in the Senior Center. On Sundays, many of them go to the United Montagnard Christian Church and Vietnamese Baptist Church. They heavily rely on public transportation. The Vietnamese majority

intends to be more educated than Montagnards. However, they all experience the same post-migration stressors, including language, acculturation, employment, housing conditions, separation from their families in Vietnam, and health insurance.

Sample

Participants were recruited from the Greensboro area through community centers, local refugee resettlement agencies, and classes in English as a Second Language (ESL). Because refugees are a hard-to-reach population due to cultural isolation and frequent secondary migration in their resettlement country, nonprobability snowball sampling and criteria sampling were used. Inclusion criteria included that the individuals must: (1) be entering U.S. with a refugee status; (2) meet the definition of being a Vietnamese or Montagnard; (3) be an adult aged 18 and above; (4) live in Greensboro more than 1 year; (5) be willing to provide in-depth information; and (6) be willing to sign a consent form. Potential participants who had cognitive impairments were excluded. A total of 20 ethnic Vietnamese and Montagnards participated in the study from September 2010 to January 2011 in order to meet the data saturation. In this paper, pseudonyms are used for participants to protect their identities.

Among these 20 participants, 75% were male (n=15), and 90% were married (n=18). One participant was aged 28 years old and two were aged over 70 years old. The other 17 participants ranged in age from 40 to 70 years. In total, 19 of 20 identified themselves as either a Christian or a Catholic. One ethnic Vietnamese refugee who was his community spokesperson reported that he had been resettled in Greensboro for only about 11 months by the time of his interview, but the rest of the participants had resided in Greensboro for 1-5 years or more. The unemployment rate among the participants aged 70 years old or younger was high (67%). Only three of them can speak limited English but half of the participants can speak Vietnamese, and another half can speak Jarai, Rhade, Bunong, and/or Koho (Table 1).

Measures

A semi-structured interview guide containing 25 questions with 12 open-ended questions was used to elicit participants' perspectives on their community's resilience in the event of a natural disaster. For example, the participants were asked how they would like to describe Greensboro, in general, in terms of its physical environment, housing, people, employment, transportation, safety, health services, media, manufacture...; in what ways they think that most people/Vietnamese/Montagnards living in Greensboro find out about an approaching natural disaster, such as a snow storm, flood or tornado; how they think most people/Vietnamese/Montagnards living in Greensboro know how to survive a serious natural event; how they think the City of Greensboro's response to a natural disaster may influence their response and their families' response. Questions were

designed assuming an upcoming natural disaster like a tornado, winter storm, hurricane, or flood. Photographs obtained from the National Geographic Society and the National Weather Services depicting the scene and consequences of a natural disaster were shown and explicated to the participants based on their understanding of a natural disaster.

Table 1. Descriptive Statistics of Study Participants' Characteristics

Characteristics	Number (n)	Percentage (%)
Gender		
Male	15	75
Female	5	25
Marital status		
Married	18	90
Single/Separated	2	10
Age		
<40	1	5
40-70	17	85
>70	2	10
Religion		
Yes	19	95
No	1	5
Language		
Vietnamese	10	50
Jarai/Rhade/Bunong/Koho	10	50
Employment		
Yes	6	30
No	14	70
Years in Greensboro		
<1	1	5
1-2	7	35
2-5	7	35
>5	5	25
Total	20	

Four dimensions of community resilience building identified by Cutter et al. (2008), were selected as relevant to this study and used to develop the interview guide: (1) economic resilience, including employment and wealth generation; (2) institutional resilience, including emergency services and emergency migration and response plans; (3) infrastructure resilience, including lifelines and critical infrastructure, residential household stock, and transportation networks; and (4) community competence resilience, including community understanding of risk factors, counseling services, community health and wellness, and quality of life. Another two dimensions: (1) social capital, including effective organizational links, social supports, social influence, and place attachment; and (2) information and communication, including communication skills and infrastructure, trusted sources of information, and responsive media, were informed by the work of Norris and Stevens' (2007). A final dimension included participants' perspectives on their community's prior emergency responses. The interview guide was

validated by nine people, including both academic and non-academic refugee experts, refugee key informants who could speak fluent English, a Vietnamese interpreter, and the coauthors of this paper.

Procedure

The study was approved by the University Institutional Review Board. Consent forms, translated into Vietnamese, were explained to participants prior to obtaining their signature. A total of 20 refugee participants were interviewed in their homes, community centers, or local restaurants. A complete interview lasted about an hour and a half to two hours. A professional interpreter was present at every interview. The City of Greensboro was defined as the community in this study to each of the participants at the beginning of their interviews. All interviews were digitally recorded. Data were also collected from interviews with refugee service providers, on-site observations, and informal conversations with Vietnamese interpreters to verify the primary data and their interpretation.

Data Analysis and Interpretation

The audio data were transcribed in English and analyzed by ATLAS Ti version 6.0 (ATLAS Ti Scientific Software Development GmbH, Germany). Using an ethnographic approach, the researchers explored the “shared and learned patterns of values, behaviors, beliefs, and languages of a cultural sharing group” (Creswell 2007:69). Data were analyzed to provide a portrait of the commonalities among participants, and both top-down coding and analysis of themes were applied. Initial codes generated from the primary data were validated by the dissertation committee and organized into seven categories.

Six of seven categories/indicators were selected from the existing literature, which has been demonstrated in the development of the instruments. These seven categories included economic, infrastructure, social capital, communication and information, emergency planning and training, community competence, and prior community emergency responses (Cutter et al 2008; Norris and Stevens 2007). The data were interpreted to respond to the three objectives of this study stated earlier. As the data cross these seven categories were analyzed, three broad themes that spanned across these categories emerged.

Results

The City is a Good Place to Live, with Many Resources to Draw on during a Natural Disaster

Participants were asked their opinions about how this city might respond to or recover from a natural disaster. Their responses indicated a view of the city as resource rich and likely to recover quickly, with statements, such as “Yes, they are able to do that because they have a lot of money,” “Maybe because Americans are rich, right?” and “America is the biggest country in the world (financially.) They have the money to prepare for all these things.”

In general, compared to the place where they had lived in Vietnam, the participants believed that their resettlement city was a much better place for them. “The environment (does) not (have) much noise. Because I was living in a city (in Vietnam), we got a lot of noise;” houses are “safe” and “pretty,” the grocery stores are “beautiful...I can find any kind of food here;” and the local media broadcast news quickly. The participants stated that the people in the city lived “together peacefully and in harmony,” and they loved each other, talked to each other, and liked to be together. They did not “seem to have a big problem.” An was happy that “some Montagnards are able to communicate with Americans...some are able to communicate with Vietnamese. They have conversations with each other.” Chi thought that American people in this community were very friendly because “each time I went to the grocery store, they saw us, they waved hands and they said hi to us.” Danh agreed that Americans were really good since “even if I am a refugee and I didn’t know them, when I was walking on the streets, they said hi to me.” Giang explained that different ethnic population groups living in the city tried to communicate well with each other. However, sometimes because of language barriers, they had to use sign language.

Multiethnic groups, such as Vietnamese, Montagnards, Whites, African-Americans, and Mexicans often resided in the same neighborhood. The participants concluded that most residents in the city communicated with each other through meetings at local churches, workplaces, and community centers, making phone calls, or chatting online. Participants would also regularly see each other in their grocery stores, classes in English as a second language, and senior resource centers, or gather in each other’s houses located in the same or adjacent neighborhoods. For instance, To.ai said, “Sometimes we meet at the market or a grocery store and we talk. If I know them, we talk. If I don’t, we just say hi.”

Views towards the health care system were generally positive, although participants experienced challenges related to access and communication. Uoc said she received good services from the local health department when she first came to the United States. Tho thought that his health needs would be very well met by the current health system. Danh stated, “The hospital here is very good. The people are very nice to me. They say hi (and) thank you to me.” De said, “The nurse, the doctor, and the workers in the hospital respect

the clients (patients). They treat them all equally.” Minh made a comparison between the health services that he received in Greensboro and the city he had lived in Vietnam,

The doctors over here are really good and very patient. For example, after my wife finished (seeing the doctor), the doctor helped her out of the chair for someone else to see. In Vietnam, the doctor stood on the third floor and didn't do anything. The doctor over there didn't help anything. He stood there and looked at you. He didn't care what happened to you. Over here, the doctor helped her out, held her, and put her in (back to) the chair...In Vietnam, the first time I went to the city, the doctor and the hospital, the first thing (for them) was to ask for money. No money, they won't let you in.

Participants also discussed mental health services in the city in case of a natural disaster. Most believed that there were many “intelligent persons” in the city, and the city government had already prepared “doctors for us if something happens...and set up the money for this, for this, for this...” They also thought that resources in other places could be relocated so as to support the services in Greensboro.

The City can be Trusted to Respond Effectively during a Natural Disaster

If a natural disaster happened to their city, participants had no doubt that the city would have both “man power” and “machine power” to respond to and recover from the disaster. They explained that the city would provide its residents with emergency food, water, medicine, blankets, salt, utilities, and shelters. Fire departments, police departments, hospitals, churches, and non-profit organizations would all work collaboratively.

The participants reflected a great deal of faith in the American government. They thought the government would take full financial responsibility in case of a natural disaster. They said, “I guess, I hope, I trust the government.” They believed that the U.S. government was much stronger and more powerful and had more intelligent people than the government in Vietnam. Truc noted that the city often repaired roads and streets so it should be financially capable of responding to a natural disaster. Bao thought that after 9.11, New York City was quickly rebuilt so the U.S. government was financially prepared to recover from a catastrophe.

Many of the participants believed that the city already had a plan for a natural disaster for several reasons. First, this was common sense. As Hung mentioned that most countries already had a plan if something happened, Thu thought that every city had an emergency plan for a disaster, though he was not sure how well the city was prepared. Bao mentioned that the city should be “always looking for a better way to do things and prevent it (from) happen(ing) in the future. You always learn and you always prepare and always find a better way. Be ready for any situation happen(s).” Second, since the city government would be warned of a natural disaster in advance by the mass media and well-educated people, they should have enough time to come up with a plan and get

ready for it. Third, as De stated, “Another thing is the financial. America is the biggest country in the world (financially.) They have the money to prepare for all these things.” Fourth, the participants believed that “every city takes care of its own people, cares about its citizens,” and this was the city government’s duty to plan ahead so as to protect its people. Fifth, based on their daily observations of other events, the participants concluded that the city had an emergency plan for a natural disaster.

Thanh: I trust the government. For example, some gang people here, they were selling drugs. The police found out. The other police came here quickly. When the fire happened, the fire truck, the ambulance, and the police, they came quickly. So I trust and I believe the government has a plan and they will respond quickly.

Danh: Because of a lot of decisions around here, I believe the government already prepares. A lot of people live here so the government already prepares to help them. For example, last time I went to DMV. Most people had to pay 10 bucks for the ID but I am old so people gave it to me for free. Yes, I think so. It is like the students. The school bus take(s) them to school. They teach them and feed them. After the school, they send them home.

Finally, the participants had confidence in the city government and its leadership. Uoc was certain that the city had a plan for a natural disaster because the American government was civilized. Duc thought that the city had “a lot of agencies, water agency, electricity agency, every branch, we have, they are ready to help the people.” Similarly, Minh said,

The Church World Services will come and help me...Yes. It is related to the government. Everything here belongs to the government. All the orientation services, the Church World Services, and the Lutheran Family Services belong to the government...I am just only thinking the government has already had a plan. In case I need, the government will try to help me.

Most participants believed the city had the infrastructure to overcome a natural disaster and meet their emergency needs. Besides this, the participants added more evidence with respect to their belief in the overall community competence to survive a natural disaster. They were convinced that the city government would be a good responder, and under its leadership, each city functional unit would be mobilized quickly to react to the disaster. They thought that they could also utilize the city’s human resources as well as the natural resources to respond, such as “Tree can block the water and block the tornado.” Participants believed that during the recovery, besides receiving continuous services from the government, people in the city would also support each other to rebuild the city and their homes. Tho said, “Human beings help each other. You help me now, so maybe later on I may help you,” He and Ho.c agreed that people in other places would come and help as Ho.c said, “If Greensboro is completely destroyed, we have someone from Raleigh, from Texas, Georgia, everywhere come to help us.” Moreover, the participants assumed that there was a built-in system in Greensboro to

facilitate the city's recovery. Xuan explained that there was a hierarchical operating system "from the low level people to the high level people."

Participants had observed community emergency responses at least once or twice, during a snow storm, an electricity outage, or a house fire. Compared to their experiences in Vietnam, their impressions of the city's reactions were favorable. They thought all the unit in the city were well coordinated and restored the functions of the city's infrastructure in a timely manner. Tro.ng witnessed a house fire, and was amazed by how fast the fire truck came to the scene and put out the fire. Bao experienced a power outage twice in his area but both times had the power back within an hour. Thu thought the city's response to a snow storm was not desirable. However, To.ai said he watched the "machine pushed the snow," and he saw, "In some places, they did it right away but in some places, it took longer. Small streets, nobody cleaned them...People cleaned the parking lot right away." Truc saw the ambulance and fire trucks were running on the street shortly after a snow storm. Both Uoc and Ho.c noted,

They used the trucks, (spread) the salt, they cleaned the streets...I feel it was almost quick. If we use hands by ourselves, it will be very difficult. But they used the trucks, easier and faster...If they saw the branches of trees were broken, they tried to cut the trees and clean the streets.

First of all, the government informed the people so they knew the disaster would come. The second one, they used their resources to help the people, like cars...They cleaned (the streets) with the trucks and they put the salt...They (were) divided. These (people) went to these streets; those people went to those streets... If the snow came again, they would do it again.

The Refugee Community will Face Significant Challenges in the Event of a Natural Disaster

Participants also expressed concerns about the ability of the city to respond to their needs, issues of access to services, and challenges related to communication within their own ethnic communities. Chief among these concerns were issues related to access to information, language and communication, and ability to connect with and use resources and services.

In case of a natural disaster, most participants believed their American neighbors would receive a severe weather warning through TV, radio, newspaper, and internet. Ho.c also thought that the American people had the knowledge to predict natural disasters because "Someone teaches them... Before, they already knew. Someone taught them the science. They've already known the science. But we don't know. They know (this) from the knowledge, the science." However, within their own ethnic group, communication channels would be different. They said that they rarely listened to a radio or read a newspaper to find out about an approaching natural disaster. They might receive a

weather warning through TV but they doubted how many ethnic Vietnamese and Montagnards living in the city had TVs at home or had local weather channels. Duc said, "I hope all the Montagnard families have the cable and TVs to see news. I hope." They expected that friends, neighbors, and coworkers who had access to this type of information could inform them. They also expected their local churches, sponsors, and refugee organizations to use their networks to reach them in the face of an emergency. Danh said, "Some have (TVs). Some don't. Like me, I just came here and I don't have it," but sometimes he went to the church, so if something like this happened, they would let him know. He said, "If I go to the church, whoever I know, friends will talk to each other and communicate with each other. And let them (or me) know if something will happen."

Although they generally agreed that interactions in this community seemed adequate, several expressed frustrations in acculturating themselves into the mainstream and connecting with other ethnic groups.

Thanh: You know God creates the human beings. We are equal and we are not supposed to have conflicts, even if in Greensboro. But unfortunately, because we have different tribes and different people and different languages, we don't know how to communicate with each other. It makes communication very difficult for us. Because of these difficulties, we are not so close to each other. Like you, you speak with us in English, like me, I don't know English. So it makes us different. That makes the problem among people to understand each other, to talk to each other, to be happy, to say hello, or to live together.

They also had concerns about their ability to effectively communicate with health care providers and social services due to language barriers. While participants were satisfied with their community hospitals and local health department, they described limited access to health services in an emergency because of the language, medical insurance, and transportation barriers. For instance, a majority of the participants had to ask their pastor, friends, children, or resettlement agencies to go to the hospitals with them to interpret or make an appointment for them. They felt that communication with doctors and nurses was fairly complicated, and it was not possible for them to handle it all by themselves. They also had concerns about how they could afford health services if they did not have medical insurance.

A majority of the participants did not have a clue about how organizations or social networks served people living in the broader community. Approximately two-thirds knew or had heard of their own ethnic organizations/groups, such as Montagnard Dega Association and Montagnard/Vietnamese churches, as well as refugee resettlement agencies and senior resource centers. However, most did not keep these organizations and agencies' contact information and could not identify the leaders. Although the participants clearly stated that if there was an emergency, such as a natural disaster, they would like to contact these organizations and agencies, they expressed concern about

their capacity to meet clients' urgent needs. Duc explained that their help was very limited, and they only dealt with "the paper work or something else like money or disaster, they cannot do it...They don't have anything either." Truc agreed,

We don't know their job (regarding) if they can help in a disaster. They only had few people take people to hospitals. We don't think (whether) they may help if something happens...They only have one or two people work(ing) there. They don't work for a disaster. We need but they cannot help us.

In the meantime, they expressed the high demands of these organizations and agencies, especially during a disaster, among the refugees. An thought that Montagnards needed an organization to unite all the Montagnards in the city. Yet, most participants believed that they could ask the leaders of these organizations/agencies to be their representative to communicate with the government authorities and people outside their group.

More than half of participants also said that they had been exposed to some informal emergency training, including preparing for a natural disaster. They had received training through their ESL classes, churches, ethnic organizations, and refugee resettlement agencies in the city. The training was delivered through informal conversations, simple handouts, short presentations, and video clips. However, most of them had received this type of informal training only once or twice over the past several years, and were not reminded on a regular basis. They had already forgotten most of the information. The participants felt their people needed more training to prepare for and survive a natural disaster, and preferred training in person or in both pictures and words. They suggested that the information should also be integrated into the formal high school or middle school education.

Discussion

Haines, Rutherford, and Thomas (1981:314) had emphasized the importance of community to Vietnamese refugees during the early 1980s. They noted that Vietnamese refugees regarded community as a place with an "abundance of mutual aid association of various kinds." Built upon the existing literature, Norris and Stevens (2007) also explicated how community resilience, including the capacities of having economic development, trusted and responsive information channels, effective organizational linkages, stabilized social support, and equal resources allocation, was positively connected with an individual victim's resilience to mass trauma and the five essential elements of mass trauma interventions. These five elements consist of safety, calmness, efficacy, hope, and connectedness, which are essential to promoting an individual's disaster mental health (Norris and Stevens 2007).

Prior research describes that building community resilience is to empower the community in order to protect both individuals' physical and mental well-being through

assuring the security of both the natural and built environments; facilitating social interactions and cultural understandings among individuals and between individuals and the government and non-government organizations; improving both the government and non-government roles of lessening disaster impacts on the public; increasing life-sustaining and essential services (e.g., food, shelter, water, employment) to the public; providing the public with disaster-related knowledge and skills; sustaining the supplies for individuals with special needs (e.g., medication for chronic diseases, medical equipment for life support); and engaging the public in the decision-making and community disaster planning, response, and recovery process (Castleden, McKee, Murray and Leonardi 2011; Jan and Lurie 2012; Joerin, et al. 2012; López-Marrero and Tschakert 2011; Nirupama and Maula 2013; Teo, Goonetilleke, and Ziyath 2013).

The refugees' shared understandings of their city's resilience from the current pilot study suggested an optimistic view of their city's resilience building. Participants thought that they already lived in a much more prosperous place than their country of origin, and their city had lots of resources to draw on during a natural disaster. Given limited knowledge about their city, they believed that the city's infrastructure, including transportation, manufacturing, hospitals, police departments, and fire departments, was well-equipped, and all these units would respond collaboratively and effectively. Importantly, they presumed that the city government operated like many governmental authorities in Asia, in a hierarchical fashion. They thought the city government worked to mobilize every single unit in the city from the top to the bottom in a public crisis and be fully responsible for meeting its residents' emergency demands. They believed that the city had already planned ahead and would not let their people die. The relationship between the city and its residents would be like "father and son." These high expectations for government preparedness can bring the participants hope in a disaster situation.

As found in Glass et al. (2009) study, hope reduced the survivors' risk of PTSD and other psychological distress during the Hurricane Katrina. However, it may also develop the participants' dependency and undermine their own ability of assessing and reducing the risk of a disaster. As time goes by, any of their unmet expectations may turn their trust to the government into a mixed feeling of anger, helplessness, and betrayal. Overall, most participants were satisfied with their community's previous emergency responses although disagreement was voiced. Some participants thought they had not experienced a severe natural disaster in Greensboro yet. Therefore, it was unsure of how successful the city would react to a severe natural disaster in the future.

Although the participants seemed to have faith in the City of Greensboro's response to a natural disaster, much of their perception of the city did not seem to be based on conclusive evidence. During the interviews, the participants expressed their uncertainties and intended to use the words like "I wish," "I guess," and/or "I assume" to describe their city's emergency preparedness. They were more willing to link back to measure their

own ethnic community's preparedness to a natural disaster, where they had a stronger sense of belonging.

A large body of literature has raised the concern about refugees being detached from the mainstream of their resettlement countries due to language barrier, discrimination, lack of access to resources, unemployment, lack of social capital, and loss of social identity/roles (e.g., Nawyn, et al. 2012; Stewart et al. 2008; Warfa, et al. 2012). Research done with refugees from Southeast Asia, Europe, and Africa has pointed out that linguistic and acculturation difficulties are the major contributors to refugees' social isolation, poverty, loss of social and political power, loss of environmental mastery (e.g., Beiser and Hou 2001; Colic-Peisker and Walker 2003; Miller et al. 2002). The rejection of foreign qualifications or education also attributed to the depreciation of their valuable social roles and their loss of efficacy in being integrated into their host society (Nawyn et al. 2012). Challenges encountered by the current Vietnamese community are consistent to the previous research findings, which separates them from the City of Greensboro, a geographically defined community. For Vietnamese, community is more like a place where people who have the same ethnicity and share the common culture and experiences live.

The Vietnamese ethnic community is a socially vulnerable community to a natural disaster as it was defined by the social scientists. Social vulnerability is part of hazard vulnerability, which evaluates the preconditions that can determine the susceptibility and severity of disaster impacts (National Academy of Sciences 2006). Using county-level socioeconomic and demographic data, Cutter and her colleagues (2003) constructed the Social Vulnerability Index to measure a county's social vulnerability to disasters. They concluded the generally accepted factors that can influence the social vulnerability in the face of a disaster, including ethnicity, socioeconomic status, language and culture barriers, access to social and health services, employment status, social capital, and infrastructure.

A study done with 832 countywide flood events in Texas from 1997 to 2001 indicated a positive association between a flood casualty and levels of social vulnerability (Zahran et al. 2008). Unlike other citizens living in Greensboro, the Vietnamese ethnic community had limited access to information. Mostly because of language and financial barriers, the community was unable to rely on mass media to receive emergency warnings. Community members depended on receiving messages from their local churches, ethnic organizations, and refugee resettlement agencies, although they had much doubt about these organizations'/agencies' capacity to meet their emergency needs. They were uncertain that refugees would receive the information from these organizations/agencies in a timely manner during a natural disaster. Their restricted information resources impaired their ability to have an objective overall evaluation on their city's capacity of responding to a public emergency. This could further explain the reason why in this particular study, although the concept of community had been

repeatedly defined and emphasized to the study participants prior to their responding to the interview questions, which was the City of Greensboro, the participants often drew back to talk about the resilience of their own ethnic sub-community, which is much more familiar to them.

The Vietnamese community also was encountering difficulties in rapidly navigating and accessing social and health services due to language deficiency and unavailability of transportation and medical insurance. The participants expressed that refugees did not have much knowledge about how the city delivered emergency training to its general populations, though they and some other Vietnamese refugees had been exposed to some informal training at times, which did not seem to be adequate. Studies done with the Vietnamese communities in New Orleans for the impacts of Hurricane Katrina highlighted the similar disproportionate vulnerabilities that the communities were experiencing and which prevented them from mitigating and recovering from the disaster impacts, such as financial constraint, lack of health insurance and culturally competent health providers, cultural and linguistic isolation, lack of clear and consistent risk communication, and high prevalence of crime within the communities after the disaster (Airriess et al. 2008; Chen et al. 2007; Do et al. 2009; Vu et al. 2009). These vulnerabilities were also identified as the risk factors to compromise the Vietnamese New Orleanians' disaster mental health (Norris, VanLandingham, and Vu 2009; Vu and VanLandingham 2012). A positive force that was able to bring those communities back and rebuild their homes quickly after the catastrophe was the strong leadership of the local Vietnamese churches and their pastors (Airriess, et al. 2008; Leong et al. 2007).

Researchers have addressed the importance of integrating the concept of social vulnerability into every step of emergency planning, including mapping out the distribution of social vulnerability before a disaster strikes (e.g., Cutter and Finch 2008; Fekete 2009; Morrow 1999; Yeletaysi et al. 2009). Cutter and Emrich (2006) suggested that a one-size-fits-all approach might no longer be effective to disaster preparedness, response, and recovery, and a more tailored approach should be developed to address each individual community's social vulnerability. Birkmann (2007) discussed three techniques, including the hotspots technique, the Americas Index, and the Community-based Risk Index, can be applied to assessing the levels of social vulnerability and then setting up the priorities for risk management and prevention of loss. As a sub-community in Greensboro, the current Vietnamese refugee community's challenges in overcoming a natural disaster more or less reflected the city's challenges of its overall disaster planning and preparedness. The City of Greensboro's emergency planning may consider taking social vulnerability analysis into account and prepare for a disaster at both macro-level (e.g., the City community) and micro-level (e.g., Vietnamese ethnic sub-community) in order to minimize the disaster aftermaths.

Limitations

This is an exploratory study. Due to the small sample size and the sampling method, the study findings may not be adequate enough to represent other Vietnamese refugees. The findings need to be generalized cautiously to refugee populations living in other areas. Also, loss or distortion of information may have occurred while the questions and responses were interpreted back and forth among the participants, interpreters, and researchers. Finally, although the researchers have been very much aware of the objectivity during the data collection and interpretation process, personal bias could still be introduced intentionally.

Implications for Practice

Despite the study's limitations, the results highlighted several directions for public health professionals to improve refugees' current perspectives on their community's resilience and prepare them for a natural disaster at a community level by addressing refugees' own ethnic community's social vulnerabilities and connecting them to the mainstream of the society. First, public health professionals may consider helping refugees accurately manage their expectations of their city's competence in responding to and recovering from natural disasters. The participants in this study lacked information of the city's actual economic situations, the capacity of its infrastructure, and availability of social support and social networks; they simply believed that no matter what, the city would meet everyone's emergency needs because the city would not let its people die. More tailored information should be delivered to refugee populations through increasing their communication channels.

It is also important to inform targeting population about existing community resources. Participants had limited knowledge about identifying community resources that could be utilized in a public crisis. Other than asking for assistance from their already overwhelmed local refugee organizations/agencies, they were not fully aware of how to access other community resources or whether they are eligible to receive these sources. It would be useful to provide refugees with visual aids accompanied by explanations regarding how this city government and other entities in the community are administered and operated on a daily basis and in a disaster. Moreover, enhancing partnerships between local refugee communities and their organizations/agencies would help to expand the refugees' social support and social networks especially in the face of a public disaster.

The findings suggested that the participants thought that they would heavily depend on these local organizations/agencies to be their representatives and gatekeepers for most of the time but they were not well connected with these organizations and agencies due to a variety of reasons. Finally, it is important to facilitate multiethnic population groups' collaboration for a public emergency. It is especially critical for an individual ethnic

community to learn how to cross ethnic communities' boundaries during a public disaster in order to share resources and develop mutual aids. Public health professionals can serve as a bridge or an agent between refugee communities and the broader community.

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