Original Article

Diversity of Pharmacy Faculty Members between UK and US

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ABSTRACT

Objective: The aim of the research was to characterize the diversity of current pharmacy faculty members in the US and UK. **Methods:** An online self-completion survey was designed and sent to the faculty members from the top 40 accredited pharmacy institutions in USA and top 20 in the UK. Data were analyzed to identify differences between pharmacy faculty members in both regions. **Results:** The response rate was 9.4% (411/4355). In both UK and US, more female faculty members stand at junior academic positions (e.g. assistant professor/associate professor in US or lecturer/senior lecturer in UK), while male professors were significant more in senior academic level (e.g. professor in US or reader/professor in UK). The results indicated the obstacles for female faculty members to pursue the further professional progression in pharmacy academics. Caucasians accounted for high proposition of faculty members at UK (95.4%) and US (89.6%), while there were very few Hispanic or African/Caribbean-descent faculty members in both countries. Thus, there was significant underrepresentation of minority in pharmacy faculty in both countries. Among the pharmacy discipline, pharmacy practice comprised over half of respondents (53% in UK and 58% in US), while science-related subjects (e.g. medicinal chemistry, pharmaceutics and pharmacology) took the rest positions. The results showed that the training models of pharmacy education in UK and US emphasized on clinical pharmacy and practice. **Conclusion:** Our research provided a comparative view of the professional development to current pharmacy faculty members in the US and UK. It is also an effective reference to the administrators in pharmacy school.

Keywords: Diversity, Pharmacy faculty, Comparison, US, UK.

INTRODUCTION

The past decade has witnessed an upsurge of the number of pharmacy schools in the UK and US. There were 134 and 26 accredited schools of pharmacy in US and UK respectively[1,2]. Furthermore, US followed a trend with 21% increase in PharmD graduates and approximately 14,000 pharmacy graduates each year[3]. This overall growth in pharmacy schools led to an increase in the number of pharmacy faculty at both regions. Since today's faculty members are becoming tomorrow leaders in academic pharmacy, it is important to have adequate amount of competent faculty members educating the next generation of pharmacy healthcare professionals to ensure the success of pharmacy academia as a sector. Both US and UK have well-recognised pharmacy education and take great effort on promoting pharmacy development. For example, there are many publications about the development of faculty mentoring program[4], the improvement of institution's racial diversity climate[5] and the influencing factors on faculty workforce[6].

As countries became more diverse culturally, diversity of education and training models emerged across countries. Previous study had shown that faculty members had variable experiences and expertise in cultural

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diversity education.[7] The study suggested that cross-countries collaboration might promote faculty members' developments. Another research also indicated that cultural diversity climates in education had a profound impact for faculty members' developments[8]. Hence, it was increasing demands to train academic staffs on culturally diversity education . Although several studies mainly focused on academic staffs from single country, however, very few studies relates to cross-national comparisons on faculty members in academic careers, especially in pharmacy academia. In this paper, we aimed to investigate current diversity of pharmacy faculty members in two important countries (USA and UK).

Methodology

Sample size

Pharmacy faculty members in this study referred to only academic staff in pharmacy schools, and research staffs were not included. Current study mainly concentrated on the top 40 accredited pharmacy institutions in USA and top 20 accredited pharmacy schools in the UK. The ranks of pharmacy schools in 2014 were based on American Association of Colleges of Pharmacy (AACP) and League Table (pharmacy) in the University Guide by The Guardian (UK), respectively.

Research survey

An online survey was designed to characterize the diversity of current faculty members at schools of pharmacy in the US and UK. The questionnaire comprised of three sections and contained a total of 19 questions.

Personal Information: This section included demographic information of the participants, such as gender, race, academic discipline and type of employment. Ethnic groups contained Caucasian, African/ Caribbean descent, Asian descent, Hispanic descent or other. Academic disciplines included pharmaceutics, pharmacology, pharmacy practice, medicinal chemistry and other. Type of employment consisted of full-time basis or part-time basis. Part-time faculty members in this study were described as teacher-practitioners and were involved with a host of appointment contracts within their affiliated institutions.

Educational Background: Participants were asked to indicate their professional degree and were then categorized into respondents with professional pharmacy degrees (BPharm, MPharm and PharmD) and the original country (local- UK/US and foreign) of their professional degrees and PhD qualifications.

Career Development: Due to the different academic system in two countries, academic rank at UK pharmacy schools were lecturer, senior lecturer, reader and professor, whilst those in the US were assistant professor, associate professor and professor.

Data collection and analysis

The research was approved by the Ethics Committee at Aston University. The online self-completion survey was sent to the sample population by email and a follow up to non-responders was administered after 2 weeks. The responses from the participants were maintained and automatically transferred to Google Spreadsheet upon completion. The anonymity and confidentiality of the participants was upheld throughout the study. The responses to the items were entered into a commissioned database. Data were grouped by countries and selected demographic variables were analyzed to identify the diversity of pharmacy faculty members in both regions with aid of SPSS (version 19.0). The result was deemed to be significant when the alpha level of significance was <0.05.

Results and Discussion

411 of 4355 surveys were returned for a response rate of 9.4%. Of these usable responses, there were 14.3% (132/924) for all UK pharmacy faculty members and 8.1% (279/3431) for faculty members in US pharmacy schools. Demographic variables of faculty members were shown in the Table 1.

Demographics

Table 1 showed that demographic characteristics of respondents. The percentage of all three levels of faculties, junior faculties (assistant professor in USA or lecturer in UK), tenured faculties (associate professor in USA or senior lecturer in UK) and senior academy (professor in USA or reader and professor in UK), were nearly equal (1/3), which indicated the healthy academic structure in both countries. The data also indicated that the number of female in junior or tenured academic positions (assistant professor and associate professor in USA and lecturer and senior lecturer in UK) was higher than that of male. However, male professors (29.4%) in America accounted for approximately three times than female professors (8.6%), with a similar trend observed with male (13.6%) and female (5.3%) professors in the UK.

Both in the US and UK, generally, more female faculty members employed as lower academic positions (lecturer/assistant professor and senior lecturer/associate professor), while there were significant decrease at the higher academic positions. The results was also in agreement with previous studies that the female full-professors in medicine were only 22%.[9] The results revealed that there were significant obstacles for female

Table 1: Demographics of UK and US Faculty Members in Each Academic Position

United Kingdom	Academic rank, No (%)				Grand Total
	Lecturer	*Senior lecturer*	*Reader*	*Professor*	
Gender					
Male	22 (16.7)	16 (12.1)	5 (3.8)	18 (13.6)	61 (46.2)
Female	26 (19.7)	32 (24.2)	6 (4.5)	7 (5.3)	71 (53.8)
Employment Type					
Full-time	31 (23.5)	38 (24.2)	11 (8.3)	22 (16.7)	102 (77.3)
Part-time	17 (12.9)	10 (7.6)	0	3 (2.2)	30 (22.7)
Grand Total	48 (36.4)	48 (36.4)	11 (8.3)	25 (18.9)	132 (100.0)
United States	*Assistant professor*	*Associate professor*	*Professor*		**Grand Total**
Gender					
Male	28 (10.0)	42 (15.1)	82 (29.4)		152 (54.5)
Female	55 (19.7)	48 (17.2)	24 (8.6)		127 (45.5)
Employment Type					
Full-time	80 (28.7)	84 (30.1)	99 (35.5)		263 (94.3)
Part-time	3 (1.0)	6 (2.2)	7 (2.5)		16 (5.7)
Grand Total	83 (29.7)	90 (32.3)	106 (38.0)		279 (100.0)

Table 2: Statistics of Professional and PhD Degree by Region

Category	Country degree obtained from			
	United Kingdom		United States	
	Local	Foreign	Local	Foreign
Professional Degree	123 (93.2)	9 (6.8)	249 (89.2)	30 (10.8)
PhD Degree	91 (69.0)	4 (3.0)	142 (50.9)	16 (5.7)
No PhD Degree	37 (28.0)		121 (43.4)	

pharmacy faculty members to further professional progressions. One possible reason is that female have to take more parental and family obligations, which might hinder their professional progressions.[10] In addition, job satisfaction is another important factor for the retention and recruitment of faculty members. However, female faculty members in pharmacy academia generally have less job satisfaction than male colleagues due to the conflicting work values and activities, such as emphasis on research versus teaching and service efforts[5] and lack of support within the academic departments, including salary inequities in the promotion and tenure process[10]. Therefore, how to help female pharmacy faculty members to further professional progressions should be a significant task for the administrators in pharmacy schools in the future. The proportion of full-time faculty members in USA (94.3%) is much higher than that of UK (77.3%). The reason may be that British pharmacy schools employed more part-time pharmacists on the teaching of pharmacy practice and most part-time faculties in UK were junior position.

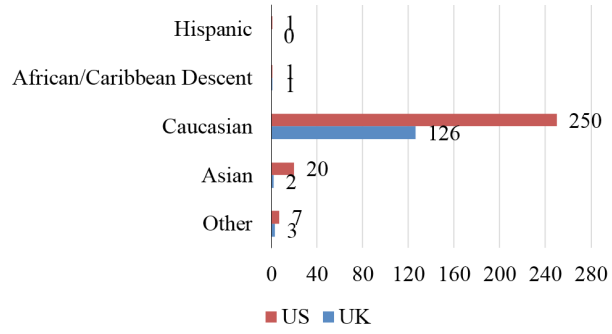

Figure 1: showing percentage employed

Race/ Ethnicity

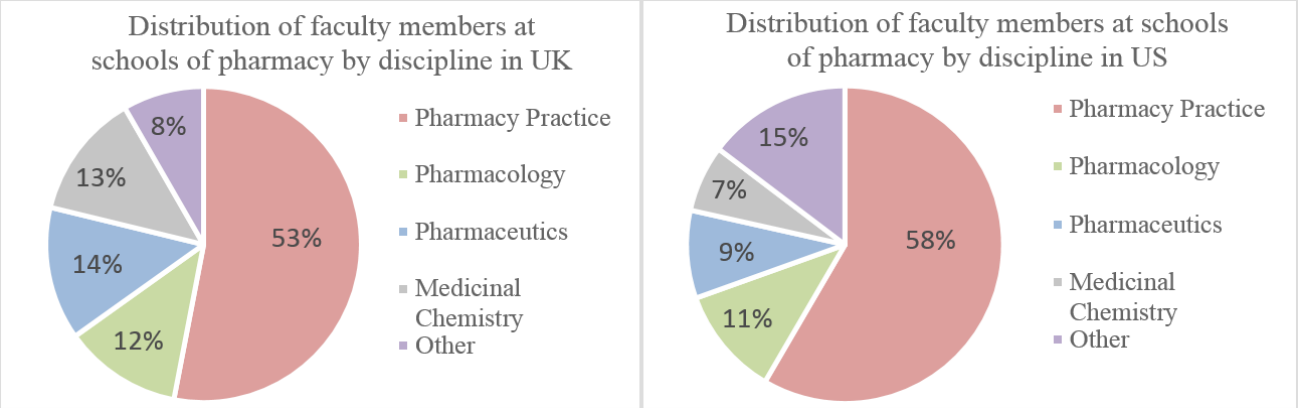

Figure 2: Faculty Members in UK and US

Figure 1 revealed that Caucasians was the highest percentage of faculty members employed at UK (95.4%) and US (89.6%). Asian, as one of the underrepresented minorities, was the second-largest group pursuing academic pharmacy in US. But there were very few Hispanic or African/Caribbean Descent faculty members in both countries.

Several publications showed many benefits of diversity racially in academia, such as broadening scientific inquiry and addressing the population–specific health problems[11]. Although some efforts had been taken to increase the workforce diversity in pharmacy education (e.g recruit and retain minority students[12] and underrepresented minority faculty members[13]), pharmacy faculty members of ethnic minority in both countries were still grossly underrepresented. There were almost no Hispanic or African/Caribbean Descent respondents in our survey. The possible reason was very lower proportion of ethnic minority students in pharmacy college applicant pool compared with racial majorities. According to a report by Pharmacy College Application Service (PharmCAS)[14], minorities such as Hispanic and African American accounted for only 6% and 7% of global accepted PharmCAS applicants in 2013 respectively, while White comprising nearly 60%. Another possible reason may be the limited number of role models of similar ethnicities available within the departments to mentor new underrepresented minority (URM) faculty members[13]. Many faculty development programs have been developed, but no specific URMs' development programs had been launched. The possible consequence of the failure to develop race diversity in pharmacy faculty members may affect the availability of pharmacists to patients with diverse racial and cultural backgrounds. However, the fact of increasing minority populations in both countries causes that underrepresentation of faculty members in pharmacy education will be a pressing issue for both UK and US schools of pharmacy.

Academic Discipline

Figure 2 showed over half of pharmacy faculty members in the UK and US involved with pharmacy practice, while science-based disciplines (pharmacology, pharmaceutics and medicinal chemistry) were less than 50%. This was in agreement with previous report.[15] The report showed that the number of full-time faculty members in pharmacy practice comprised over half of current workforce in the US, which was higher than that of faculty members with all the other disciplines combined. The reason is that of the training aim of both American and British pharmacy education was to develop pharmacy talents into qualified pharmacists for clinical hospital and community services, rather than scientists.[16,17]. Therefore, pharmacy education of both countries put more emphasis on with clinical service and community services.

Professional degree and PhD

Table 2 indicated that approximately 90% of faculty members in both countries obtained their professional degrees locally. Therefore, local professional degree played the crucial role in obtaining academic position, especially pharmacy practice subject. In addition, it was assumed that doctoral degree had important impact on academic career paths for faculty members. However, our research found the receipt of PhD degree was not highly related to professional degree in pharmacy field. For PhD degree, only more than half of respondents got their PhD qualifications locally. However, there were more pharmacy faculties in the US (43.4%) without PhD degree than that in the UK (28.0%). The possible reason is that PhD degree is essential to faculty members in scientific subjects, which faculty members in pharmacy practice usually only need professional degree.

CONCLUSION

Our research provided a comparative view of the current pharmacy faculty members in the US and UK. Female faculty members both in UK and US were facing more obstacles in pursuing career paths. Moreover, there continued to be a significant underrepresentation of minority faculty in both regions. Most of faculty members were focusing on pharmacy practice because of clinical practice-oriented training models in UK and US. This research will provide an effective reference to the administrators in pharmacy schools.

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