BRIEF REPORT

Current status and problems of orthopaedic residents in Thailand and Myanmar [version 1; peer review: awaiting peer review]

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Abstract

Background: There is no research about current experiences of orthopaedic residents in Thailand and Myanmar. Methods: A questionnaire survey was distributed among Thai and Myanmar orthopaedic residents to assess their current experiences. This study included a total of 168 participants, comprising 92 (94.8%) of 97 orthopaedic residents in Thailand, and 76 (97.4%) of 78 in Myanmar who answered the questionnaire. The survey comprised nine questions about issues such as the contents of residency training programs, current training satisfaction, and future careers. The survey was administered anonymously between October 2020 and January 2021.

Results: Regarding training content, 24 residents reported being "very satisfied", 103 were "satisfied", 37 were "moderately satisfied", and four were "dissatisfied", and respondents spent a mean of 3.1 h/day reading textbooks and research papers. As for salary, five residents answered "satisfied", 46 responded "moderately satisfied", and 117 were "dissatisfied".

Conclusions: Many orthopedic residents in Thailand and Myanmar were enthusiastic about and satisfied with their training. Their only problem was that the salary was low.

Keywords
orthopaedic specialists, orthopaedic residents, medical education, Thailand, Myanmar
Introduction
In Southeast Asian countries, most reports on medical residents becoming specialists have been reported from Singapore,
very few from Thailand, and none from Myanmar. Moreover, there have been no reports on orthopaedic residents in Thailand or Myanmar in the past.

According to the information from the Royal College of Orthopedic Surgeons of Thailand and Myanmar Orthopaedic Society (Accessed on 4th Mar 2021), the number of orthopaedic specialists was 2,630 in Thailand and 600 in Myanmar, and the ratio of orthopaedic surgeons per 100,000 population is 4.0 in Thailand and 1.2 in Myanmar. As a reference, the number of orthopaedic specialists in Japan is 19,598, which amounts to 16.3 per 100,000 population, according to the information from the Japanese Orthopaedic Association website (accessed on 20th Feb 2021). These low numbers of orthopaedic specialists in Thailand and Myanmar may be because the total number of orthopaedic residents in 2021 was limited to 138 in Thailand and 100 in Myanmar (the number of applicants changes between years.)

In the present study, we report a questionnaire survey on Thai and Myanmar orthopaedic residents investigating the actual education conditions in countries with a shortage of doctors and related problems.

Methods
This study included 168 orthopaedic residents, comprising 92 (18.0 % of all 520 Thai residents) of 97 orthopaedic residents from three universities and three hospitals in Thailand who answered the questionnaire and 76 (28.1% of all 271 residents in Myanmar) of 78 orthopaedic residents from one university in Myanmar who answered the questionnaire. The questionnaire was conducted at the facility of our choice to the orthopaedic residents who were attending the lecture on the day of distribution of the questionnaire. In Thailand, 92 out of 97 (94.8%) residents, and in Myanmar, 76 out of 78 residents (97.4%) attended the lecture. The questionnaire survey was created by the first author (YK), and the questionnaire was distributed at the end of the lecture without contacting the participants in advance to conduct this questionnaire. First, the doctor at the facility exposed the purpose of this questionnaire and explained that there would be no advantage or disadvantage to answering this questionnaire, and that this data would be collected, used, and published in an international journal. Then, after answering “yes” to the question asking whether participants consented to answer, all participants answered, and the questionnaire was collected. Windows 10 was used as the software tool, and the data was combined in Excel. The creator of this questionnaire did not collect data.

The mean age of Thai respondents was 28.0 years (ranging between years.)

Table 1 shows the results of the questionnaire survey answered by Thai and Myanmar orthopaedic residents.

The question regarding why they became an orthopaedic surgeon was answered by “interest” by 88 residents, “an important field of medical care” by 59, “easy to earn money” by 10, “on the advice of seniors” by six, and “the challenge of new things” by five participants. The selection test for orthopaedic specialists was rated as “very difficult” by 21 residents, “difficult” by 113 residents, “moderately difficult” by 32 residents, and “easy” by two residents. Mean daily sleep was 6.0 h/day (range, 4–9 h/day), while respondents spent a mean of 3.1 h/day reading textbooks and research papers (range, 1–11 h/day). In the training programs, the most time-consuming tasks were reported to be inpatient treatment plans (including preparing presentation materials such as medical history, present illness,
Table 1. Results of the questionnaire survey answered by Thai and Myanmar 168 orthopaedic residents.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Thailand orthopaedic residents (92 persons)</th>
<th>Myanmar orthopaedic residents (76 persons)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Grounds for being an orthopaedic surgeon</td>
<td>Interest important field of medical care easy to earn money on the advice of seniors</td>
<td>45 interest important field of medical care 34 challenge of new things 9 on the advice of seniors 4 easy to earn money 1</td>
</tr>
<tr>
<td>2. Selection test to be an orthopaedic surgery resident</td>
<td>very difficult difficult moderately difficult easy</td>
<td>14 very difficult difficult moderately difficult easy 7</td>
</tr>
<tr>
<td>3. Hours of sleep per day</td>
<td>average 5.7 h (4–8 h)</td>
<td>average 6.5 h (5–9 h)</td>
</tr>
<tr>
<td>4. Hours of study per day</td>
<td>average 3.5 h (1–11 h)</td>
<td>average 2.6 h (1–5 h)</td>
</tr>
<tr>
<td>5. Most time-consuming task in the training program</td>
<td>inpatient treatment plans and postoperative care reading textbooks and research papers surgery physical examinations of outpatients</td>
<td>49 inpatient treatment plans and postoperative care surgery 18 reading textbooks and research papers 15 physical examinations of outpatients 10</td>
</tr>
<tr>
<td>6. Satisfaction with the training program</td>
<td>very satisfied satisfied moderately satisfied dissatisfied</td>
<td>7 very satisfied 50 satisfied 32 moderately satisfied 3 dissatisfied 1</td>
</tr>
<tr>
<td>7. Satisfaction with the salary</td>
<td>satisfied moderately satisfied dissatisfied</td>
<td>4 satisfied 37 moderately satisfied 51 dissatisfied</td>
</tr>
<tr>
<td>8. Orthopedic specialist examination</td>
<td>very difficult difficult moderately difficult</td>
<td>24 very difficult 52 difficult 16 moderately difficult 5</td>
</tr>
<tr>
<td>9. Future career plan</td>
<td>undecided working at hospital studying a subspecialty</td>
<td>61 undecided 21 studying a subspecialty 10 working at hospital undertaking training abroad 10</td>
</tr>
</tbody>
</table>

Discussion

Since orthopaedic diseases include many diseases from trauma to degenerative diseases, the number of patients is very large, and training of orthopedic specialists is important and indispensable in any country, training methods vary widely between countries. In developing countries such as Thailand and Myanmar, trauma patients with injuries such as fractures are frequently seen, so training as a trauma surgeon is crucial.

In our study results, orthopaedic residents in Thailand and Myanmar generally trained diligently and were relatively satisfied with the training content. It was speculated that the reason for applying for being orthopaedic specialists was that...
it was an interesting and important field of medical care, and these might be reasons they were highly motivated to learn. Although passing rates for the selection test to be accepted as orthopaedic residents differ between years and facilities i.e., universities or hospitals, the success rate for exams to become orthopaedic residents is 30–70% in Thailand and 10–30% in Myanmar, according to the information from Royal College of Orthopaedic Surgeons of Thailand and Myanmar Orthopaedic Society (Accessed on 4th Mar 2021). Because Thai and Myanmar residents are learning after successfully overcoming a competitive environment, they might have pride and a strong sense of mission to work as one of the few orthopaedic surgeons, which apparently encourages them to study hard. As a result of their hard work, around 95% of residents pass specialist examinations in Thailand and Myanmar, according to the information from the Royal College of Orthopaedic Surgeons of Thailand and the Myanmar Orthopaedic Society (Accessed on 4th Mar 2021).

On the other hand, the low salary was raised as a problem. In addition, relatively many people had not decided their future career plan, which can be attributed to about half of them being first or second-year residents. Treating fractures, dislocations and ligament injuries is the main focus of orthopedic surgery for residents in Thailand and Myanmar, because trauma is overwhelmingly more frequent than non-traumatic diseases; therefore, it was thought that one of the reasons for this was that few people would like to subspecialise in orthopaedic surgery such as joint surgery, spine surgery, and hand surgery.

The limitations of this paper are that it is the result of surveying about 20% of residents in Thailand and about 30% of residents in Myanmar, and that there were no question items about the number of years of experience of orthopaedic residents. And, one university in Myanmar, three universities in Thailand, and three hospitals chose facilities that facilitate the questionnaire survey by the authors. Universities in the largest cities in Myanmar and universities and hospitals in local cities in Thailand have been selected, and it is possible that this questionnaire survey does not accurately reflect the situation in each country. However, in the present study, we described orthopedic residents’ current situation and problems in Thailand and Myanmar. As further research, we would like to increase the number of respondents and consider the differences relating to participants’ years of experience as residents.

Conclusion

Many orthopedic residents in Thailand and Myanmar were enthusiastic about and satisfied with their training. The only problem identified was that the salary was low.

Data availability

Underlying data

Figshare: All DATA.xlsx, https://doi.org/10.6084/m9.figshare.19083407.v1

Extended data

Figshare: question for Orthopaedic residents.docx, https://doi.org/10.6084/m9.figshare.19100036.v2

Data are available under the terms of the Creative Commons Zero “No rights reserved” data waiver (CC0 1.0 Public domain dedication).

References


