The relationship between physical therapy clinical educator’s motivation and negative factors

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Abstract. [Purpose] The purpose of this study was to clarify the relationship between physical therapy clinical educators’ motivations and negative personal factors. [Participants and Methods] The authors sent a questionnaire on clinical education to 790 physical therapists working in hospitals across Japan, and received 345 valid responses. The study defined motivated and unmotivated clinical educators based on their answers to the “interests” and “enjoyment” aspects of clinical education. It also calculated the negative response rate out of 10 questions and odds ratio based on motivated clinical educators. [Results] The motivated group comprised 287 clinical educators (years of clinical experience: 8.1 ± 6.3) and the unmotivated group 58 (years of clinical experience: 7.0 ± 5.2). There was no statistically significant difference in years of clinical experience between the two groups. Two questions—“Is student guidance necessary for growth as a therapist (self-improvement)?” and “Do you want to learn about instructional methods?”—showed very high odds ratios. [Conclusion] This study reveals negative personal factors for the clinical educators who lack the will to educate students, such as preparation for clinical education, self-improvement, and cooperation with class instructors. Longitudinal research on motivated and unmotivated clinical educators will help identify these negative factors to improve their motivation.

Key words: Physical therapy, Clinical education, Instructor preparation

INTRODUCTION

In Japan, new rules for educational institutions that train physical therapists will take effect in April 20201). These rules include curricular requirements and guidelines for credentialing instructors. Clinical training of physical therapists is at a major turning point. Evidence-based education2) will be required teaching for clinical educators (CEs), just as it is in medical schools. The new guidelines for physical therapists and occupational therapists make it obligatory that they receive five years of clinical experience, along with the training course focused on clinical education.

In light of the new requirements, the present study conducted a research survey on CEs3, 4). The results found that CEs need to share their thought processes more widely with their students5), and they need to adapt their teaching practices to student’s needs. In addition, the study revealed that CEs have anxieties about correcting the reports the students wrote during clinical training in addition to the student’s cognitive, affective, and psychomotor problems6). Study results also showed that some CEs negatively view clinical education, and some are not motivated to educate students. Clinical educators’ difficulties and lack of motivation have been studied before7, 8), but no literature was found that shows a correlation between their motivation for clinical education and their own difficulties.

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The purpose of this study was to identify the negative factors associated with CEs' motivation for clinical education. Determining these factors could help in research aimed at demonstrating a causal relationship between CEs’ motivation in clinical education and their personal factors.

**PARTICIPANTS AND METHODS**

The survey was conducted by sending questionnaires to 790 physical therapists working in Japanese hospitals; 345 provided valid responses between August 2013 and March 2014. In this study, 345 CE (years of clinical experience: 7.9 ± 6.1) gave the same answer (yes to both or no to both) regarding the “interests” and “enjoyment” of clinical education (Table 1). I defined CEs who answered yes to both questions as “Motivated CEs” and those who answered no to both questions as “Unmotivated CEs.” The study was approved by the ethics committee of Kawasaki Hospital (approval no. 2022), and all study participants provided informed consent.

The study analyzed data from 10 questions regarded as CEs’ personal factors (Table 2). “YES” was indicated a positive answer, and “NO” indicated a negative answer. Missing data and no opinion were excluded. “YES” was totaled as a negative answer only in Q7 (Do you find clinical education a heavy burden?).

The t-test was used to analyze differences in clinical experience years between Motivated CEs and Unmotivated CEs. The Fisher’s test was used to analyze the categorical variables. All data were analyzed at an alpha level of 0.05. The odds were defined as the proportion of negative answers to positive answers and the odds ratio as the proportion of the odds of Unmotivated CEs to the odds of Motivated CEs. A 95% confidence interval for the odds ratio was calculated by Wald’s method based on normal approximation. All the analyses were performed with the use of R, version 3.6.1 (R Foundation for Statistical Computing).

**RESULTS**

The ratio of Motivated CEs to Unmotivated CEs is described in Table 2. In response to two questions (Table 1), “Are you interested in clinical education?” and “Do you enjoy clinical education?”, there were 287 Motivated CEs (years of clinical

| Table 1. The questions for defining motivated CEs or unmotivated CEs |
|---------------------------------------------------------------|
| Are you interested in clinical education?                     |
|                                                               |
|                      Yes | No | Missing data | Total |
|-----------------------|----|--------------|-------|
| Do you enjoy clinical | 287| 45           | 22    | 354  |
| education?            |    |              |       |      |
| No                    | 17 | 58           | 8     | 83   |
| Missing data          | 125| 101          | 127   | 353  |
| Total                 | 429| 204          | 157   | 790  |

Number of patients (clinical educators).

| Table 2. Participant demographics and number of answers to each question |
|------------------------------------------------------------------------|
|                                                                          |
| Total                     | Unmotivated CEs | Motivated CEs | p value |
| N (%)                     | N (%)           | M            |        |
| Female                    | 58 (100)        | 287 (100)    | 0.012  |
| Clinical experience years (mean±SD)                                  | 26 (44.8)       | 78 (27.2)    |        |
| Q1 Are you draw on advice you received when you were a student?       | NO              | 27 (46.6)    | 0.386  |
| Q2 After starting work, are you draw on instructional methods that you learned at work? | NO | 9 (15.5) | 0 | 0.164 |
| Q3 Do you draw on instructional methods that you learned in a training workshop? | NO | 47 (81.0) | 0 | 0.02  |
| Q4 Do you utilize the textbook for clinical education?                | NO              | 50 (92.6)    | 0.363  |
| Q5 Is student guidance necessary for growth as a therapist?           | NO              | 11 (20.0)    | 0.001  |
| Q6 Do you want to learn about instructional methods?                  | NO              | 9 (15.5)     | 0.001  |
| Q7 Do you find clinical education a heavy burden?                     | YES             | 49 (84.5)    | 0.843  |
| Q8 Do you have a clinical educator-teacher-student meeting, when a class instructor comes to your institution? | NO | 21 (42.9) | 9 | 1.000 |
| Q9 Do you need information about a student in advance?                 | NO              | 8 (14.3)     | 0.019  |
| Q10 Is the goal of the clinical education that students will you be able to begin work immediately? | NO | 43 (76.8) | 2 | 0.588 |

M: number of missing data or “they did not know”. All p values were calculated with Fisher’s exact test with the exception of “Clinical experience years”, for which the p value was calculated with t-test. Plus-minus values are means ± SD.
experience: 8.1 ± 6.3) who answered both questions with “Yes.” Unmotivated CEs who answered both questions with “No” equaled 58 (years of clinical experience: 7.0 ± 5.2). The two groups showed no significant differences in years of experience.

Four questions showed significant differences in the ratio of Yes to No: Q3, “Do you draw on instructional methods that you learned in a training workshop?” (p=0.02); Q5, “Is student guidance necessary for growth as a therapist?” (p<0.001); Q6, “Do you want to learn about instructional methods?” (p<0.001); and Q9, “Do you need information about a student in advance?” (p=0.019).

The odds ratio (OR) and 95% confidence interval (95%CI) are described in Table 3. Two questions were at a higher OR than the others: Q5 “Is student guidance necessary for growth as a therapist?” (OR=23.59, 95%CI=6.33–87.89) and Q6 “Do you want to learn about instructional methods?” (OR=32.05, 95%CI=9.68–106.07). The odds ratio of Q1, Q2, Q3, Q4, Q7, Q8, and Q9 were higher than 1.0, and these 95%CI ranged from 0.54 to 7.86. The odds ratio of Q10, “Is the goal of clinical education that students will be able to begin work immediately?”, was under 1.0 (OR=0.82, 95%CI=0.41–1.63).

**DISCUSSION**

The relationship between the CEs’ motivations and negative factors for non-enterprising ideas and passive attitudes about clinical education are listed in Table 3. The odds ratios of Q5 and Q6 were excessively high, and this indicates a major gap between Motivated and Unmotivated CEs. In addition, although the 95% CI of the odds ratios of Q2 and Q4 contain “1,” it is clear that they tend to be at a higher proportion. The study results concluded that the following keywords indicate negative factors: attempts and preparation for clinical education (in order of the odds ratio: Q3, Q4, Q2), self-improvement (in order of the odds ratio: Q6, Q5), and cooperation with class instructors (in order of the odds ratio: Q9). In future research related to education for CEs, the study argues for a need to institute measures for better education on teaching clinics and improving the quality of information given to students.

The limitation of this study is the failure to make causal inferences between CEs’ motivations and negative factors for clinical education. As the negative factors found in this study were gleaned from a questionnaire in a cross-sectional survey, it might be presumptuous to conclude that changing these negative factors can improve CEs’ motivations in clinical education. Additionally, Q5 asked about growth as a physical therapist and this is not a standardized question, as objective assessments are required for measurement of a physical therapist’s professional growth.

The proposed study design for the next step is to develop a statistical model that defines the causal relationships between CEs’ motivations and negative factors for clinical education. It is proposed that an objective variable is a CE’s motivation and explanatory variables are question items at a higher OR: attempts and preparation for clinical education (Q2, Q3, Q4), self-improvement (Q5, Q6), and cooperation with class instructors (Q9). Longitudinal research on Motivated CEs and Unmotivated CEs will identify negative factors so that their motivations can be improved.

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**Conflict of interest**

The authors declare that they have no conflict of interest.
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