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## The contribution of short-term global clinical health experience to the leadership competency of health professionals: A qualitative study

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## Title

The contribution of short-term global clinical health experience to the leadership competency of health professionals: A qualitative study

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## Abstract

**Objectives:** Globalization has increased the opportunities for healthcare professionals working in developed countries to provide clinical and educational support in developing countries. However, how these experiences contribute to the leadership competency of health care professionals is unclear; therefore, this study explored this with the objective of analyzing the process of developing individual leadership competency.

**Design:** Qualitative descriptive study. Qualitative descriptive data were collected in face-to-face, semi-structured interviews.

**Setting:** The authors interviewed Japanese health professionals who participated in an international medical cooperation project as part of a multinational medical team between July 2017 and March 2018 and analyzed and interpreted the data using a social constructivism paradigm.

**Participants:** The authors' interviews of 20 research participants, including five nurses, five dentists, and ten doctors with an average of 15.3 years of clinical experience.

**Results:** The interviews identified 58 constituent elements related to their leadership competency, 23 of which affected the actual medical care in their own institution. The theoretical framework comprised seven primary factors: leadership concepts, teambuilding, direction-setting, communication, business skills, working with others, and self-development. The authors identified the relationships among each competency and identified differences between professions: nurses particularly reflected their empathic attitudes toward patient after global health experience; dentists tended to reflect their business skills; physicians tended to reflect their leadership concepts and teambuilding.

**Conclusions:** This study clarified the leadership competency gained through short-term global health clinical experience and the process of individual leadership competency development.

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The findings provide expected learning competency for those considering medical practice in developing or other countries in the future.

For peer review only

## Strengths and limitations of this study

- This study clarified leadership competency gained through the global health experience and the process of individual leadership competency development.
- Researchers focused on the members of a multinational team of physicians, dentists, and nurses.
- The study findings will provide useful information for developing leadership competency in health professionals.
- Further investigation of how health professionals adopted their leadership competency upon their return to their own worksites would be required.

## Introduction

With globalization, the opportunities for health professionals working in developed countries to conduct medical practice and provide educational support in developing countries are multiplying.<sup>1</sup> Many universities offer students and advanced medical personnel opportunities to undergo short-term medical training in developing countries.<sup>2</sup> Through global clinical health experiences, health professionals not only become aware of what they did not notice previously, but they can also improve their interactions with others.<sup>3</sup> Both quantitative and qualitative studies have been conducted on health professionals and students who provide healthcare services in developing countries to determine the type of learning process that occurs in these health professionals.<sup>4-6</sup> Various research has been conducted on host countries that have accepted medical support;<sup>7-8</sup> however, how these experiences are utilized by health professionals in their own fields is unclear. Moreover, to our knowledge, no study has assessed the differences in each profession. This study aimed to explore how the practitioners' short-term global clinical health experiences were translated into clinical practice from the perspective of experiential learning.

The experiential learning theory was established by a multidisciplinary integration of knowledge through many academic disciplines.<sup>9</sup> Experience is the foundation of learning, and learners actively build their own experiences. Learning and experience are closely linked and cannot be separated.<sup>10</sup> "Learning" refers to changes in knowledge and skills, and "experience" refers to mutual interaction with the outside world that promotes changes in knowledge and skills.<sup>11</sup> The concept of "experiential learning" refers to the ways in which a variety of experiences are affected by sociocultural norms and the subjectivity of agents. This idea can be differentiated into "external experiences," in which events are the subject of learning, and "internal experiences," in which past experiences accumulated in the memory become the

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3 conditions for learning.<sup>12</sup> The model of experiential learning as presented by Kolb is the most  
4 influential of the theories that attempt to explain individual managers' experiential learning  
5 and has been applied in a variety of fields, including education, psychology, medicine, nursing,  
6 and general management.<sup>13-14</sup> However, Kolb's experiential learning model does have its  
7 limitations, particularly in connection with the introspection of experiences, and it has also  
8 been criticized for not considering social factors, unconscious learning, and higher meta-  
9 learning processes.<sup>15-16</sup> In response to these criticisms, other researchers have proposed models  
10 that relate to meta-learning in which experience itself can be transformed through  
11 introspection.<sup>17</sup>  
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26 Experiences that are related to creating change and transcending boundaries can be seen as  
27 developmental challenges, and it is evident that the experience of working beyond boundaries  
28 is connected to the development of human resources.<sup>18-19</sup> It is further clear that culture shock  
29 can contribute to the development of leadership.<sup>20</sup> Fulfilling innovative duties in the workplace  
30 could allow managers to learn, and challenging situations could allow individuals to challenge  
31 traditional ways of thinking and behaving, thereby creating the motivation to bridge the gap  
32 between an individual's current capabilities and those they desire. These experiences of  
33 working beyond boundaries, also known as developmental challenges, lead to the acquisition  
34 of abilities.<sup>21</sup> By transcending boundaries and overcoming barriers to teambuilding, individuals  
35 can learn valuable lessons. With the creation of teams that cross boundaries and by being part  
36 of such teams, members can increase their knowledge of other disciplines, expand networks  
37 with colleagues in other organizations, and enhance leadership competencies.<sup>22</sup> Leadership is  
38 an important required competency for health professionals to demonstrate practical skills and  
39 effective team management in complex organizational and human relationships in various  
40 environments.<sup>23</sup> High-quality healthcare relies on developing healthcare professionals'  
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3 leadership, thereby optimizing health system performance.<sup>24</sup> The BEME review showed the  
4 evidence used in the leadership development of medical faculty members,<sup>25</sup> demonstrating that  
5 the use of experiential learning and reflective practice contribute to positive outcomes that  
6 promote leadership. However, relationships between cross-boundary experiences in the health  
7 professionals and their leadership development have not been identified.  
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17 This study examined the contribution of a short-term global clinical health experience in  
18 various Asian-Pacific countries to the leadership competency of members of a multinational  
19 team of physicians, dentists, and nurses. We conducted a qualitative descriptive study with the  
20 participants' consent. The objective was to analyze the process of developing individual  
21 leadership competency from the perspective of experiential learning. In addition, we explored  
22 their relationship with daily clinical practice to clarify the differences between various types of  
23 jobs. The study findings will help in guiding mentors who conduct global clinical health  
24 training for undergraduate students and residents, and will also provide useful information for  
25 developing leadership competency in health professionals.  
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## 40 **Method**

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42 We followed the Standards for Reporting Qualitative Research recommendations.<sup>26</sup>  
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### 48 ***Setting***

49 Following the Sumatra earthquake and Indian Ocean tsunami,<sup>27</sup> the US Army organized the  
50 "Pacific Partnership," a multilateral project that aimed to improve humanitarian assistance  
51 and disaster relief capacity. Under this project, a US navy boat conducts annual visits to  
52 several countries in the Asia-Pacific region. Through cooperation with government agencies,  
53 the military, and non-governmental organizations (NGOs) of the participating countries, the  
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3 Pacific Partnership aims to improve mutual understanding and strengthen cooperation among  
4 related countries by conducting medical activities, facility repair, and cultural exchange  
5 programs. We adopted this project as a short-term global health experience in our study to  
6 explore how the experiences are translated into clinical practice, and our first author actually  
7 participated in the 2016 and 2017 Pacific Partnership as an NGO member and developed  
8 relationships with research participants. Japanese health professionals provided medical  
9 support in Palau (Pacific Partnership 2016) and Vietnam (Pacific Partnership 2017) for  
10 several weeks. The participants lived and worked with the visiting health professionals from  
11 the US, the UK, and Australia on military transport ships and conducted outdoor medical  
12 practice, ambulatory care support, and educational activities for each job category.  
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### 28 ***Participants***

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30 We recruited 20 research participants, including five nurses, five dentists, and ten physicians  
31 who had participated in the 2016 or 2017 Pacific Partnership and who had provided informed  
32 consent for study participation. The mean age of the research participants was 40.0 years  
33 (range, 29–57 years), and the mean duration of clinical experience was 15.3 years (range, 4–  
34 34 years). Table 1 provides their profiles.  
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### 45 ***Data collection***

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47 In this qualitative descriptive study, we conducted face-to-face, semi-structured interviews  
48 using an audio recorder. Each interview lasted 30–90 minutes. The interviews took place at  
49 the participant's place of clinical practice between July 2017 and March 2018. To ensure a  
50 safe environment that would elicit the interviewees' straightforward beliefs, only the  
51 participant and the interviewer were present in these interviews. An interview guide was used  
52 to clarify how the participants viewed their experiences and how those experiences  
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3 influenced their leadership competency (see Fig. 1). The study authors agreed that the  
4 interview guide suited our research purpose and that the contents of the interview guide did  
5 not change over time. On the other hand, each of the interviews were flexible, and the  
6 participants were allowed to take the discussion in any direction. The audio-recorded data of  
7 the interviews were transcribed verbatim immediately after each interview by the authors.  
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15 The Institutional Review Board of the University of Tokyo approved this study (11562).  
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### 19 ***Data analysis***

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21 We analyzed the data with multiple names using the Steps for Coding and Theorization  
22 method and performed a theoretical evaluation from the perspective of a social  
23 constructivism paradigm.<sup>28</sup> For the targeted number of research participants, we conducted  
24 interviews for multiple occupations until theoretical saturation was obtained. After data  
25 collection and individual analyses, we agreed that we had achieved theoretical saturation,  
26 with no new theoretical concepts identified in the data set, and we achieved a complete  
27 understanding of the identified concepts. Member-checking was conducted twice by the  
28 research participants after the interviews and analyses.  
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### 42 **Results**

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45 Through the interviews, we identified 58 constituent elements related to the competency of  
46 leadership (see Table 2). We divided them into “during” and “after” the actual global clinical  
47 experience. Among them, 23 of the elements that affected the actual medical care in their own  
48 institutions were recognized. The theoretical framework comprised seven primary factors:  
49 leadership concepts, teambuilding, direction-setting, communication, business skills, working  
50 with others, and self-development.  
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### ***Leadership concepts***

The experience of participating in the global clinical health cooperation project became a trigger that often led to the establishment of a leadership style. Although we can see some differences in each health professional and their own experiences, many health professionals saw the change in location as an impetus for change. To quote one participant: “There are many developing nations, and I feel that Japan is quite advanced in terms of its medical standards. Instead of simply providing assistance with medical care, I think it is important to educate local medical practitioners that are providing such care. Furthermore, education is obviously necessary, but I also felt that the perspective of training educators was necessary.”

(Participant D3)

Health professionals self-evaluated their leadership in highly uncertain situations during their actual global clinical health experience. Some noted that after the experience, they continued to strengthen the leadership concept of delegation of authority that had been gained through their short-term global health experience: “I appointed a person-in-charge in each department, asked them to organize the department, and then supervised them during the subsequent activity....Although I had not thought about team medical care before participating in the program, I allocated more responsibilities to staff members in my hospital after seeing the professionalism of the participants.” (P1)

### ***Teambuilding***

The project helped health professionals recognize that a cooperative workplace led to more successful policy decisions and a better understanding of diversity and their colleagues’ environment, and they meta-recognized past work experience of their own: “The biggest achievement from global health experience is that one’s perspective as a medical professional

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3 broadens by participating....Although we were different in age and positions, my team  
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5 members were great people. Having peers with whom I wanted to work with together again  
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7 was the biggest reward from this program.” (D4)  
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12 The participants strengthened their awareness of teambuilding and shared leadership, which in  
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14 turn led to inter-professional education: “Through my experience abroad, I was able to  
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16 experience that collaboration between different professions is important in any environment. It  
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18 can serve as an educational tool for the future because even after participants come back to  
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20 Japan, it will lead them to strengthen the collaboration between different professions on-site.”  
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22 (N5)  
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### 26 27 28 *Direction-setting* 29

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31 The experience of the global clinical health cooperation project urged the participants to be  
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33 more conscious of goal-setting and policy decision-making as an organization. They developed  
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35 cultural competency: “The significance of this program is that participants can learn about how  
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37 things are done in other countries because of the diversity of members within the program. It  
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39 also becomes a learning experience on the diversity of management.” (D2)  
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45 The experience contributed to a better understanding of the participants’ own work  
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47 environments as well as how the environment and the team process strengthened the awareness  
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49 of target-setting and backward-development. In addition, they strengthened their viewpoint of  
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51 leader development through acquiring inter-subjectivity: “The place where this program’s  
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53 activities took place had no educational environment even if people wanted to learn about  
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55 performing medical practice. Therefore, we are preparing to establish a structure within our  
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3 facility in which we can accept foreign students to study. I would like to increase both the  
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5 quality and quantity of local health professionals.” (D4)  
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### 10 ***Communication***

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12 Not only during but also after participating in the global health cooperation project, the  
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14 participants increased their emphasis on communication at their work site, recognizing the  
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16 project as a place to nurture global-thinking and communication skills. Strengthening their  
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18 awareness of communication led to education: “While I felt that when I go to a new place and  
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20 work with people I meet for the first time, it is necessary to first properly talk with one another  
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22 when a relationship of trust has not yet been established, I also learned that communication in  
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24 my daily medical practice settings can take place because there is an existing relationship of  
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26 trust.” (N4)  
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### 32 ***Business skills***

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34 Through unexpected situations and conflict management, the participants were particularly  
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36 influenced with respect to their consciousness of business skills in the field. They also  
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38 recognized their own individual work style: “I did not know what to do because there was not  
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40 even an option, and surgery and medicine would obviously not improve the situation...By  
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42 providing medical treatment in an environment that is different from my usual one, I felt that I  
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44 had been practicing medical care by relying too much on tools. It made me recognize that I am  
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46 blessed with my medical environment.” (P7)  
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53 The participants also reflected on their own business skills, and as a result reinforced these  
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55 skills and applied them to simulation tools: “While there were a few items that we had a  
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57 shortage of during our activities, there were quite a few items that we had leftovers of. I thought  
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3 that it is important to take necessary items with us and have a logistic system in place to manage  
4 them when a disaster actually occurs...I came to be more aware of management and  
5 collaboration after the medical cooperation project.” (N3)  
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### 11 ***Working with others***

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14 Through the multilateral project that aimed to improve humanitarian assistance and disaster  
15 relief capacity, the health professionals established a relationship of trust in the field and made  
16 a more conscious effort to empower other health professionals. Furthermore, back in their  
17 workplace, the participants leveraged their experience into developing others and career  
18 support, and strengthened credit accumulation and cooperation among their staff members:  
19 “Both the students and my colleagues became interested in this program through my activity  
20 report. I want to provide as many people as possible with the opportunities that I was given.”  
21 (N2) “I had the opportunity to contact people from other departments and make adjustments  
22 before the program took place, helping me acquire the habit of trying to understand the other  
23 person’s organizations.” (D2)  
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### 40 ***Self-development***

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42 Through the global health experience, some participants experienced a paradigm shift that  
43 became a trigger for career advancement and self-development: “Although there were  
44 differences depending on the environment, I felt that I had to hone my regular skills so that I  
45 could also give instructions after seeing the accurate medical techniques of the local physicians.”  
46 (P2)  
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### 56 ***Relationships between themes***

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3 We identified several types of relationships between the themes described above (see Fig.2).  
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5 Experience in managing conflict during the global health experience led the health  
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7 professionals to reflect on their communication and business skills: “I could see that people  
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9 abroad think in a completely different manner even if I didn’t interact with them on a regular  
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11 basis....I made all the schedules to indicate who would be taking the day off. It was difficult to  
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13 coordinate because there was a language barrier and there were complaints that people weren’t  
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15 getting many days off.” (D1)  
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22 Additionally, the global health experience encouraged participants to motivate and empower  
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24 others and encouraged “teambuilding”: “The biggest achievement that one can get by forming  
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26 a team with people they just met is the ability to communicate effectively. This experience can  
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28 be useful even in a different environment.” (D3)  
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33 The development of individual leadership competency associated with leading a medical care  
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35 team was related to “understanding the environment of other cultures” and “teambuilding.”  
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37 One participant stated this: “We did actually provide outdoor medical care as if it was an actual  
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39 field hospital. I keenly felt the difficulties of practicing medical care by having to start by  
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41 preparing the tools. I learned how difficult it is to work in an environment with hygiene  
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43 standards that are completely different from those of Japan.” (P4)  
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49 Finally, the concepts of “motivating and empowering others” and “lifelong learning” became  
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51 associated with the actual delivery of medical care: “Coming into contact with various health  
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53 professionals in a foreign country will be a good experience to have. I hope that the participants’  
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55 perspectives will broaden through their interactions. On the contrary, engaging only in one’s  
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3 regular medical care environment will limit their perspectives. I want to share what I learned  
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5 with my colleagues.” (P6)  
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### 10 *Differences in the professions*

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12 Some differences in each profession were identified through the data analysis.  
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#### 16 *Nurses*

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18 Nurses particularly improved their empathic attitudes toward colleagues and patients as a result  
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20 of the global health experience. Consequently, through perspective gained from work in the  
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22 field, they established servant leadership with the mentality of understanding others through  
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24 relationships of trust, stating: “A relationship in which each person can see the other person’s  
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26 face is extremely important...After participating in the program, I am more conscious of  
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28 listening to my peers while on-site. With my staff members in particular, I check what they are  
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30 having troubles with and provide everything I can for their growth.” (N1)  
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#### 37 *Dentists*

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39 Dentists tended to reflect on their business skills after the global health experience. The  
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41 experience affected their consciousness of their business skills at their own work site and their  
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43 application of these skills to the leadership concept: “Instead of relying on the limited resources  
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45 during medical treatments, I became able to think about how to replace the resources with  
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47 something else and share this finding with colleagues.” (D2) Another dentist stated: “The  
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49 attitude to provide the best medical care in environments with limited resources like where the  
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51 activity took place is important. A similar mindset is also needed when one transfers from a  
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53 hospital with enhanced facilities, like a university hospital, to a regional hospital with limited  
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55 resources.” (D3)  
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### *Physicians*

After participating in the project with the multinational medical team, physicians recognized the importance of teambuilding at their own work site. They recognized that they became conscious of strengthening their leadership and goal-setting at their own organizations: “On-site, I became able to make adjustments well by transferring some of the authorities to the staff members and having them practice and make corrections instead of taking on all the responsibilities as a department director....I feel that finding what each person can do in their profession and allocating duties accordingly can draw out their abilities.” (P1) Another physician stated: “Seeing case examples of diseases that cannot be treated on-site made me re-acknowledge just how fortunate the Japanese medical environment is.” (P8)

## **Discussions**

We identified seven leadership competencies strengthened by the short-term global clinical health experience. In addition, we clarified relationships among each leadership competency gained through the experience and the different types of leadership competency among various types of jobs. Previous studies have shown the potential benefits for global clinical health participants in terms of increased awareness of global health issues, gaining new medical information, capacity-building for clinical problem solving, and an improved sense of professional satisfaction.<sup>3,6</sup> Our results contribute to the literature with additional findings regarding the enhancement of leadership competency.

We considered several factors contributing to how health professionals can gain leadership competency through the global experience and then add it to their clinical practice. Collaboration among the multinational team of health professionals certainly led to increased

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3 leadership competency. While leadership and collaboration are highly valued and potentially  
4 conflicting competencies in clinical practice,<sup>24</sup> by managing conflict and difficult cases in the  
5 global clinical health experience, participants collaborated with each other, enhancing their  
6 leadership competency. From the perspective of experiential learning, the global health  
7 experience was an external experience by health professionals that contributed to their daily  
8 clinical practice as an internal experience.<sup>12</sup> Second, understanding the environment of other  
9 cultures forms the basis for gaining leadership competency as shown in the relationships among  
10 the themes. Experiencing cultural differences becomes conscious behavior through contact  
11 with new situations and cultures in which unconscious and implicit cultural behavior and  
12 sensibilities are required.<sup>29</sup> The global health experience offered the opportunity for  
13 participants to learn about themselves and their own leadership,<sup>30</sup> and they continued these  
14 leadership competencies in their own institutions upon their return. In this process, we observed  
15 that a meta-learning process occurred in each health professional as a result of their global  
16 health experience, and that this process led to the enhancement of their leadership competency  
17 in each context.

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40 Our results clearly demonstrate that the leadership concept is perceived differently by  
41 individuals from different professions. Nurses particularly strengthened their empathic  
42 attitudes toward patients and colleagues, and they strengthened their leadership by establishing  
43 a mentality of understanding and relationships of trust in their workplace. Nurses tend to be  
44 well trained in an empathetic attitude in their careers,<sup>31</sup> which supports our result. Meanwhile,  
45 dentists particularly focused on their business skills. In the clinical environment in many  
46 countries, treatment must be done with limited equipment, and dentists often solved these  
47 problems while leveraging their own business skills. As ethical stewardship of health care  
48 resources are important for health professionals,<sup>32</sup> participant dentists became aware of the  
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3 ethics of waste avoidance in their daily practice overseas. Consequently, they improved their  
4 business skills and brought those improved skills to their own jobs after their participation.  
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6 Finally, physicians recognized the importance of teambuilding and after the global health  
7  
8 experience strengthened their leadership and goal-setting in their own organization. Physicians  
9  
10 have professional obligations and a responsibility to develop public roles.<sup>33</sup> The global health  
11  
12 experience presented physicians with many opportunities to coordinate and make decisions  
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14 with other occupations, thereby strengthening their competencies related to leadership and  
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16 teambuilding.  
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24 Our findings show important parallels with earlier studies, including the BEME review that  
25  
26 showed that leadership competencies are gained through faculty development programs.<sup>25</sup>  
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28 These studies examined the prevalence and characteristics of faculty leadership development  
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30 programs at academic health centers and found that conflict management or interpersonal  
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32 effectiveness are emphasized but business skills and lifelong learning are part of faculty  
33  
34 development.<sup>34</sup> In this study, we pointed out various types of leadership competency gained by  
35  
36 health professionals through a global clinical health experience, which supports the idea that  
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38 the use of experiential learning and reflective practice contribute to positive outcomes in  
39  
40 promoting leadership. Furthermore, we identified a link between cross-boundary experiences  
41  
42 and the participants' leadership development. It would be useful to elucidate the differences in  
43  
44 the learning process between faculty development and experiential learning and examine the  
45  
46 concept of tacit knowledge that is difficult to transfer to another person.<sup>35</sup> In general, faculty  
47  
48 development aims to ensure that health professionals have the knowledge and skills for  
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50 leadership development, while in experiential learning, health professionals learn leadership  
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52 competency as tacit knowledge through the experience itself without formal instruction.  
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3 One limitation of this study is we had interviewed only Japanese health professionals who  
4 participated in the short-term global clinical health experience. As there is no leadership that  
5 exerts a common effect beyond culture in a previous study,<sup>36</sup> we should investigate the process  
6 of developing individual leadership competency in other countries. Another limitation of this  
7 study is we focused on health professionals who mainly have their own specialty (mean  
8 duration of clinical experience is 15.3 years). Leadership is one of the important competencies  
9 required to demonstrate practical skills in effective team management in complex organizations  
10 at all levels.<sup>23</sup> Therefore, we believe that it is necessary to investigate the leadership  
11 development process through global clinical health experiences in the younger generation,  
12 including residents and undergraduate students. Finally, the actual interpersonal interaction in  
13 each health professional's institution is not made clear in this study. Although we identified  
14 the contribution of the short-term global clinical health experience to the leadership  
15 competency as an outcome, the organizations where the participants work are complex and  
16 dynamic social environments.<sup>37-38</sup> Therefore, further investigation of how health professionals  
17 adopted their leadership competency upon their return to their own environment would be  
18 required.  
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## 42 **Conclusion**

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45 This study clarified the leadership competency gained through a short-term global clinical  
46 health experience and the process of individual leadership competency development. The  
47 competencies gained by nurses, dentists, and physicians were different. The findings provide  
48 expected learning competency for those considering clinical practice in developing or other  
49 countries in the future. The study findings may also help in guiding mentors who conduct  
50 global clinical health training for health professionals.  
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## Contributors

MH was the principal investigator for this study, conducted the interviews, and authored the paper. HO contributed to the design of this study. DS analyzed and coded all data with MH. ME checked the results, advised edits, and approved for public release. All authors have agreed with the final version of this paper.

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## Competing Interests

Non-financial associations that may be relevant to the submitted manuscript.

## Ethical approval

This study was deemed exempt by the Institutional Review Board of the University of Tokyo (IRB ID 11562).

## Provenance and peer review

Not commissioned; externally peer reviewed.

## Data sharing statement

No additional data are available.

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**Table 1. Character of research participants**

No	Sex	PGY	Type of institution	Position	Participation
N1	F	15	Community hospital	Staff	2016
N2	M	4	Nursing home	Staff	2017
N3	M	20	Self-Defense Forces	Staff	2016
N4	F	10	University	Graduate student	2016
N5	M	17	University	Lecturer	2016
D1	M	15	Self-Defense Forces hospital	Staff	2016
D2	M	9	Self-Defense Forces	Staff	2016
D3	M	34	University hospital	Professor	2016
D4	M	23	Community hospital	Manager	2017
D5	M	11	Self-Defense Forces hospital	Staff	2016
P1	M	16	Self-Defense Forces hospital	Manager	2016
P2	M	21	University hospital	Assistant Professor	2017
P3	F	13	Community hospital	Staff	2017
P4	M	13	Community hospital	Staff	2016
P5	M	14	Community hospital	Staff	2016
P6	M	19	University hospital	Lecturer	2016, 2017
P7	M	9	Self-Defense Forces hospital	Staff	2016
P8	M	8	University hospital	Staff	2017
P9	M	4	University hospital	Resident	2017
P10	M	30	University hospital	Assistant Professor	2017

N: Nurse

D: Dentist

P: Physician (Doctor)

PGY: Postgraduate year

**Table 2. Emergent themes**

	<b>During Participation</b>	<b>After Participation</b>
<b>Leadership concepts</b>	<ul style="list-style-type: none"> <li>• Fulfillment of duties</li> <li>• Recognition of individual leadership</li> <li>• Overseeing medical treatment as a specialist</li> <li>• Leveraging the individual leadership concept</li> <li>• Promoting awareness of potential leadership</li> <li>• Constructing the leadership concept</li> <li>• A place to guide change</li> <li>• Self-assessment of leadership</li> <li>• Paradigm shift on leadership</li> </ul>	<ul style="list-style-type: none"> <li>• Establishment of individual leadership style</li> <li>• Establishment of servant leadership</li> <li>• Strengthening follower-friendly servant leadership</li> <li>• Contribution of leadership concept to daily practice</li> <li>• Delegation of authority</li> </ul>
<b>Teambuilding</b>	<ul style="list-style-type: none"> <li>• Making policy decision as a practical community</li> <li>• Meta-recognition of past work experience</li> <li>• Promoting understanding of diversity</li> <li>• Strengthening the attitude of shared leadership</li> <li>• Practicing conflict management</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthening the awareness of the team building</li> </ul>
<b>Direction-setting</b>	<ul style="list-style-type: none"> <li>• Taking action based on context dependence</li> <li>• Making the medical care environment relative</li> <li>• Recognition of local context</li> <li>• Development of cultural competency</li> <li>• Awareness of target setting and backwards development</li> <li>• Making policy decisions</li> <li>• Paying attention to team direction and process</li> <li>• Understanding environment and decision making</li> </ul>	<ul style="list-style-type: none"> <li>• Recognition of individual organizational position</li> <li>• Understanding the environment</li> <li>• Reviewing target setting</li> <li>• Strengthening viewpoint of leader development</li> </ul>
<b>Communication</b>	<ul style="list-style-type: none"> <li>• Nurturing global thinking and communication skills</li> <li>• Encouraging reflection of communication skills</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthening the awareness of communication</li> </ul>

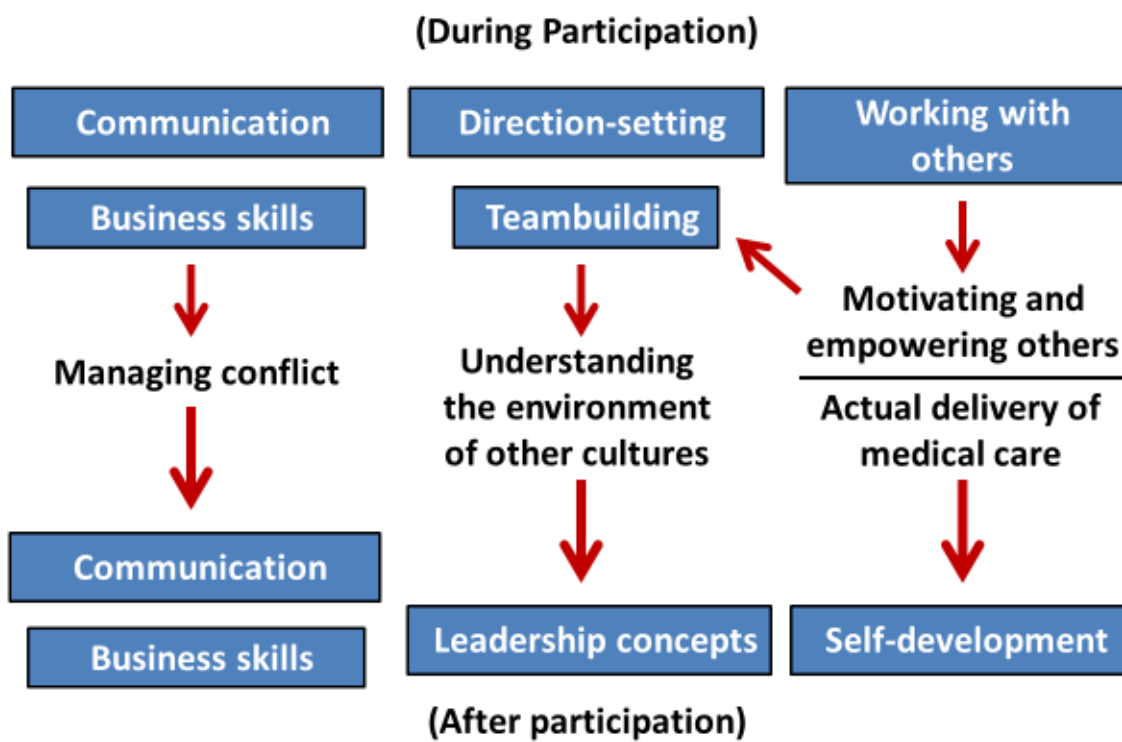
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<b>Business skills</b>	<ul style="list-style-type: none"> <li>• Strengthening business and communication skills</li> <li>• Simulation training for disasters</li> <li>• Understanding and reflection of business skills</li> <li>• Paying attention to the power relation</li> </ul>	<ul style="list-style-type: none"> <li>• Applying simulation tools</li> <li>• Awareness of business skills</li> <li>• Developing other support activities</li> <li>• Reflecting individual examination style</li> </ul>
<b>Working with others</b>	<ul style="list-style-type: none"> <li>• Seeking out new leadership concepts</li> <li>• Establishment of a trust relationship</li> </ul>	<ul style="list-style-type: none"> <li>• Empowering other health professions</li> <li>• Strengthening cooperation among staff members</li> <li>• Developing others and career support</li> <li>• Reflecting individual educational policy</li> </ul>
<b>Self-development</b>	<ul style="list-style-type: none"> <li>• Developing awareness of a sense of belonging</li> <li>• Strengthening adaptability and self-management</li> <li>• Paradigm shift as a professional</li> <li>• Seeking self-development opportunities</li> <li>• Recognizing the necessity of total management</li> </ul>	<ul style="list-style-type: none"> <li>• Reconsidering empathic attitude towards patients</li> <li>• Establishing self-management</li> <li>• Motivation for career advancement and self-development</li> <li>• Lifelong learning</li> </ul>

## Figure 1. Interview guide

1. What is your job category (specialty/department), experience level (number of years), type of participation, and number of times you have participated in the Pacific Partnership?
2. Please explain the medical service you usually perform.
3. What has been your major medical experience thus far?
4. If you have had overseas experience (including medical experience) before joining the Pacific Partnership, please provide details regarding it.
5. Why did you choose to participate in an international medical cooperation project as part of a multinational medical team in the South Pacific (Pacific Partnership)?
6. What are your personal impressions of the Pacific Partnership?
7. What impact did the impressive episode (answer 6) have on your own medical treatment (attitude toward medical practice or work) and business management?
8. Describe your experience of providing team-based medical practice in a real situation, specifically in context of a cross-cultural exchange with a multinational medical team.
9. What impact did the experience of practicing various types of medical activities different from your usual environment have on your own daily practice?
10. Do you feel that participating in international medical cooperation projects like the Pacific Partnership adds value to your professional skills? Why do you think so?

Figure 2. Relationships between themes



## Standards for Reporting Qualitative Research (SRQR)\*

<http://www.equator-network.org/reporting-guidelines/srqr/>

Page/line no(s).

### Title and abstract

<p><b>Title</b> - Concise description of the nature and topic of the study Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended</p>	1
<p><b>Abstract</b> - Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions</p>	2,3

### Introduction

<p><b>Problem formulation</b> - Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement</p>	5,6,7
<p><b>Purpose or research question</b> - Purpose of the study and specific objectives or questions</p>	7

### Methods

<p><b>Qualitative approach and research paradigm</b> - Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/ interpretivist) is also recommended; rationale**</p>	7,9
<p><b>Researcher characteristics and reflexivity</b> - Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability</p>	8,9
<p><b>Context</b> - Setting/site and salient contextual factors; rationale**</p>	7,8
<p><b>Sampling strategy</b> - How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale**</p>	8
<p><b>Ethical issues pertaining to human subjects</b> - Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues</p>	9
<p><b>Data collection methods</b> - Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale**</p>	8,9



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2	<b>Data collection instruments and technologies</b> - Description of instruments (e.g.,	
3	interview guides, questionnaires) and devices (e.g., audio recorders) used for data	
4	collection; if/how the instrument(s) changed over the course of the study	8,9
5		
6	<b>Units of study</b> - Number and relevant characteristics of participants, documents,	
7	or events included in the study; level of participation (could be reported in results)	8,25
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9	<b>Data processing</b> - Methods for processing data prior to and during analysis,	
10	including transcription, data entry, data management and security, verification of	
11	data integrity, data coding, and anonymization/de-identification of excerpts	9
12		
13	<b>Data analysis</b> - Process by which inferences, themes, etc., were identified and	
14	developed, including the researchers involved in data analysis; usually references a	
15	specific paradigm or approach; rationale**	9
16		
17	<b>Techniques to enhance trustworthiness</b> - Techniques to enhance trustworthiness	
18	and credibility of data analysis (e.g., member checking, audit trail, triangulation);	
19	rationale**	9
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## Results/findings

23	<b>Synthesis and interpretation</b> - Main findings (e.g., interpretations, inferences, and	
24	themes); might include development of a theory or model, or integration with	
25	prior research or theory	9,13,14,15,16
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27	<b>Links to empirical data</b> - Evidence (e.g., quotes, field notes, text excerpts,	
28	photographs) to substantiate analytic findings	10,11,12,13,14, 15,16,26,27
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## Discussion

32	<b>Integration with prior work, implications, transferability, and contribution(s) to</b>	
33	<b>the field</b> - Short summary of main findings; explanation of how findings and	
34	conclusions connect to, support, elaborate on, or challenge conclusions of earlier	
35	scholarship; discussion of scope of application/generalizability; identification of	
36	unique contribution(s) to scholarship in a discipline or field	16,17,18,19
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38	<b>Limitations</b> - Trustworthiness and limitations of findings	19
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## Other

42	<b>Conflicts of interest</b> - Potential sources of influence or perceived influence on	
43	study conduct and conclusions; how these were managed	20
44		
45	<b>Funding</b> - Sources of funding and other support; role of funders in data collection,	
46	interpretation, and reporting	20
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\*The authors created the SRQR by searching the literature to identify guidelines, reporting standards, and critical appraisal criteria for qualitative research; reviewing the reference lists of retrieved sources; and contacting experts to gain feedback. The SRQR aims to improve the transparency of all aspects of qualitative research by providing clear standards for reporting qualitative research.

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\*\*The rationale should briefly discuss the justification for choosing that theory, approach, method, or technique rather than other options available, the assumptions and limitations implicit in those choices, and how those choices influence study conclusions and transferability. As appropriate, the rationale for several items might be discussed together.

**Reference:**

O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. **Standards for reporting qualitative research: a synthesis of recommendations.** *Academic Medicine*, Vol. 89, No. 9 / Sept 2014  
DOI: 10.1097/ACM.0000000000000388

For peer review only

# BMJ Open

## The contribution of short-term global clinical health experience to the leadership competency of health professionals: A qualitative study

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Manuscript ID	bmjopen-2018-027969.R1
Article Type:	Research
Date Submitted by the Author:	01-Feb-2019
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<b>Primary Subject Heading</b>:	Global health
Secondary Subject Heading:	Qualitative research, Medical education and training
Keywords:	QUALITATIVE RESEARCH, MEDICAL EDUCATION & TRAINING, LEADERSHIP, GLOBAL HEALTH

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## Title

The contribution of short-term global clinical health experience to the leadership competency of health professionals: A qualitative study

## Authors

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## Abstract

**Objectives:** Globalization has increased the opportunities for healthcare professionals working in developed countries to provide clinical and educational support in developing countries. However, how these experiences contribute to the leadership competency of health care professionals is unclear; therefore, this study explored this with the objective of analyzing the process of developing individual leadership competency.

**Design:** This is a qualitative descriptive study. Qualitative descriptive data were collected in face-to-face, semi-structured interviews.

**Setting:** The authors interviewed Japanese health professionals who participated in an international medical cooperation project as part of a multinational medical team between July 2017 and March 2018, and analyzed and interpreted the data using a social constructivism paradigm.

**Participants:** The authors interviewed 20 research participants, including five nurses, five dentists, and ten doctors with an average of 15.3 years of clinical experience.

**Results:** The interviews identified 58 emergent themes related to their leadership competency, 23 of which affected the actual medical care in their own institutions. The authors categorized the 58 emergent themes into seven competency areas: leadership concepts, teambuilding, direction-setting, communication, business skills, working with others, and self-development. The authors identified the relationships among each competency and identified differences between professions: nurses particularly reflected their empathic attitudes toward patient after global health experience; dentists tended to reflect their business skills; physicians tended to reflect their leadership concepts and teambuilding.

**Conclusions:** This study clarified the leadership competency gained through short-term global health clinical experience and the process of individual leadership competency development.

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3 The findings provide expected learning competency for those considering medical practice in  
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5 developing or other countries in the future.  
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For peer review only

## Strengths and limitations of this study

• This study clarified leadership competency gained through the global health experience and the process of individual leadership competency development because this is the first time the relationship between the two was explored.

• Researchers focused on the members of a multinational team of physicians, dentists, and nurses because this one-month experience of working closely together gave extensive opportunity for data collection and observation. However, it was one team in certain circumstances.

• Further investigation of how health professionals adopted their leadership competency upon their return to their own worksites would be required.

## Introduction

With globalization, the opportunities for health professionals working in developed countries to conduct medical practice and provide educational support in developing countries are multiplying.<sup>1</sup> Many universities offer students and advanced medical personnel opportunities to undergo short-term medical training in developing countries.<sup>2</sup> Through global clinical health experiences, health professionals not only become aware of what they did not notice previously, but they can also improve their interactions with others.<sup>3</sup> Both quantitative and qualitative studies have been conducted on health professionals and students who provide healthcare services in developing countries to determine the type of learning process that occurs in these health professionals.<sup>4-6</sup> Various research has been conducted on host countries that have accepted medical support;<sup>7-8</sup> however, how these experiences are utilized by health professionals in their own fields is unclear. Moreover, to our knowledge, no study has assessed the differences in each profession. This study aimed to explore how the practitioners' short-term global clinical health experiences were translated into clinical practice from the perspective of experiential learning.

The experiential learning theory was established by a multidisciplinary integration of knowledge through many academic disciplines.<sup>9</sup> Experience is the foundation of learning, and learners actively build their own experiences. Learning and experience are closely linked and cannot be separated.<sup>10</sup> "Learning" refers to changes in knowledge and skills, and "experience" refers to mutual interaction with the outside world that promotes changes in knowledge and skills.<sup>11</sup> The concept of "experiential learning" refers to the ways in which a variety of experiences are affected by sociocultural norms and the subjectivity of agents. This idea can be differentiated into "external experiences," in which events are the subject of learning, and "internal experiences," in which past experiences accumulated in the memory become the



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3 conditions for learning.<sup>12</sup> The model of experiential learning as presented by Kolb is the most  
4 influential of the theories that attempt to explain individual managers' experiential learning  
5 and has been applied in a variety of fields, including education, psychology, medicine, nursing,  
6 and general management.<sup>13-14</sup> However, Kolb's experiential learning model does have its  
7 limitations, particularly in connection with the introspection of experiences, and it has also  
8 been criticized for not considering social factors, unconscious learning, and higher meta-  
9 learning processes.<sup>15-16</sup> In response to these criticisms, other researchers have proposed models  
10 that relate to meta-learning in which experience itself can be transformed through  
11 introspection.<sup>17</sup>  
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26 Experiences that are related to creating change and transcending boundaries can be seen as  
27 developmental challenges, and it is evident that the experience of working beyond boundaries  
28 is connected to the development of human resources.<sup>18-19</sup> It is further clear that culture shock  
29 can contribute to the development of leadership.<sup>20</sup> Fulfilling innovative duties in the workplace  
30 could allow managers to learn, and challenging situations could allow individuals to challenge  
31 traditional ways of thinking and behaving, thereby creating the motivation to bridge the gap  
32 between an individual's current capabilities and those they desire. These experiences of  
33 working beyond boundaries, also known as developmental challenges, lead to the acquisition  
34 of abilities.<sup>21</sup> By transcending boundaries and overcoming barriers to teambuilding, individuals  
35 can learn valuable lessons. With the creation of teams that cross boundaries and by being part  
36 of such teams, members can increase their knowledge of other disciplines, expand networks  
37 with colleagues in other organizations, and enhance leadership competencies.<sup>22</sup> Leadership is  
38 an important required competency for health professionals to demonstrate practical skills and  
39 effective team management in complex organizational and human relationships in various  
40 environments.<sup>23</sup> High-quality healthcare relies on developing healthcare professionals'  
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3 leadership, thereby optimizing health system performance.<sup>24</sup> The BEME review showed the  
4 evidence used in the leadership development of medical faculty members,<sup>25</sup> demonstrating that  
5 the use of experiential learning and reflective practice contribute to positive outcomes that  
6 promote leadership. However, relationships between cross-boundary experiences in the health  
7 professionals and their leadership development have not been identified.  
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17 This study examined the contribution of a short-term global clinical health experience in  
18 various Asian-Pacific countries to the leadership competency of members of a multinational  
19 team of physicians, dentists, and nurses. We conducted a qualitative descriptive study with the  
20 participants' consent. The objective was to analyze the process of developing individual  
21 leadership competency from the perspective of experiential learning. The potential to inculcate  
22 the competency of leadership exists in all individuals, regardless of their current job  
23 designations. In addition, we explored their relationship with daily clinical practice to clarify  
24 the differences between various types of jobs. The study findings will help in guiding mentors  
25 who conduct global clinical health training for undergraduate students and residents, and will  
26 also provide useful information for developing leadership competency in health professionals.  
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## 43 **Method**

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45 We followed the Standards for Reporting Qualitative Research (SRQR) recommendations.<sup>26</sup>  
46 Full details of the SRQR can be found in the Research Checklist to this paper. We conducted  
47 a qualitative descriptive study, and interviewed 20 research participants. The thematic  
48 analysis method used in this study involved generative coding and theorization.  
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## 57 **Setting**

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3 Following the Sumatra earthquake and Indian Ocean tsunami,<sup>27</sup> the US Army organized the  
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5 “Pacific Partnership,” a multilateral project that aimed to improve humanitarian assistance and  
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7 disaster relief capacity. Under this project, a US navy boat conducts annual visits to several  
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9 countries in the Asia-Pacific region. Through cooperation with government agencies, the  
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11 military, and non-governmental organizations (NGOs) of the participating countries, the  
12  
13 Pacific Partnership aims to improve mutual understanding and strengthen cooperation among  
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15 related countries by conducting medical activities, facility repair, and cultural exchange  
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17 programs. We adopted this project as a short-term global health experience in our study to  
18  
19 explore how the experiences are translated into clinical practice, and our first author actually  
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21 participated in the 2016 and 2017 Pacific Partnership as an NGO member and developed  
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23 relationships with research participants. Japanese health professionals provided medical  
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25 support in Palau (Pacific Partnership 2016) and Vietnam (Pacific Partnership 2017) for several  
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27 weeks. The participants lived and worked with the visiting health professionals from the US,  
28  
29 the UK, and Australia on military transport ships and conducted outdoor medical practice,  
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31 ambulatory care support, and educational activities for each job category. All participants  
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33 shared both clinical and administrative duties due to the location and working conditions,  
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35 which varied day by day.  
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### 45 *Participants*

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47 All fifty health professionals involved in this project were invited to participate. Twenty people  
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49 volunteered: five nurses, five dentists, and ten physicians who had participated in the 2016 or  
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51 2017 Pacific Partnership and who had provided informed consent for study participation. The  
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53 mean age of the research participants was 40.0 years (range, 29–57 years), and the mean  
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55 duration of clinical experience was 15.3 years (range, 4–34 years). By focusing on a culturally  
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3 homogenous group, we could achieve thematic saturation with this limited number (20) of  
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5 participants. Table 1 provides their profiles.  
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### 10 ***Patient and Public Involvement***

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12 Patients and the public were not involved in this study.  
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### 16 ***Data collection***

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18 In this qualitative descriptive study, we conducted face-to-face, semi-structured interviews  
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20 using an audio recorder. Each interview lasted 30–90 minutes. The interviews took place at  
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22 the participant's place of clinical practice between July 2017 and March 2018. To ensure a  
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24 safe environment that would elicit the interviewees' straightforward beliefs, only the  
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26 participant and the interviewer were present in these interviews. An interview guide (see Fig.  
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28 1) was used to clarify how the participants viewed their experiences and how those  
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30 experiences influenced their leadership competency. The study authors agreed that the  
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32 interview guide suited our research purpose and that the contents of the interview guide did  
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34 not change over time. On the other hand, each of the interviews were flexible, and the  
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36 participants were allowed to take the discussion in any direction. As a participant in the  
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38 Pacific Partnership, the first author worked alongside the twenty participants and observed  
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40 them in situ. The recorded audio data of the interviews were transcribed verbatim by the  
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42 authors immediately after each interview. The Institutional Review Board of the University  
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44 of Tokyo approved this study (11562).  
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### 54 ***Data analysis***

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56 We have analyzed the data manually with multiple names using the Steps for Coding and  
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58 Theorization method and performed a theoretical evaluation from the perspective of a social  
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3 constructivism paradigm.<sup>28-29</sup> The method of coding and theorization for data analysis  
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5 comprised two major steps: first, the text data were divided into small units and were  
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7 classified as meanings or ideas; and second, each of these small units was labelled with an  
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9 interpretive description (see Fig.2). These processes were conducted on each interview  
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11 transcript. For the targeted number of research participants, we conducted interviews for  
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13 multiple occupations until theoretical saturation was obtained. After data collection and  
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15 individual manual analyses, we agreed that we had achieved theoretical saturation, with no  
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17 new themes emerged in the data set, and we achieved a complete understanding of the  
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19 identified concepts. Member-checking was conducted twice by the research participants after  
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21 the interviews and analyses.  
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## 28 **Results**

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31 Through the interviews, we identified 58 emergent themes to the competency of leadership  
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33 (see Table 2). We divided them into “during” and “after” the actual global clinical experience.  
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35 Among them, 23 of the themes that affected the actual medical care in their own institutions  
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37 were recognized. We categorized the 58 themes into the seven competency areas: leadership  
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39 concepts, teambuilding, direction-setting, communication, business skills, working with others,  
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41 and self-development. We focused on the leadership aspects of certain specific factors related  
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43 to clinical practice. For instance, we considered the ‘establishment of a trust relationship’ to be  
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45 a leadership competency component of ‘working with others,’ but did not regard ‘performing  
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47 assignments’ as an element contributing to the leadership competency.  
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### 54 ***Leadership concepts***

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56 The experience of participating in the global clinical health cooperation project became a  
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58 trigger that often led to the establishment of a leadership style. Although we can see some  
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3 differences in each health professional and their own experiences, many health professionals  
4 saw the change in location as an impetus for change. To quote one participant: “There are  
5 many developing nations, and I feel that Japan is quite advanced in terms of its medical  
6 standards. Instead of simply providing assistance with medical care, I think it is important to  
7 educate local medical practitioners that are providing such care. Furthermore, education is  
8 obviously necessary, but I also felt that the perspective of training educators was necessary.”  
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17 (Participant D3)  
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22 Health professionals self-evaluated their leadership in highly uncertain situations during their  
23 actual global clinical health experience. Some noted that after the experience, they continued  
24 to strengthen the leadership concept of delegation of authority that had been gained through  
25 their short-term global health experience: “I appointed a person-in-charge in each department,  
26 asked them to organize the department, and then supervised them during the subsequent  
27 activity....Although I had not thought about team medical care before participating in the  
28 program, I allocated more responsibilities to staff members in my hospital after seeing the  
29 professionalism of the participants.” (P1)  
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### 42 ***Teambuilding***

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44 The project helped health professionals recognize that a cooperative workplace led to more  
45 successful policy decisions and a better understanding of diversity and their colleagues’  
46 environment, and they meta-recognized past work experience of their own: “The biggest  
47 achievement from global health experience is that one’s perspective as a medical professional  
48 broadens by participating....Although we were different in age and positions, my team  
49 members were great people. Having peers with whom I wanted to work with together again  
50 was the biggest reward from this program.” (D4)  
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6 The participants strengthened their awareness of teambuilding and shared leadership, which in  
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8 turn led to inter-professional education: “Through my experience abroad, I was able to  
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10 experience that collaboration between different professions is important in any environment. It  
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12 can serve as an educational tool for the future because even after participants come back to  
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14 Japan, it will lead them to strengthen the collaboration between different professions on-site.”

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17 (N5)  
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### 21 ***Direction-setting***

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23 The experience of the global clinical health cooperation project urged the participants to be  
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25 more conscious of goal-setting and policy decision-making as an organization. They developed  
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27 cultural competency: “The significance of this program is that participants can learn about how  
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29 things are done in other countries because of the diversity of members within the program. It  
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31 also becomes a learning experience on the diversity of management.” (D2)  
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38 The experience contributed to a better understanding of the participants’ own work  
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40 environments as well as how the environment and the team process strengthened the awareness  
41  
42 of target-setting and backward-development. In addition, they strengthened their viewpoint of  
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44 leader development through acquiring inter-subjectivity: “The place where this program’s  
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46 activities took place had no educational environment even if people wanted to learn about  
47  
48 performing medical practice. Therefore, we are preparing to establish a structure within our  
49  
50 facility in which we can accept foreign students to study. I would like to increase both the  
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52 quality and quantity of local health professionals.” (D4)  
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### 58 ***Communication***

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3 Not only during but also after participating in the global health cooperation project, the  
4 participants increased their emphasis on communication at their work site, recognizing the  
5 project as a place to nurture global-thinking and communication skills. Strengthening their  
6 awareness of communication led to education: “While I felt that when I go to a new place and  
7 work with people I meet for the first time, it is necessary to first properly talk with one another  
8 when a relationship of trust has not yet been established, I also learned that communication in  
9 my daily medical practice settings can take place because there is an existing relationship of  
10 trust.” (N4)  
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### 23 ***Business skills***

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25 Through unexpected situations and conflict management, the participants were particularly  
26 influenced with respect to their consciousness of business skills in the field. They also  
27 recognized their own individual work style: “I did not know what to do because there was not  
28 even an option, and surgery and medicine would obviously not improve the situation...By  
29 providing medical treatment in an environment that is different from my usual one, I felt that I  
30 had been practicing medical care by relying too much on tools. It made me recognize that I am  
31 blessed with my medical environment.” (P7)  
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45 The participants also reflected on their own business skills, and as a result reinforced these  
46 skills and applied them to simulation tools: “While there were a few items that we had a  
47 shortage of during our activities, there were quite a few items that we had leftovers of. I thought  
48 that it is important to take necessary items with us and have a logistic system in place to manage  
49 them when a disaster actually occurs...I came to be more aware of management and  
50 collaboration after the medical cooperation project.” (N3)  
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### ***Working with others***

Through the multilateral project that aimed to improve humanitarian assistance and disaster relief capacity, the health professionals established a relationship of trust in the field and made a more conscious effort to empower other health professionals. Furthermore, back in their workplace, the participants leveraged their experience into developing others and career support, and strengthened credit accumulation and cooperation among their staff members: “Both the students and my colleagues became interested in this program through my activity report. I want to provide as many people as possible with the opportunities that I was given.” (N2) “I had the opportunity to contact people from other departments and make adjustments before the program took place, helping me acquire the habit of trying to understand the other person’s organizations.” (D2)

### ***Self-development***

Through the global health experience, some participants experienced a paradigm shift that became a trigger for career advancement and self-development: “Although there were differences depending on the environment, I felt that I had to hone my regular skills so that I could also give instructions after seeing the accurate medical techniques of the local physicians.” (P2)

### ***Relationships between themes***

We identified several types of relationships between the themes described above (see Fig.3). Experience in managing conflict during the global health experience led the health professionals to reflect on their communication and business skills: “I could see that people abroad think in a completely different manner even if I didn’t interact with them on a regular basis....I made all the schedules to indicate who would be taking the day off. It was difficult to

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3 coordinate because there was a language barrier and there were complaints that people weren't  
4 getting many days off." (D1)  
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10 Additionally, the global health experience encouraged participants to motivate and empower  
11 others and encouraged "teambuilding": "The biggest achievement that one can get by forming  
12 a team with people they just met is the ability to communicate effectively. This experience can  
13 be useful even in a different environment." (D3)  
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22 The development of individual leadership competency associated with leading a medical care  
23 team was related to "understanding the environment of other cultures" and "teambuilding."  
24 One participant stated this: "We did actually provide outdoor medical care as if it was an actual  
25 field hospital. I keenly felt the difficulties of practicing medical care by having to start by  
26 preparing the tools. I learned how difficult it is to work in an environment with hygiene  
27 standards that are completely different from those of Japan." (P4)  
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38 Finally, the concepts of "motivating and empowering others" and "lifelong learning" became  
39 associated with the actual delivery of medical care: "Coming into contact with various health  
40 professionals in a foreign country will be a good experience to have. I hope that the participants'  
41 perspectives will broaden through their interactions. On the contrary, engaging only in one's  
42 regular medical care environment will limit their perspectives. I want to share what I learned  
43 with my colleagues." (P6)  
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#### 54 ***Differences in the professions***

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56 Some differences in each profession were identified through the data analysis.  
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### *Nurses*

Nurses particularly improved their empathic attitudes toward colleagues and patients as a result of the global health experience. Consequently, through perspective gained from work in the field, they established servant leadership with the mentality of understanding others through relationships of trust, stating: “A relationship in which each person can see the other person’s face is extremely important...After participating in the program, I am more conscious of listening to my peers while on-site. With my staff members in particular, I check what they are having troubles with and provide everything I can for their growth.” (N1)

### *Dentists*

Dentists tended to reflect on their business skills after the global health experience. The experience affected their consciousness of their business skills at their own work site and their application of these skills to the leadership concept: “Instead of relying on the limited resources during medical treatments, I became able to think about how to replace the resources with something else and share this finding with colleagues.” (D2) Another dentist stated: “The attitude to provide the best medical care in environments with limited resources like where the activity took place is important. A similar mindset is also needed when one transfers from a hospital with enhanced facilities, like a university hospital, to a regional hospital with limited resources.” (D3)

### *Physicians*

After participating in the project with the multinational medical team, physicians recognized the importance of teambuilding at their own work site. They recognized that they became conscious of strengthening their leadership and goal-setting at their own organizations: “On-site, I became able to make adjustments well by transferring some of the authorities to the staff

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3 members and having them practice and make corrections instead of taking on all the  
4 responsibilities as a department director....I feel that finding what each person can do in their  
5 profession and allocating duties accordingly can draw out their abilities.” (P1) Another  
6 physician stated: “Seeing case examples of diseases that cannot be treated on-site made me  
7 re-acknowledge just how fortunate the Japanese medical environment is.” (P8)  
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## 17 **Discussions**

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20 We identified seven leadership competencies strengthened by the short-term global clinical  
21 health experience. In addition, we clarified relationships among each leadership competency  
22 gained through the experience and the different types of leadership competency among various  
23 types of jobs. Previous studies have shown the potential benefits for global clinical health  
24 participants in terms of increased awareness of global health issues, gaining new medical  
25 information, capacity-building for clinical problem solving, and an improved sense of  
26 professional satisfaction.<sup>3,6</sup> Our results contribute to the literature with additional findings  
27 regarding the enhancement of leadership competency.  
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41 We considered several factors contributing to how health professionals can gain leadership  
42 competency through the global experience and then add it to their clinical practice.  
43 Collaboration among the multinational team of health professionals certainly led to increased  
44 leadership competency. While leadership and collaboration are highly valued and potentially  
45 conflicting competencies in clinical practice,<sup>24</sup> by managing conflict and difficult cases in the  
46 global clinical health experience, participants collaborated with each other, enhancing their  
47 leadership competency. From the perspective of experiential learning, the global health  
48 experience was an external experience by health professionals that contributed to their daily  
49 clinical practice as an internal experience.<sup>12</sup> Second, understanding the environment of other  
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3 cultures forms the basis for gaining leadership competency as shown in the relationships among  
4 the themes. Experiencing cultural differences becomes conscious behavior through contact  
5 with new situations and cultures in which unconscious and implicit cultural behavior and  
6 sensibilities are required.<sup>30</sup> The global health experience offered the opportunity for  
7 participants to learn about themselves and their own leadership,<sup>31</sup> and they continued these  
8 leadership competencies in their own institutions upon their return. In this process, we observed  
9 that a meta-learning process occurred in each health professional as a result of their global  
10 health experience, and that this process led to the enhancement of their leadership competency  
11 in each context.  
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26 Our results clearly demonstrate that the leadership concept is perceived differently by  
27 individuals from different professions. Nurses particularly strengthened their empathic  
28 attitudes toward patients and colleagues, and they strengthened their leadership by establishing  
29 a mentality of understanding and relationships of trust in their workplace. Nurses tend to be  
30 well trained in an empathetic attitude in their careers,<sup>32</sup> which supports our result. Meanwhile,  
31 dentists particularly focused on their business skills. In the clinical environment in many  
32 countries, treatment must be done with limited equipment, and dentists often solved these  
33 problems while leveraging their own business skills. As ethical stewardship of health care  
34 resources are important for health professionals,<sup>33</sup> participant dentists became aware of the  
35 ethics of waste avoidance in their daily practice overseas. Consequently, they improved their  
36 business skills and brought those improved skills to their own jobs after their participation.  
37 Finally, physicians recognized the importance of teambuilding and after the global health  
38 experience strengthened their leadership and goal-setting in their own organization. Physicians  
39 have professional obligations and a responsibility to develop public roles.<sup>34</sup> The global health  
40 experience presented physicians with many opportunities to coordinate and make decisions  
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3 with other occupations, thereby strengthening their competencies related to leadership and  
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6 teambuilding.  
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10 Our findings show important parallels with earlier studies, including the BEME review that  
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12 showed that leadership competencies are gained through faculty development programs.<sup>25</sup>  
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14 These studies examined the prevalence and characteristics of faculty leadership development  
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16 programs at academic health centers and found that conflict management or interpersonal  
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18 effectiveness are emphasized but business skills and lifelong learning are part of faculty  
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20 development.<sup>35</sup> In this study, we pointed out various types of leadership competency gained by  
21  
22 health professionals through a global clinical health experience, which supports the idea that  
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24 the use of experiential learning and reflective practice contribute to positive outcomes in  
25  
26 promoting leadership. Furthermore, we identified a link between cross-boundary experiences  
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28 and the participants' leadership development. It would be useful to elucidate the differences in  
29  
30 the learning process between faculty development and experiential learning and examine the  
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32 concept of tacit knowledge that is difficult to transfer to another person.<sup>36</sup> In general, faculty  
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34 development aims to ensure that health professionals have the knowledge and skills for  
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36 leadership development, while in experiential learning, health professionals learn leadership  
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38 competency as tacit knowledge through the experience itself without formal instruction.  
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47 One limitation of this study is we had interviewed only Japanese health professionals who  
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49 participated in the short-term global clinical health experience. As there is no leadership that  
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51 exerts a common effect beyond culture in a previous study,<sup>37</sup> we should investigate the process  
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53 of developing individual leadership competency in other countries. Another limitation of this  
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55 study is we focused on health professionals who mainly have their own specialty (mean  
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57 duration of clinical experience is 15.3 years). Leadership is one of the important competencies  
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3 required to demonstrate practical skills in effective team management in complex organizations  
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5 at all levels.<sup>23</sup> Therefore, we believe that it is necessary to investigate the leadership  
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7 development process through global clinical health experiences in the younger generation,  
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9 including residents and undergraduate students. Finally, the actual interpersonal interaction in  
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11 each health professional's institution is not made clear in this study. Although we identified  
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13 the contribution of the short-term global clinical health experience to the leadership  
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15 competency as an outcome, the organizations where the participants work are complex and  
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17 dynamic social environments.<sup>38-39</sup> Therefore, further investigation of how health professionals  
18  
19 adopted their leadership competency upon their return to their own environment would be  
20  
21 required. As stated above, the leadership competency development in other cultures would  
22  
23 have to be studied to investigate the transferability of these results. Leadership competencies  
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25 would be affected by cultural values such as individualism-collectivism and social norms  
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27 including cultural tightness-looseness.<sup>40</sup> It is also difficult to make generalized statements  
28  
29 without researching the leadership development process in other fields such as volunteering,  
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31 construction, or religious missions. Based on emergent themes, we can predict that other fields  
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33 or cultures would yield some similar findings in parameters such as communication, working  
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35 with others, and team-building (Table 2).  
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## 45 **Conclusion**

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47 This study clarified the leadership competency gained through a short-term global clinical  
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49 health experience and the process of individual leadership competency development. The  
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51 competencies gained by nurses, dentists, and physicians were different. The findings provide  
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53 expected learning competency for those considering clinical practice in developing or other  
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55 countries in the future. The study findings may also help in guiding mentors who conduct  
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57 global clinical health training for health professionals.  
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## Acknowledgments

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## Contributors

MH was the principal investigator for this study, conducted the interviews, and authored the paper. HO contributed to the design of this study. DS analyzed and coded all data with MH. ME checked the results, advised edits, and approved for public release. All authors have agreed with the final version of this paper.

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## Competing Interests

Non-financial associations that may be relevant to the submitted manuscript.

## Ethical approval

This study was approved by the Institutional Review Board of the University of Tokyo (IRB ID 11562).

## Provenance and peer review



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3 Not commissioned; externally peer reviewed.  
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## 8 **Data sharing statement**

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10 No additional data are available.  
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## 15 **References**

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**Table 1. Character of research participants**

No	Sex	PGY	Type of institution	Position	Participation
N1	F	15	Community hospital	Staff	2016
N2	M	4	Nursing home	Staff	2017
N3	M	20	Self-Defense Forces	Staff	2016
N4	F	10	University	Graduate student	2016
N5	M	17	University	Lecturer	2016
D1	M	15	Self-Defense Forces hospital	Staff	2016
D2	M	9	Self-Defense Forces	Staff	2016
D3	M	34	University hospital	Professor	2016
D4	M	23	Community hospital	Manager	2017
D5	M	11	Self-Defense Forces hospital	Staff	2016
P1	M	16	Self-Defense Forces hospital	Manager	2016
P2	M	21	University hospital	Assistant Professor	2017
P3	M	13	Community hospital	Staff	2017
P4	F	13	Community hospital	Staff	2016
P5	M	14	Community hospital	Staff	2016
P6	M	19	University hospital	Lecturer	2016, 2017
P7	M	9	Self-Defense Forces hospital	Staff	2016
P8	M	8	University hospital	Staff	2017
P9	M	4	University hospital	Resident	2017
P10	M	30	University hospital	Assistant Professor	2017

N: Nurse

D: Dentist

P: Physician (Doctor)

PGY: Postgraduate year

**Table 2. Emergent themes**

<b>During Participation</b>	<b>After Participation</b>
<b>Leadership concept</b>	
Fulfillment of duties	Establishment of individual leadership style
Recognition of individual leadership	Establishment of servant leadership
Overseeing medical treatment as a specialist	Strengthening follower-friendly servant leadership
Leveraging the individual leadership concept	Contribution of leadership concept to daily practice
Promoting awareness of potential leadership	Delegation of authority
Constructing the leadership concept	
A place to guide change	
Self-assessment of leadership	
Paradigm shift on leadership	
<b>Teambuilding</b>	
Making policy decision as a practical community	Strengthening the awareness of the team building
Meta-recognition of past work experience	
Promoting understanding of diversity	
Strengthening the attitude of shared leadership	
Practicing conflict management	
<b>Direction-setting</b>	
Taking action based on context dependence	Recognition of individual organizational position
Making the medical care environment relative	Understanding the environment
Recognition of local context	Reviewing target setting
Development of cultural competency	Strengthening viewpoint of leader development
Awareness of target setting and backwards development	
Making policy decisions	
Paying attention to team direction and process	
Understanding environment and decision making	
<b>Communication</b>	
Nurturing global thinking and communication skills	Strengthening the awareness of communication
Encouraging reflection of communication skills	
<b>Business skills</b>	
Strengthening business and communication skills	Applying simulation tools
Simulation training for disasters	Awareness of business skills
Understanding and reflection of business skills	Developing other support activities
Paying attention to the power relation	Reflecting individual examination style
<b>Working with others</b>	
Seeking out new leadership concepts	Empowering other health professions
Establishment of a trust relationship	Developing others and career support
	Reflecting individual educational policy
	Strengthening cooperation among staff members
<b>Self-development</b>	
Developing awareness of a sense of belonging	Reconsidering empathic attitude towards patient
Strengthening adaptability and self-management	Establishing self-management
Paradigm shift as a professional	Motivation for career advancement and self-development
Seeking self-development opportunities	Lifelong learning
Recognizing the necessity of total management	

1. What is your job category (specialty/department), experience level (number of years), type of participation, and number of times you have participated in the Pacific Partnership?
2. Please explain the medical service you usually perform.
3. What has been your major medical experience thus far?
4. If you have had overseas experience (including medical experience) before joining the Pacific Partnership, please provide details regarding it.
5. Why did you choose to participate in an international medical cooperation project as part of a multinational medical team in the South Pacific (Pacific Partnership)?
6. What are your personal impressions of the Pacific Partnership?
7. What impact did the impressive episode (answer 6) have on your own medical treatment (attitude toward medical practice or work) and business management?
8. Describe your experience of providing team-based medical practice in a real situation, specifically in context of a cross-cultural exchange with a multinational medical team.
9. What impact did the experience of practicing various types of medical activities different from your usual environment have on your own daily practice?
10. Do you feel that participating in international medical cooperation projects like the Pacific Partnership adds value to your professional skills? Why do you think so?

### **Figure 1. Interview guide**



## Steps for Coding and Theorization

**The first procedure** is "four steps coding".

We write segmented data first and put following codes consecutively.

<1> Noteworthy words or phrases from the text

<2> paraphrases of <1>

<3> concepts from out of the text that account for <2>

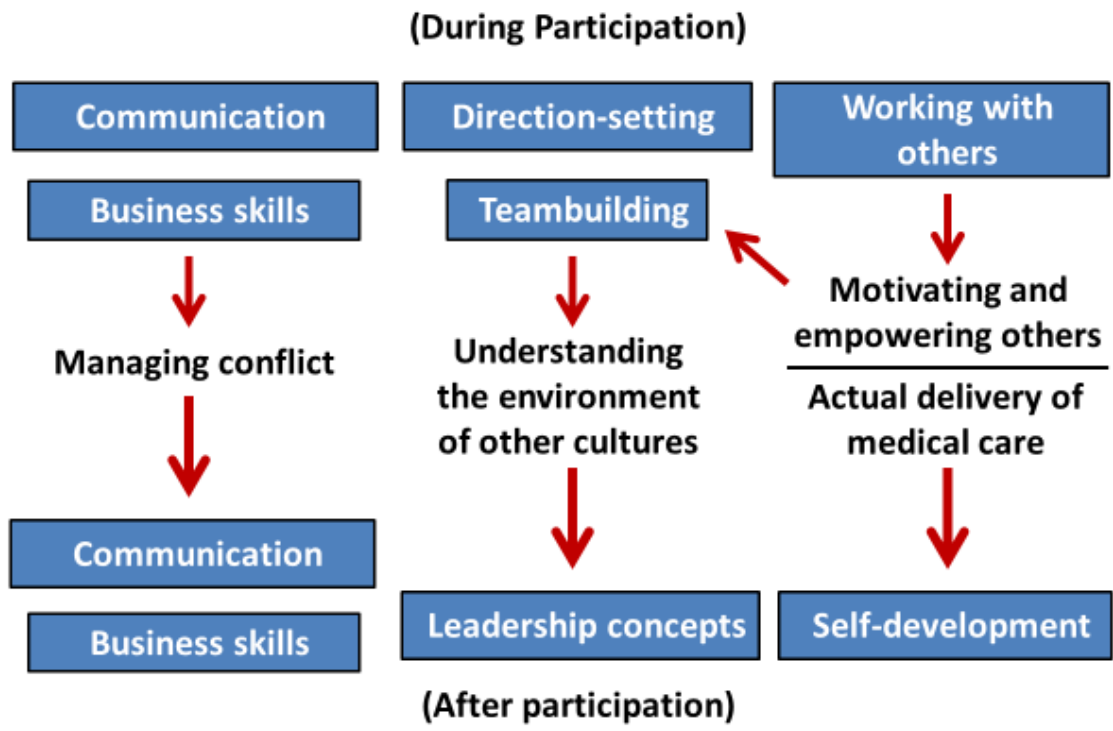
<4> themes, constructs in considerations of context

**The second procedure** is writing **story-line** and **theory**. After completion of <1> through

<4>, we write story-line using <4>. And finally, we write theory from our story-line.

### Figure 2. Processes of the data analysis

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**Figure 3. Relationships between themes**

## Standards for Reporting Qualitative Research (SRQR)\*

<http://www.equator-network.org/reporting-guidelines/srqr/>

Page/line no(s).

### Title and abstract

<p><b>Title</b> - Concise description of the nature and topic of the study Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended</p>	1
<p><b>Abstract</b> - Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions</p>	2,3

### Introduction

<p><b>Problem formulation</b> - Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement</p>	5,6,7
<p><b>Purpose or research question</b> - Purpose of the study and specific objectives or questions</p>	7

### Methods

<p><b>Qualitative approach and research paradigm</b> - Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/ interpretivist) is also recommended; rationale**</p>	7,9,10
<p><b>Researcher characteristics and reflexivity</b> - Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability</p>	8,9
<p><b>Context</b> - Setting/site and salient contextual factors; rationale**</p>	7,8
<p><b>Sampling strategy</b> - How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale**</p>	8
<p><b>Ethical issues pertaining to human subjects</b> - Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues</p>	9
<p><b>Data collection methods</b> - Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale**</p>	9,10

1		
2	<b>Data collection instruments and technologies</b> - Description of instruments (e.g.,	
3	interview guides, questionnaires) and devices (e.g., audio recorders) used for data	
4	collection; if/how the instrument(s) changed over the course of the study	9,29
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6	<b>Units of study</b> - Number and relevant characteristics of participants, documents,	
7	or events included in the study; level of participation (could be reported in results)	8,27
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9	<b>Data processing</b> - Methods for processing data prior to and during analysis,	
10	including transcription, data entry, data management and security, verification of	
11	data integrity, data coding, and anonymization/de-identification of excerpts	9,10
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13	<b>Data analysis</b> - Process by which inferences, themes, etc., were identified and	
14	developed, including the researchers involved in data analysis; usually references a	
15	specific paradigm or approach; rationale**	9,10
16		
17	<b>Techniques to enhance trustworthiness</b> - Techniques to enhance trustworthiness	
18	and credibility of data analysis (e.g., member checking, audit trail, triangulation);	
19	rationale**	10
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### Results/findings

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23	<b>Synthesis and interpretation</b> - Main findings (e.g., interpretations, inferences, and	
24	themes); might include development of a theory or model, or integration with	
25	prior research or theory	10,14,15,16,17
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27	<b>Links to empirical data</b> - Evidence (e.g., quotes, field notes, text excerpts,	
28	photographs) to substantiate analytic findings	11,12,13,14,15 15,16,17,28
29		

### Discussion

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32	<b>Integration with prior work, implications, transferability, and contribution(s) to</b>	
33	<b>the field</b> - Short summary of main findings; explanation of how findings and	
34	conclusions connect to, support, elaborate on, or challenge conclusions of earlier	
35	scholarship; discussion of scope of application/generalizability; identification of	
36	unique contribution(s) to scholarship in a discipline or field	17,18,19,20
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38	<b>Limitations</b> - Trustworthiness and limitations of findings	19,20
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### Other

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42	<b>Conflicts of interest</b> - Potential sources of influence or perceived influence on	
43	study conduct and conclusions; how these were managed	21,22
44		
45	<b>Funding</b> - Sources of funding and other support; role of funders in data collection,	
46	interpretation, and reporting	21
47		

\*The authors created the SRQR by searching the literature to identify guidelines, reporting standards, and critical appraisal criteria for qualitative research; reviewing the reference lists of retrieved sources; and contacting experts to gain feedback. The SRQR aims to improve the transparency of all aspects of qualitative research by providing clear standards for reporting qualitative research.

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\*\*The rationale should briefly discuss the justification for choosing that theory, approach, method, or technique rather than other options available, the assumptions and limitations implicit in those choices, and how those choices influence study conclusions and transferability. As appropriate, the rationale for several items might be discussed together.

**Reference:**

O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. **Standards for reporting qualitative research: a synthesis of recommendations.** *Academic Medicine*, Vol. 89, No. 9 / Sept 2014  
DOI: 10.1097/ACM.0000000000000388

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# BMJ Open

## The contribution of short-term global clinical health experience to the leadership competency of health professionals: A qualitative study

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Secondary Subject Heading:	Qualitative research, Medical education and training
Keywords:	QUALITATIVE RESEARCH, MEDICAL EDUCATION & TRAINING, LEADERSHIP, GLOBAL HEALTH

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## Title

The contribution of short-term global clinical health experience to the leadership competency of health professionals: A qualitative study

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## Abstract

**Objectives:** Globalization has increased the opportunities for healthcare professionals working in developed countries to provide clinical and educational support in developing countries. However, how these experiences contribute to the leadership competency of healthcare professionals is unclear; therefore, this study explored this with the objective of analyzing the process of developing individual leadership competency.

**Design:** This is a qualitative descriptive study. Qualitative descriptive study is widely used in healthcare research, particularly to describe the nature of various healthcare phenomena. Qualitative descriptive data were collected in face-to-face, semi-structured interviews.

**Setting:** The authors interviewed Japanese health professionals who participated in an international medical cooperation project as part of a multinational medical team between July 2017 and March 2018, and analyzed and interpreted the data using a social constructivism paradigm.

**Participants:** The authors interviewed 20 research participants, including five nurses, five dentists, and ten doctors with an average of 15.3 years of clinical experience.

**Results:** The interviews identified 58 emergent themes related to their leadership competency, 23 of which affected the actual medical care in their own institutions. The authors categorized the 58 emergent themes into seven competency areas: leadership concepts, teambuilding, direction-setting, communication, business skills, working with others, and self-development. The authors identified the relationships among each competency and identified differences between professions: nurses particularly reflected their empathic attitudes toward patient after global health experience; dentists tended to reflect their business skills; physicians tended to reflect their leadership concepts and teambuilding.

**Conclusions:** This study clarified the leadership competency gained through short-term global health clinical experience and the process of individual leadership competency development.



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The findings provide expected learning competency for those considering medical practice in developing or other countries in the future.

For peer review only

## Strengths and limitations of this study

• This study clarified leadership competency gained through the global health experience and the process of individual leadership competency development because this is the first time the relationship between the two was explored.

• Researchers focused on the members of a multinational team of physicians, dentists, and nurses because this one-month experience of working closely together gave extensive opportunity for data collection and observation.

• A limitation of this study is that we had interviewed only Japanese health professionals who have participated in short-term global clinical health experiences.

• Further investigation of how health professionals adopted their leadership competency upon their return to their own worksites would be required.

## Introduction

With globalization, the opportunities for health professionals<sup>1</sup> (Table 1) working in developed countries to conduct medical practice and provide educational support in developing countries are multiplying.<sup>2</sup> Many universities offer students and advanced medical personnel opportunities to undergo short-term medical training in developing countries.<sup>3</sup> Through global clinical health experiences<sup>4</sup> (Table 1), health professionals not only become aware of what they did not notice previously, but they can also improve their interactions with others.<sup>5</sup> Both quantitative and qualitative studies have been conducted on health professionals and students who provide healthcare services in developing countries to determine the type of learning process that occurs in these health professionals.<sup>6-8</sup> Various research has been conducted on host countries that have accepted medical support;<sup>9-10</sup> however, how these experiences are utilized by health professionals in their own fields is unclear. Moreover, to our knowledge, no study has assessed the differences in each profession. This study aimed to explore how the practitioners' short-term global clinical health experiences were translated into clinical practice from the perspective of experiential learning.

The experiential learning theory was established by a multidisciplinary integration of knowledge through many academic disciplines.<sup>11</sup> Experience is the foundation of learning, and learners actively build their own experiences. Learning and experience are closely linked and cannot be separated.<sup>12</sup> "Learning" refers to changes in knowledge and skills, and "experience" refers to mutual interaction with the outside world that promotes changes in knowledge and skills.<sup>13</sup> The concept of "experiential learning" refers to the ways in which a variety of experiences are affected by sociocultural norms and the subjectivity of agents. This idea can be differentiated into "external experiences," in which events are the subject of learning, and "internal experiences," in which past experiences accumulated in the memory become the

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3 conditions for learning.<sup>14</sup> The model of experiential learning as presented by Kolb is the most  
4 influential of the theories that attempt to explain individual managers' experiential learning  
5 and has been applied in a variety of fields, including education, psychology, medicine, nursing,  
6 and general management.<sup>15-16</sup> However, Kolb's experiential learning model does have its  
7 limitations, particularly in connection with the introspection of experiences, and it has also  
8 been criticized for not considering social factors, unconscious learning, and higher meta-  
9 learning processes.<sup>17-18</sup> In response to these criticisms, other researchers have proposed models  
10 that relate to meta-learning in which experience itself can be transformed through  
11 introspection.<sup>19</sup>  
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26 Experiences that are related to creating change and transcending boundaries can be seen as  
27 developmental challenges, and it is evident that the experience of working beyond boundaries  
28 is connected to the development of human resources.<sup>20-21</sup> It is further clear that culture shock  
29 can contribute to the development of leadership.<sup>22</sup> Fulfilling innovative duties in the workplace  
30 could allow managers to learn, and challenging situations could allow individuals to challenge  
31 traditional ways of thinking and behaving, thereby creating the motivation to bridge the gap  
32 between an individual's current capabilities and those they desire. These experiences of  
33 working beyond boundaries, also known as developmental challenges, lead to the acquisition  
34 of abilities.<sup>23</sup> By transcending boundaries and overcoming barriers to teambuilding, individuals  
35 can learn valuable lessons. With the creation of teams that cross boundaries and by being part  
36 of such teams, members can increase their knowledge of other disciplines, expand networks  
37 with colleagues in other organizations, and enhance leadership competencies.<sup>24</sup> Leadership is  
38 an important required competency for health professionals to demonstrate practical skills and  
39 effective team management in complex organizational and human relationships in various  
40 environments.<sup>25</sup> High-quality healthcare relies on developing healthcare professionals'  
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3 leadership, thereby optimizing health system performance.<sup>26</sup> The BEME review showed the  
4 evidence used in the leadership development of medical faculty members,<sup>27</sup> demonstrating that  
5 the use of experiential learning and reflective practice contribute to positive outcomes that  
6 promote leadership. However, relationships between cross-boundary experiences in the health  
7 professionals and their leadership development have not been identified.  
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17 This study examined the contribution of a short-term global clinical health experience in  
18 various Asian-Pacific countries to the leadership competency<sup>28</sup> (Table 1) of members of a  
19 multinational team of physicians, dentists, and nurses. We conducted a qualitative descriptive  
20 study with the participants' consent. The objective was to analyze the process of developing  
21 individual leadership competency from the perspective of experiential learning. The potential  
22 to inculcate the competency of leadership exists in all individuals, regardless of their current  
23 job designations. In addition, we explored their relationship with daily clinical practice to  
24 clarify the differences between various types of jobs. The study findings will help in guiding  
25 mentors who conduct global clinical health training for undergraduate students and residents,  
26 and will also provide useful information for developing leadership competency in health  
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## 45 **Method**

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47 We followed the Standards for Reporting Qualitative Research (SRQR) recommendations.<sup>29</sup>  
48 Full details of the SRQR can be found in the Research Checklist to this paper. Qualitative  
49 descriptive study<sup>30</sup> is one of the qualitative study methods that are widely used in healthcare  
50 research, particularly to describe the nature of various healthcare phenomena. We conducted  
51 a qualitative descriptive study, and interviewed 20 research participants. The thematic  
52 analysis method<sup>31</sup> used in this study involved generative coding and theorization.  
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## ***Setting***

Following the Sumatra earthquake and Indian Ocean tsunami,<sup>32</sup> the US Army organized the “Pacific Partnership,” a multilateral project that aimed to improve humanitarian assistance and disaster relief capacity. Under this project, a US navy boat conducts annual visits to several countries in the Asia-Pacific region. Through cooperation with government agencies, the military, and non-governmental organizations (NGOs) of the participating countries, the Pacific Partnership aims to improve mutual understanding and strengthen cooperation among related countries by conducting medical activities, facility repair, and cultural exchange programs. We adopted this project as a short-term global health experience in our study to explore how the experiences are translated into clinical practice, and our first author actually participated in the 2016 and 2017 Pacific Partnership as an NGO member and developed relationships with research participants. Japanese health professionals provided medical support in Palau (Pacific Partnership 2016) and Vietnam (Pacific Partnership 2017) for several weeks. The participants lived and worked with the visiting health professionals from the US, the UK, and Australia on military transport ships and conducted outdoor medical practice, ambulatory care support, and educational activities for each job category. All participants shared both clinical and administrative duties because of the location and working conditions, which varied from day to day.

## ***Participants***

All 50 health professionals involved in this project were invited to participate. Twenty people volunteered: five nurses, five dentists, and 10 physicians who had participated in the 2016 or 2017 Pacific Partnership and who had provided informed consent for study participation. The mean age of the research participants was 40.0 years (range, 29–57 years), and the mean

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3 duration of clinical experience was 15.3 years (range, 4–34 years). By focusing on a culturally  
4 homogenous group, we could achieve thematic saturation with this limited number (20) of  
5 participants. Table 2 provides their profiles.  
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### 10 11 12 ***Patient and Public Involvement***

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14 Patients and the public were not involved in this study.  
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### 17 18 19 ***Data collection***

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21 In this qualitative descriptive study, we conducted face-to-face, semi-structured interviews  
22 using an audio recorder. Each interview lasted 30–90 minutes. The interviews took place at  
23 the participant's place of clinical practice between July 2017 and March 2018. To ensure a  
24 safe environment that would elicit the interviewees' straightforward beliefs, only the  
25 participant and the interviewer were present in these interviews. An interview guide (see Fig.  
26 1) was used to clarify how the participants viewed their experiences and how those  
27 experiences influenced their leadership competency. The study authors agreed that the  
28 interview guide suited our research purpose and that the contents of the interview guide did  
29 not change over time. On the other hand, each of the interviews were flexible, and the  
30 participants were allowed to take the discussion in any direction. As a participant in the  
31 Pacific Partnership, the first author worked alongside the 20 participants and observed them  
32 in situ. The recorded audio data of the interviews were transcribed verbatim by the authors  
33 immediately after each interview. The Institutional Review Board of the University of Tokyo  
34 approved this study (11562).  
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### 54 55 56 ***Data analysis***

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3 We have analyzed the data manually with multiple names using the Steps for Coding and  
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5 Theorization method and performed a theoretical evaluation from the perspective of a social  
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7 constructivism paradigm.<sup>33-34</sup> The method of coding and theorization for data analysis  
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9 comprised two major steps: first, the text data were divided into small units and were  
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11 classified as meanings or ideas, and second, each of these small units was labeled with an  
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13 interpretive description (see Fig. 2). These processes were conducted on each interview  
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15 transcript. For the targeted number of research participants, we conducted interviews for  
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17 multiple occupations until theoretical saturation was obtained. After data collection and  
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19 individual manual analyses, we agreed that we had achieved theoretical saturation, with no  
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21 new themes emerged in the data set, and we achieved a complete understanding of the  
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23 identified concepts. Member-checking was conducted twice by the research participants after  
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25 the interviews and analyses.  
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## 33 **Results**

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35 Through the interviews, we identified 58 emergent themes to the competency of leadership  
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37 (see Table 3). We divided them into “during” and “after” the actual global clinical experience.  
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39 Among them, 23 of the themes that affected the actual medical care in their own institutions  
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41 were recognized. We categorized the 58 themes into the seven competency areas: leadership  
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43 concepts, teambuilding, direction-setting, communication, business skills, working with others,  
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45 and self-development. We focused on the leadership aspects of certain specific factors related  
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47 to clinical practice. For instance, we considered the “establishment of a trust relationship” to  
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49 be a leadership competency component of “working with others” but did not regard  
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51 “performing assignments” as an element contributing to leadership competency.  
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### 59 ***Leadership concepts***



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3 The experience of participating in the global clinical health cooperation project became a  
4 trigger that often led to the establishment of a leadership style. Although we can see some  
5 differences in each health professional and their own experiences, many health professionals  
6 saw the change in location as an impetus for change. To quote one participant: “There are  
7 many developing nations, and I feel that Japan is quite advanced in terms of its medical  
8 standards. Instead of simply providing assistance with medical care, I think it is important to  
9 educate local medical practitioners that are providing such care. Furthermore, education is  
10 obviously necessary, but I also felt that the perspective of training educators was necessary.”  
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22 (Participant D3)  
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26 Health professionals self-evaluated their leadership in highly uncertain situations during their  
27 actual global clinical health experience. Some noted that after the experience, they continued  
28 to strengthen the leadership concept of delegation of authority that had been gained through  
29 their short-term global health experience: “I appointed a person-in-charge in each department,  
30 asked them to organize the department, and then supervised them during the subsequent  
31 activity....Although I had not thought about team medical care before participating in the  
32 program, I allocated more responsibilities to staff members in my hospital after seeing the  
33 professionalism of the participants.” (P1)  
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### 47 ***Teambuilding***

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49 The project helped health professionals recognize that a cooperative workplace led to more  
50 successful policy decisions and a better understanding of diversity and their colleagues’  
51 environment, and they meta-recognized past work experience of their own: “The biggest  
52 achievement from global health experience is that one’s perspective as a medical professional  
53 broadens by participating....Although we were different in age and positions, my team  
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3 members were great people. Having peers with whom I wanted to work with together again  
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5 was the biggest reward from this program.” (D4)  
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10 The participants strengthened their awareness of teambuilding and shared leadership, which in  
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12 turn led to inter-professional education: “Through my experience abroad, I was able to  
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14 experience that collaboration between different professions is important in any environment. It  
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16 can serve as an educational tool for the future because even after participants come back to  
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18 Japan, it will lead them to strengthen the collaboration between different professions on-site.”  
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21 (N5)  
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### 26 ***Direction-setting***

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28 The experience of the global clinical health cooperation project urged the participants to be  
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30 more conscious of goal-setting and policy decision-making as an organization. They developed  
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32 cultural competency: “The significance of this program is that participants can learn about how  
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34 things are done in other countries because of the diversity of members within the program. It  
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36 also becomes a learning experience on the diversity of management.” (D2)  
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42 The experience contributed to a better understanding of the participants’ own work  
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44 environments as well as how the environment and the team process strengthened the awareness  
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46 of target-setting and backward-development. In addition, they strengthened their viewpoint of  
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48 leader development through acquiring inter-subjectivity: “The place where this program’s  
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50 activities took place had no educational environment even if people wanted to learn about  
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52 performing medical practice. Therefore, we are preparing to establish a structure within our  
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54 facility in which we can accept foreign students to study. I would like to increase both the  
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56 quality and quantity of local health professionals.” (D4)  
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### ***Communication***

Not only during but also after participating in the global health cooperation project, the participants increased their emphasis on communication at their work site, recognizing the project as a place to nurture global-thinking and communication skills. Strengthening their awareness of communication led to education: “While I felt that when I go to a new place and work with people I meet for the first time, it is necessary to first properly talk with one another when a relationship of trust has not yet been established, I also learned that communication in my daily medical practice settings can take place because there is an existing relationship of trust.” (N4)

### ***Business skills***

Through unexpected situations and conflict management, the participants were particularly influenced with respect to their consciousness of business skills in the field. They also recognized their own individual work style: “I did not know what to do because there was not even an option, and surgery and medicine would obviously not improve the situation...By providing medical treatment in an environment that is different from my usual one, I felt that I had been practicing medical care by relying too much on tools. It made me recognize that I am blessed with my medical environment.” (P7)

The participants also reflected on their own business skills, and as a result reinforced these skills and applied them to simulation tools: “While there were a few items that we had a shortage of during our activities, there were quite a few items that we had leftovers of. I thought that it is important to take necessary items with us and have a logistic system in place to manage

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3 them when a disaster actually occurs...I came to be more aware of management and  
4 collaboration after the medical cooperation project.” (N3)  
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### 10 ***Working with others***

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12 Through the multilateral project that aimed to improve humanitarian assistance and disaster  
13 relief capacity, the health professionals established a relationship of trust in the field and made  
14 a more conscious effort to empower other health professionals. Furthermore, back in their  
15 workplace, the participants leveraged their experience into developing others and career  
16 support, and strengthened credit accumulation and cooperation among their staff members:  
17 “Both the students and my colleagues became interested in this program through my activity  
18 report. I want to provide as many people as possible with the opportunities that I was given.”  
19 (N2) “I had the opportunity to contact people from other departments and make adjustments  
20 before the program took place, helping me acquire the habit of trying to understand the other  
21 person’s organizations.” (D2)  
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### 37 ***Self-development***

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39 Through the global health experience, some participants experienced a paradigm shift that  
40 became a trigger for career advancement and self-development: “Although there were  
41 differences depending on the environment, I felt that I had to hone my regular skills so that I  
42 could also give instructions after seeing the accurate medical techniques of the local physicians.”  
43 (P2)  
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### 53 ***Relationships between themes***

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55 We identified several types of relationships between the themes described above (see Fig.3).  
56 Experience in managing conflict during the global health experience led the health  
57 professionals to reflect on their communication and business skills: “I could see that people  
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3 abroad think in a completely different manner even if I didn't interact with them on a regular  
4 basis....I made all the schedules to indicate who would be taking the day off. It was difficult to  
5 coordinate because there was a language barrier and there were complaints that people weren't  
6 getting many days off." (D1)  
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14 Additionally, the global health experience encouraged participants to motivate and empower  
15 others and encouraged "teambuilding": "The biggest achievement that one can get by forming  
16 a team with people they just met is the ability to communicate effectively. This experience can  
17 be useful even in a different environment." (D3)  
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25 The development of individual leadership competency associated with leading a medical care  
26 team was related to "understanding the environment of other cultures" and "teambuilding."  
27 One participant stated this: "We did actually provide outdoor medical care as if it was an actual  
28 field hospital. I keenly felt the difficulties of practicing medical care by having to start by  
29 preparing the tools. I learned how difficult it is to work in an environment with hygiene  
30 standards that are completely different from those of Japan." (P4)  
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43 Finally, the concepts of "motivating and empowering others" and "lifelong learning" became  
44 associated with the actual delivery of medical care: "Coming into contact with various health  
45 professionals in a foreign country will be a good experience to have. I hope that the participants'  
46 perspectives will broaden through their interactions. On the contrary, engaging only in one's  
47 regular medical care environment will limit their perspectives. I want to share what I learned  
48 with my colleagues." (P6)  
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### 58 *Differences in the professions*

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3 Some differences in each profession were identified through the data analysis.  
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8 *Nurses*  
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10 Nurses particularly improved their empathic attitudes toward colleagues and patients as a result  
11 of the global health experience. Consequently, through perspective gained from work in the  
12 field, they established servant leadership with the mentality of understanding others through  
13 relationships of trust, stating: “A relationship in which each person can see the other person’s  
14 face is extremely important...After participating in the program, I am more conscious of  
15 listening to my peers while on-site. With my staff members in particular, I check what they are  
16 having troubles with and provide everything I can for their growth.” (N1)  
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28 *Dentists*  
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30 Dentists tended to reflect on their business skills after the global health experience. The  
31 experience affected their consciousness of their business skills at their own work site and their  
32 application of these skills to the leadership concept: “Instead of relying on the limited resources  
33 during medical treatments, I became able to think about how to replace the resources with  
34 something else and share this finding with colleagues.” (D2) Another dentist stated: “The  
35 attitude to provide the best medical care in environments with limited resources like where the  
36 activity took place is important. A similar mindset is also needed when one transfers from a  
37 hospital with enhanced facilities, like a university hospital, to a regional hospital with limited  
38 resources.” (D3)  
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53 *Physicians*  
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55 After participating in the project with the multinational medical team, physicians recognized  
56 the importance of teambuilding at their own work site. They recognized that they became  
57 conscious of strengthening their leadership and goal-setting at their own organizations: “On-  
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3 site, I became able to make adjustments well by transferring some of the authorities to the staff  
4 members and having them practice and make corrections instead of taking on all the  
5 responsibilities as a department director....I feel that finding what each person can do in their  
6 profession and allocating duties accordingly can draw out their abilities.” (P1) Another  
7 physician stated: “Seeing case examples of diseases that cannot be treated on-site made me  
8 re-acknowledge just how fortunate the Japanese medical environment is.” (P8)  
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## 20 **Discussions**

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22 We identified seven leadership competencies strengthened by the short-term global clinical  
23 health experience. In addition, we clarified relationships among each leadership competency  
24 gained through the experience and the different types of leadership competency among various  
25 types of jobs. Previous studies have shown the potential benefits for global clinical health  
26 participants in terms of increased awareness of global health issues, gaining new medical  
27 information, capacity-building for clinical problem solving, and an improved sense of  
28 professional satisfaction.<sup>5,8</sup> Our results contribute to the literature with additional findings  
29 regarding the enhancement of leadership competency.  
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43 We considered several factors contributing to how health professionals can gain leadership  
44 competency through the global experience and then add it to their clinical practice.  
45 Collaboration among the multinational team of health professionals certainly led to increased  
46 leadership competency. While leadership and collaboration are highly valued and potentially  
47 conflicting competencies in clinical practice,<sup>26</sup> by managing conflict and difficult cases in the  
48 global clinical health experience, participants collaborated with each other, enhancing their  
49 leadership competency. From the perspective of experiential learning, the global health  
50 experience was an external experience by health professionals that contributed to their daily  
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3 clinical practice as an internal experience.<sup>14</sup> Second, understanding the environment of other  
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5 cultures forms the basis for gaining leadership competency as shown in the relationships among  
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7 the themes. Experiencing cultural differences becomes conscious behavior through contact  
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9 with new situations and cultures in which unconscious and implicit cultural behavior and  
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11 sensibilities are required.<sup>35</sup> The global health experience offered the opportunity for  
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13 participants to learn about themselves and their own leadership,<sup>36</sup> and they continued these  
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15 leadership competencies in their own institutions upon their return. In this process, we observed  
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17 that a meta-learning process occurred in each health professional as a result of their global  
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19 health experience, and that this process led to the enhancement of their leadership competency  
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21 in each context.  
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29 Our results clearly demonstrate that the leadership concept is perceived differently by  
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31 individuals from different professions. Nurses particularly strengthened their empathic  
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33 attitudes toward patients and colleagues, and they strengthened their leadership by establishing  
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35 a mentality of understanding and relationships of trust in their workplace. Nurses tend to be  
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37 well trained in an empathetic attitude in their careers,<sup>37</sup> which supports our result. Meanwhile,  
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39 dentists particularly focused on their business skills. In the clinical environment in many  
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41 countries, treatment must be done with limited equipment, and dentists often solved these  
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43 problems while leveraging their own business skills. As ethical stewardship of healthcare  
44  
45 resources are important for health professionals,<sup>38</sup> participant dentists became aware of the  
46  
47 ethics of waste avoidance in their daily practice overseas. Consequently, they improved their  
48  
49 business skills and brought those improved skills to their own jobs after their participation.  
50  
51 Finally, physicians recognized the importance of teambuilding and after the global health  
52  
53 experience strengthened their leadership and goal-setting in their own organization. Physicians  
54  
55 have professional obligations and a responsibility to develop public roles.<sup>39</sup> The global health  
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3 experience presented physicians with many opportunities to coordinate and make decisions  
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5 with other occupations, thereby strengthening their competencies related to leadership and  
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7 teambuilding.  
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12 Our findings show important parallels with earlier studies, including the BEME review that  
13  
14 showed that leadership competencies are gained through faculty development programs.<sup>27</sup>  
15  
16 These studies examined the prevalence and characteristics of faculty leadership development  
17  
18 programs at academic health centers and found that conflict management or interpersonal  
19  
20 effectiveness are emphasized but business skills and lifelong learning are part of faculty  
21  
22 development.<sup>40</sup> In this study, we pointed out various types of leadership competency gained by  
23  
24 health professionals through a global clinical health experience, which supports the idea that  
25  
26 the use of experiential learning and reflective practice contribute to positive outcomes in  
27  
28 promoting leadership. Furthermore, we identified a link between cross-boundary experiences  
29  
30 and the participants' leadership development. It would be useful to elucidate the differences in  
31  
32 the learning process between faculty development and experiential learning and examine the  
33  
34 concept of tacit knowledge that is difficult to transfer to another person.<sup>41</sup> In general, faculty  
35  
36 development aims to ensure that health professionals have the knowledge and skills for  
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38 leadership development, while in experiential learning, health professionals learn leadership  
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40 competency as tacit knowledge through the experience itself without formal instruction.  
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49  
50 One limitation of this study is we had interviewed only Japanese health professionals who  
51  
52 participated in the short-term global clinical health experience. As there is no leadership that  
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54 exerts a common effect beyond culture in a previous study,<sup>42</sup> we should investigate the process  
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56 of developing individual leadership competency in other countries. Another limitation of this  
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58 study is we focused on health professionals who mainly have their own specialty (mean  
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3 duration of clinical experience is 15.3 years). Leadership is one of the important competencies  
4 required to demonstrate practical skills in effective team management in complex organizations  
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8 at all levels.<sup>25</sup> Therefore, we believe that it is necessary to investigate the leadership  
9  
10 development process through global clinical health experiences in the younger generation,  
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12 including residents and undergraduate students. Finally, the actual interpersonal interaction in  
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14 each health professional's institution is not made clear in this study. Although we identified  
15  
16 the contribution of the short-term global clinical health experience to the leadership  
17  
18 competency as an outcome, the organizations where the participants work are complex and  
19  
20 dynamic social environments.<sup>43-44</sup> Therefore, further investigation of how health professionals  
21  
22 adopted their leadership competency upon their return to their own environment would be  
23  
24 required. As stated above, leadership competency development in other cultures would have to  
25  
26 be studied to investigate the transferability of these results. Leadership competencies would be  
27  
28 affected by cultural values such as individualism–collectivism and social norms including  
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30 cultural tightness–looseness.<sup>45</sup> It is also difficult to make generalized statements without  
31  
32 researching the leadership development process in other fields such as volunteering,  
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34 construction, or religious missions. Based on emergent themes, we can predict that other fields  
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36 or cultures would yield some similar findings in parameters such as communication, working  
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38 with others, and teambuilding (Table 3).  
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## 47 **Conclusion**

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49 This study clarified the leadership competency gained through a short-term global clinical  
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51 health experience and the process of individual leadership competency development. The  
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53 competencies gained by nurses, dentists, and physicians were different. The findings provide  
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55 expected learning competency for those considering clinical practice in developing or other  
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3 countries in the future. The study findings may also help in guiding mentors who conduct  
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5 global clinical health training for health professionals.  
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## 20 **Contributors**

21  
22  
23 MH was the principal investigator for this study, conducted the interviews, and authored the  
24  
25 paper. HO contributed to the design of this study. DS analyzed and coded all data with MH.  
26  
27 ME checked the results, advised edits, and approved for public release. All authors have agreed  
28  
29 with the final version of this paper.  
30  
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38  
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## 44 **Competing Interests**

45  
46  
47 Non-financial associations that may be relevant to the submitted manuscript.  
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## 52 **Ethical approval**

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55 This study was approved by the Institutional Review Board of the University of Tokyo (IRB  
56  
57 ID 11562).  
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## Provenance and peer review

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## Data sharing statement

No additional data are available.

## Figure legends:

Figure 1. Interview guide

Figure 2. Processes of data analysis

Figure 3. Relationships between themes

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### 28 **Table 1. Glossary**

<p>30 31 <b>Health professional:</b> 32 A person who maintains health in humans through the application of the principles and 33 procedures of evidence-based medicine and caring. It includes medical doctors, nursing 34 professionals, midwife professionals, dentists, pharmacists.<sup>1</sup></p>
<p>35 36 <b>Global clinical health experience:</b> 37 Experience of clinical practice that places a priority on improving health and achieving 38 equity in health for all people worldwide and emphasizing vulnerable populations in 39 underserved settings.<sup>4</sup></p>
<p>40 41 <b>Leadership competency:</b> 42 A group of competencies linked to the concept of leadership where leadership is not 43 restricted to people who hold designated leadership roles and where there is a shared 44 sense of responsibility for the success of the organization and its services.<sup>28</sup> 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60</p>

**Table 2. Character of research participants**

No	Sex	PGY	Type of institution	Position	Participation
N1	F	15	Community hospital	Staff	2016
N2	M	4	Nursing home	Staff	2017
N3	M	20	Self-Defense Forces	Staff	2016
N4	F	10	University	Graduate student	2016
N5	M	17	University	Lecturer	2016
D1	M	15	Self-Defense Forces hospital	Staff	2016
D2	M	9	Self-Defense Forces	Staff	2016
D3	M	34	University hospital	Professor	2016
D4	M	23	Community hospital	Manager	2017
D5	M	11	Self-Defense Forces hospital	Staff	2016
P1	M	16	Self-Defense Forces hospital	Manager	2016
P2	M	21	University hospital	Assistant Professor	2017
P3	M	13	Community hospital	Staff	2017
P4	F	13	Community hospital	Staff	2016
P5	M	14	Community hospital	Staff	2016
P6	M	19	University hospital	Lecturer	2016, 2017
P7	M	9	Self-Defense Forces hospital	Staff	2016
P8	M	8	University hospital	Staff	2017
P9	M	4	University hospital	Resident	2017
P10	M	30	University hospital	Assistant Professor	2017

N: Nurse

D: Dentist

P: Physician (Doctor)  
PGY: Postgraduate year

**Table 3. Emergent themes**

<b>During Participation</b>	<b>After Participation</b>
<b>Leadership concept</b>	
Fulfillment of duties	Establishment of individual leadership style
Recognition of individual leadership	Establishment of servant leadership
Overseeing medical treatment as a specialist	Strengthening follower-friendly servant leadership
Leveraging the individual leadership concept	Contribution of leadership concept to daily practice
Promoting awareness of potential leadership	Delegation of authority
Constructing the leadership concept	
A place to guide change	
Self-assessment of leadership	
Paradigm shift on leadership	
<b>Teambuilding</b>	
Making policy decision as a practical community	Strengthening the awareness of teambuilding
Meta-recognition of past work experience	
Promoting understanding of diversity	
Strengthening the attitude of shared leadership	
Practicing conflict management	
<b>Direction-setting</b>	
Taking action based on context dependence	Recognition of individual organizational position
Making the medical care environment relative	Understanding the environment
Recognition of local context	Reviewing target-setting
Development of cultural competency	Strengthening viewpoint of leader development
Awareness of target-setting and backwards development	
Making policy decisions	
Paying attention to team direction and process	
Understanding environment and decision-making	
<b>Communication</b>	

Nurturing global-thinking and communication skills	Strengthening the awareness of communication
Encouraging reflection of communication skills	
<b>Business skills</b>	
Strengthening business and communication skills	Applying simulation tools
Simulation training for disasters	Awareness of business skills
Understanding and reflection of business skills	Developing other support activities
Paying attention to the power relation	Reflecting individual examination style
<b>Working with others</b>	
Seeking out new leadership concepts	Empowering other health professions
Establishment of a trust relationship	Developing others and career support
	Reflecting individual educational policy
	Strengthening cooperation among staff members
<b>Self-development</b>	
Developing awareness of a sense of belonging	Reconsidering empathic attitude toward patient
Strengthening adaptability and self-management	
Paradigm shift as a professional	Establishing self-management
Seeking self-development opportunities	Motivation for career advancement and self-development
Recognizing the necessity of total management	Lifelong learning

1. What is your job category (specialty/department), experience level (number of years), type of participation, and number of times you have participated in the Pacific Partnership?
2. Please explain the medical service you usually perform.
3. What has been your major medical experience thus far?
4. If you have had overseas experience (including medical experience) before joining the Pacific Partnership, please provide details regarding it.
5. Why did you choose to participate in an international medical cooperation project as part of a multinational medical team in the South Pacific (Pacific Partnership)?
6. What are your personal impressions of the Pacific Partnership?
7. What impact did the impressive episode (answer 6) have on your own medical treatment (attitude toward medical practice or work) and business management?
8. Describe your experience of providing team-based medical practice in a real situation, specifically in context of a cross-cultural exchange with a multinational medical team.
9. What impact did the experience of practicing various types of medical activities different from your usual environment have on your own daily practice?
10. Do you feel that participating in international medical cooperation projects like the Pacific Partnership adds value to your professional skills? Why do you think so?

### **Figure 1. Interview guide**

## Steps for Coding and Theorization

**The first procedure** is "four steps coding."

We write segmented data first and put the following codes consecutively:

<1> Noteworthy words or phrases from the text

<2> paraphrases of <1>

<3> concepts from out of the text that account for <2>

<4> themes, constructs in considerations of context

**The second procedure** is writing the **story-line** and **theory**. After the completion of

<1> through <4>, we write the story-line using <4>. Finally, we write theory emerging from our story-line.

### Figure 2. Processes of data analysis

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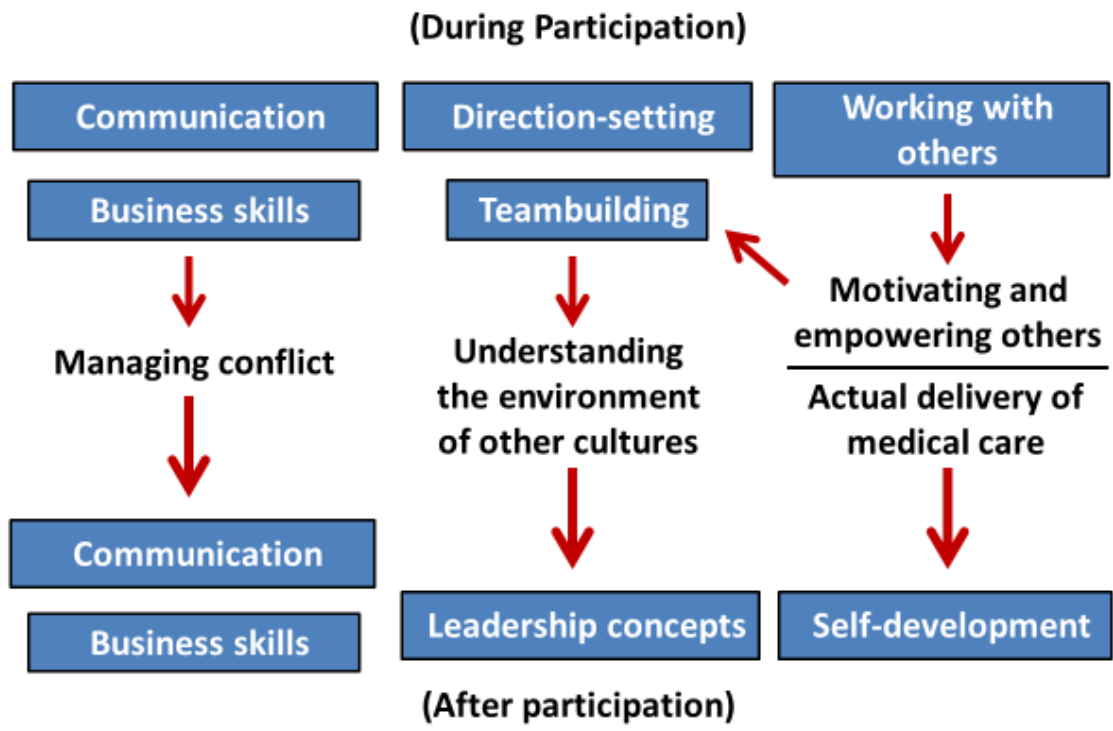


Figure 3. Relationships between themes

## Standards for Reporting Qualitative Research (SRQR)\*

<http://www.equator-network.org/reporting-guidelines/srqr/>

Page/line no(s).

### Title and abstract

<p><b>Title</b> - Concise description of the nature and topic of the study Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended</p>	1
<p><b>Abstract</b> - Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions</p>	2,3

### Introduction

<p><b>Problem formulation</b> - Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement</p>	5,6,7
<p><b>Purpose or research question</b> - Purpose of the study and specific objectives or questions</p>	7

### Methods

<p><b>Qualitative approach and research paradigm</b> - Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/ interpretivist) is also recommended; rationale**</p>	7,9,10
<p><b>Researcher characteristics and reflexivity</b> - Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability</p>	8,9
<p><b>Context</b> - Setting/site and salient contextual factors; rationale**</p>	7,8
<p><b>Sampling strategy</b> - How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale**</p>	8
<p><b>Ethical issues pertaining to human subjects</b> - Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues</p>	9
<p><b>Data collection methods</b> - Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale**</p>	9,10



1 2 3 4 5	<b>Data collection instruments and technologies</b> - Description of instruments (e.g., interview guides, questionnaires) and devices (e.g., audio recorders) used for data collection; if/how the instrument(s) changed over the course of the study	9,29
6 7 8	<b>Units of study</b> - Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	8,27
9 10 11 12	<b>Data processing</b> - Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymization/de-identification of excerpts	9,10
13 14 15 16	<b>Data analysis</b> - Process by which inferences, themes, etc., were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale**	9,10
17 18 19 20	<b>Techniques to enhance trustworthiness</b> - Techniques to enhance trustworthiness and credibility of data analysis (e.g., member checking, audit trail, triangulation); rationale**	10

### Results/findings

23 24 25 26	<b>Synthesis and interpretation</b> - Main findings (e.g., interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	10,14,15,16,17
27 28 29	<b>Links to empirical data</b> - Evidence (e.g., quotes, field notes, text excerpts, photographs) to substantiate analytic findings	11,12,13,14,15 15,16,17,28

### Discussion

32 33 34 35 36 37 38	<b>Integration with prior work, implications, transferability, and contribution(s) to the field</b> - Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application/generalizability; identification of unique contribution(s) to scholarship in a discipline or field	17,18,19,20
39	<b>Limitations</b> - Trustworthiness and limitations of findings	19,20

### Other

42 43 44	<b>Conflicts of interest</b> - Potential sources of influence or perceived influence on study conduct and conclusions; how these were managed	21,22
45 46	<b>Funding</b> - Sources of funding and other support; role of funders in data collection, interpretation, and reporting	21

\*The authors created the SRQR by searching the literature to identify guidelines, reporting standards, and critical appraisal criteria for qualitative research; reviewing the reference lists of retrieved sources; and contacting experts to gain feedback. The SRQR aims to improve the transparency of all aspects of qualitative research by providing clear standards for reporting qualitative research.

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\*\*The rationale should briefly discuss the justification for choosing that theory, approach, method, or technique rather than other options available, the assumptions and limitations implicit in those choices, and how those choices influence study conclusions and transferability. As appropriate, the rationale for several items might be discussed together.

**Reference:**

O'Brien BC, Harris IB, Beckman TJ, Reed DA, Cook DA. **Standards for reporting qualitative research: a synthesis of recommendations.** *Academic Medicine*, Vol. 89, No. 9 / Sept 2014  
DOI: 10.1097/ACM.0000000000000388

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