Introduction

The tertiary education system in Hong Kong has undergone a recent curriculum reform. Originally, university students received 3-year education for an undergraduate program [1]. The first cohort of secondary school students entered the 4-year undergraduate program at university in September 2012. With such major transition, university undergraduate programs, including physiotherapy program, have been under review and modifications have been made in order to ensure the learning experience and teaching quality.

Since graduates from the only available physiotherapy undergraduate program in Hong Kong are allowed to register as physiotherapists without any licensure examination, it is especially critical to maintain professional competency in physiotherapy graduates after the curriculum reform. Standards and benchmarks of the professional competency have been established in

many western countries. However, in view of cultural difference and discrepancy in the clinical service demand, a guideline for local physiotherapy graduates is highly warranted.

Hence, this study described the procedures to establish a local competency checklist for physiotherapy graduates in Hong Kong. In addition, we sought to compare the self-perceived professional competency in graduates from 3-year and 4-year curriculum. We hypothesized that the competency level would be similar across two cohorts.

Methods

Establishment of the competency checklist

An expert panel was formed by six experienced (practiced for more than 10 years) physiotherapists and four faculty staff working in the only university offering physiotherapy undergraduate program. Panel members were either specialized in musculoskeletal, cardiopulmonary, or neurological physiotherapy. They were given the guidelines and benchmark statements from the World Confederation for Physical Therapy [2] and professional associations from Australia [3], Canada [4], and USA [5] as reference materials. A draft of competency checklist was formulated after discussion among expert panel members. Face validity of the competency checklist was established by finalizing the draft after responding to the comments from existing students, physiotherapy graduates, clinicians, and faculty members from the university.

Participants

Final year students from class 2011-2014 (3-year curriculum) and class 2012-2016 (4-year curriculum) were asked to complete the competency checklist during their last semester in the study. Study procedures were reviewed and approved by the Departmental Learning and Teaching Committee, Department of Rehabilitation Sciences, The Hong Kong Polytechnic University and written consent was obtained from each participants before they filled in the questionnaire.

Statistics

Competency scores were compared between graduates from 3- and 4-year curriculum using Mann-Whitney U test. Global alpha was set at 0.05. All data were analyzed using SPSS version 20 (SPSS software, Chicago, IL, USA).

Results

There were 77 areas in the competency checklist covering four major domains, namely “foundation knowledge and theoretical concepts”, “client management – assessment”, “client management – intervention/ treatment”, and “professional attributes” (Appendix).

Competency scores of the graduates from 3- (n=52) and 4-year curriculum (n=27) are presented in Table 1. Similar scores between graduates from 3-year and 4-year curriculum were reported in seventy-one areas in the competency checklist. A higher competency level of “common neurosurgical procedures and their implications to rehabilitation” was found in graduates receiving 4-year than 3-year curriculum ($p=0.039$). However, lower competency in four areas, including “therapeutic exercises prescription to improve range and strength of major joints/ muscles”, “therapeutic exercises prescription to improve exercise capacity and endurance”, “selecting and performing balance and coordination training”, and “providing feedback to the client and/ or significant others, and discussing the management of conditions”, were reported in graduates from 4-year curriculum ($p<0.033$). Similar trend was observed in the area “assimilating information from medical documentations, e.g. bed notes to understand the medical diagnosis, relevant medical and social history, laboratory investigations, and imaging results” ($p=0.054$).

Discussion

This study presented a competency checklist for physiotherapy graduates in Hong Kong and we found that the competency levels of graduates from 3-year and 4-year curriculum were mostly similar. We have identified areas that students perceived better competency, which may be due to the fact that some of the involved courses/ subjects have incorporated a better teaching method, such as blended learning or ‘flipped classroom’ mode. However, we have also identified

some areas requiring additional attention, as students' competency appear to be lower in these areas. We have informed concerning teaching teams for their further actions.

When interpreting our findings, it is important to notice several limitations in the study. First, only face validity was established for the competency checklist. Future study should examine the content and construct validity of the instrument. Second, a 4-point Likert scale is likely to be less sensitive, when compared with an instrument with 5-point or 7-point Likert scale [6]. Finally, we only examined the first cohort of graduates studying the 4-year curriculum. Since there were changes and modifications in the recent years, the current findings may not represent graduates from the upcoming years. Future follow-up study is therefore warranted.

Conclusion

Physiotherapy graduates from 3-year and 4-year curriculum possess similar clinical competency. In order to maintain clinical service quality of entry level physiotherapists, curriculum review may be necessary for certain areas.

Conflict of interest

None.

References

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