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PRELIMINARY REPORT

Exploring the experiences and learning of young primary care physicians in disaster-affected areas: A qualitative study on the Great East Japan Earthquake

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Abstract

Background: Primary care physicians (PCPs) play a critical role in disaster medicine. However, it is unclear how PCPs who provide chronic support to disaster-affected areas learn from their experiences.

Methods: This qualitative study investigates the learnings of young PCPs who provided medical care during the chronic phase of the Great East Japan Earthquake disaster.

Results: Thematic analysis of interviews with five physicians revealed the challenges faced by them and their learnings in providing medical support to disaster-affected areas.

Conclusions: They not only learned medical skills but also humanistic aspects such as empathizing with the survivors' loss.

KEYWORDS
disaster medicine, family medicine residents, Great East Japan Earthquake, primary care physicians, qualitative research

1 | INTRODUCTION

Primary care physicians (PCPs) play an important role in disaster medicine, particularly in supporting chronically affected areas.[1,2] PCPs must be trained in disaster preparedness to ensure that they have the knowledge and confidence to lead or participate in disaster response.[1,3] Medical schools, residency programs, and continuing medical education courses should emphasize disaster preparedness and provide PCPs with the tools they need to become familiar with and confident in assuming a role in disaster preparedness.[1,4] PCPs can address the hidden burden of healthcare in disasters by providing continuity of patient care.[2,3] Furthermore, PCPs can assist in the identification of vulnerable populations and the provision of preventive care to reduce the impact of disasters on these populations, as well as in the management of chronic diseases in disaster-affected areas.[2,3] However, it is unclear how PCPs who provide disaster relief in disaster-affected areas feel and learn from their experiences. The goal of this study was to investigate the subjective experiences and learnings of young PCPs who traveled to affected areas to provide medical assistance during the chronic phase of the Great East Japan Earthquake disaster.

2 | METHODS

This was a qualitative study that looked into the subjective experiences of physicians who went to the disaster area. This study is based on the constructivist paradigm that human knowledge

is socially constructed, not discovered. Following the Great East Japan Earthquake on March 11, 2011, the Japan Primary Care Association established a project team called the "Primary Care for All Team (PCAT)," to assist the affected areas.[5] In October 2011, PCAT launched a project to send PCPs, primarily senior family medicine residents, to Motoyoshi Hospital in Kesennuma City, which was severely damaged by the earthquake and tsunami. Out of the total population of Kesennuma City of about 70,000, Motoyoshi Town had a population of about 10,000 people (aging rate of 31%), and Motoyoshi Hospital was the only hospital in town at the time. It was a small hospital with 38 inpatient beds and two full-time physicians that was damaged by the tsunami that swept through the hospital's first floor. Following the earthquake, the hospital was left without a full-time physician, so volunteer doctors from across Japan stepped in to help. Following that, the inpatient function was suspended, and only outpatient care was made available.

Eight PCPs (approximately one per month) were recruited by PCAT and sent to the Motoyoshi Hospital between January 2012 and July 2012. Medical support consisted mainly of outpatient and on-duty care, but also included some home visits. They had received advanced training in Psychological First Aid[6] and the medical situation in disaster-affected areas. Five of these physicians consented and participated in the interviews after the support activities were completed. The interviews were conducted individually online and took place between February and July 2012, by the first author (DS) and the last author (HO). Both interviewers were primary care physicians and served as mentors and program directors for the volunteer doctors in this program. During the interviews, participants were asked about what they learned from their experience and how it has been applied to their current practice, as well as what could be improved in the program. Each interview was conducted once and lasted from 30 to 46 min. Verbatim transcripts were formed from the recorded data, coded using thematic analysis,[7] and themes were generated. The data were analyzed iteratively and continuously, and themes were triangulated among researchers for validity. As a theoretical framework, we adopted experiential learning theory to analyze human learning from the standpoint that human learning is constructed through experience.[8] Following this theory, the thematic analysis of participants' learning focused on how they reflected on what they learned from their field experiences and what lessons or principles they drew from them. This study was conducted with the approval of the Ethics Committee of the Japan Primary Care Association (No. R120201).

3 | RESULTS

Table 1 shows the background of the five senior family medicine residents who participated in the study. Table 2 shows the results of the thematic analysis of the interviews, which revealed three categories and nine themes.

3.1 | Tackling disaster-related problems

In a practice context that they had never experienced before, the young family physicians were confronted with cases involving complex psychosocial issues and disaster-related mental health cases. Through trial and error, they were able to cope and continue their practice in a situation where resources such as specialists and specialized testing equipment were limited.

TABLE 1 Background of the study participants.

ID	Position	Gender	Age	Post-graduate year	Period of being sent	Interview time (min)
1	Senior family medicine resident, second year	Male	20s	4	January 2012	46
2	Senior family medicine resident, fourth year	Male	20s	6	March 2012	45
3	Senior family medicine resident, second year	Male	20s	4	April 2012	33
4	Senior family medicine resident, second year	Male	30s	6	June 2012	30
5	Senior family medicine resident, second year	Female	20s	4	June 2012	30

TABLE 2 Results of the thematic analysis.

Categories	Themes
Tackling disaster-related problems	Practice related to complex psychosocial issues
	Disaster-related mental health practice
	Practice in inexperienced contexts
	Trial and error in areas with limited resources
Importance of training support	Usefulness of pre-training before entering the field
	Importance of support for practice-based reflection
Learnings by being with people	Solidarity through being together with local people
	Empathizing with people who have experienced loss due to disasters
	Learning by interacting with physicians from various backgrounds

> Yes, one thing that was useful was that I was able to treat patients in a setting and patient population that I had not experienced before. Because the target population was people who had experienced the earthquake, we treated a certain percentage of people with PTSD or other mental disorders related to the disaster.
>
> (Theme "Practice in inexperienced contexts," ID 1)

> I also participated in a children's mental health care study group that was being held by local childcare workers and others. Everyone was crying and talking about their experiences as they recalled what they were going through at the time of the disaster. At that time, I was able to see things from a different perspective.
>
> (Theme "Disaster-related mental health practice," ID 3)

3.2 | Importance of training support

The sent physicians emphasized the importance of pre-training before entering the field. They stated that learning disaster-related medical knowledge ahead of time was extremely beneficial. They also understood the significance of reflection on their own practice. Indeed, their regular online reflections with their supervisors appeared to have given them confidence and insight into their practice in a solitary setting.

> Yes, at the end of the day, Dr. S always asked me, "How was your day?" I was able to discuss any problems I had. I felt that I had not done a proper reflection of the training so far, and that it was a good opportunity for me to reflect on my own experiences.
>
> (Theme "Importance of support for practice-based reflection," ID 5)

3.3 | Learning by being with people

The young physicians learned more than just medical practice by practicing in the affected areas. In particular, they felt a sense of solidarity by being with the locals and empathy for those who had suffered loss as a result of the disaster. They also stated that they learned a great deal from interacting with doctors from various backgrounds, particularly from their professionalism in dealing with people in affected areas.

> I also had the opportunity to see the actual disaster area and hear the real voices of the people there, and I think those experiences were really significant. Since I was there for a month, I was able to see the reality of the situation, which was not only superficial. I also learned a lot after spending time there.
>
> (Theme "Empathizing people who have experienced loss due to disasters," ID 2)

4 | DISCUSSION

This study revealed the difficulties encountered by young physicians-in-training and their learnings while providing medical assistance to disaster-affected areas during the chronic phase of the disaster. The findings indicate that, with adequate support, young PCPs can cope to some extent with the complex and difficult medical challenges of the disaster area, and that there is still much to learn in the disaster area.

Disaster medicine is a specialized field that necessitates professional assistance, particularly when dealing with disaster-related psychological and psychiatric issues.[9] However, the physicians who were sent this time were able to handle complex and difficult cases in the field relatively well. This could be because specialized treatments for psychiatric symptoms were less of a concern, rather than how to deal with psychosocial factors that primary care physicians frequently encounter. Furthermore, the physicians empathized with the loss of survivors who had lost relatives in disasters, and they learned a lot from their solidarity with them. According to reports, post-disaster recovery necessitates a shared sense of solidarity, which develops through a collective expression of grief,[10] and social support is an important component of disaster recovery. It is believed that the physicians were also able to provide social support through solidarity to the survivors.

A limitation of this study is that the number of study participants was small and may not have captured the full range of their

experiences in the affected areas. Another limitation was that because the interviewers were program mentors or directors, participants may not have been able to fully express their negative thoughts and feelings.

5 | CONCLUSIONS

Young PCPs could cope with the complex and difficult medical challenges of the disaster area in the chronic phase with appropriate assistance such as pre-training and practice-based reflection. They not only learnt medical skills but also humanistic aspects such as empathizing with the survivors.

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CONFLICT OF INTEREST STATEMENT

The authors have stated explicitly that there are no conflicts of interest in connection with this article.

ETHICS APPROVAL STATEMENT

This study was approved by the Ethics Committee of the Japan Primary Care Association (No. R120201).

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