ORIGINAL ARTICLE

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International employment in clinical practice: influencing factors for the dental hygienist

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Abstract: Purpose: To assess demographics, job characteristics, geographical regions, resources and commitment, which influence dental hygienists seeking international clinical practice employment opportunities. Methods: Questionnaires were mailed to a convenience sample of members of the Dental Hygienists' Association of the City of New York. Statistical analyses were conducted and frequency distributions and relationships between variables were calculated. Results: Seventy-two percent of respondents reported that they are or may be interested in working overseas. Italy and Spain (67%) were the regions of most interest. Salary (65%) was cited as the most influencing factor in selection, whereas non-compliance with the equivalency to Occupational Safety and Health Administration standards (74%) was the most frequently perceived barrier. Multiple language fluency was statistically significant (0.003) regarding interest in overseas employment. Conclusion: Policy makers, employers and educators need to be aware of these findings should recruitment be a possibility to render urgently needed oral hygiene care in regions where there is a perceived shortage of dental hygienists.

Key words: dental hygienist; employment; career; survey; international; recruitment

Introduction

In the year 2000, the United States Department of Health and Human Services released a report entitled 'Oral Health in America' (1). This was the first public statement linking oral diseases to a variety of systemic diseases. Thus, identifying further need to promote oral health in the attainment of general health. As the dental hygienist plays a key role in the delivery of preventive care to healthy patients and therapeutic care to patients with periodontal disease their global reach is critical. Unfortunately, there are many countries, which have a shortage of dental hygienists (2-6). Possible solutions concerning the shortage of hygienists have been cited, including preceptorship, development of more dental hygiene programmes and the recruitment of licensed hygienists (2). Specifically pertaining to the recruitment of licensed dental hygienists, policy makers first need to determine the attitudes and opinions of currently licensed hygienists before they take into account recruitment strategies. The purpose of this study was to assess characteristics such as demographics, geographical regions, job characteristics and resources, and commitment, which influence dental hygienists seeking international clinical practice employment opportunities.

Review of literature

Although there have been no studies specifically examining factors which influence international recruitment for dental hygienists there have been several studies which have probed into related matters. These related areas are: (i) international dental hygiene profiles, attitudes and trends (2–5); (ii) factors associated with career satisfaction, retention and reentry among dental hygienists (7–17); (iii) migration of the allied health profession (18–22).

International dental hygiene profiles, attitudes and trends

International dental hygiene studies have depicted the evolving and expanding dental hygiene profession (3, 4). A recent study examined the patterns, trends and changes in dental hygiene (4). Overall characteristics of the profession were remarkably similar; most noteworthy was the scope of dental hygiene clinical practice. Greater variation was evident regarding numbers, distribution, regulation, workforce behaviour, predominant work setting and remuneration of dental hygienists.

A survey of dental hygienist numbers in Canada, the European Economic Area, Japan, and the United States of America in 1998 indicated that although the populations of Canada, Japan and the USA are broadly similar to those in the 18 member states of the European Economic Area (EEA), there are over 15 times as many dental hygienists in the three countries than in the EEA. It was suggested in the article that apart from more training it might be possible to recruit dental hygienists from overseas for the perceived shortage. Luciak-Dunsberger investigated 13 European countries that have introduced dental hygiene in order to provide guidelines to countries where initiatives are being taken to introduce the profession (2). The author concludes that implementing legislation governing the practice and the educational process of dental hygiene in European Union and beyond would contribute to an equitable standard of health care as well as to equal opportunities in education and employment.

Career satisfaction, retention and reentry

Job satisfaction of dental hygienists appears to be of domestic and international concern (7–17). A study of Swedish dental hygienists found that a supportive work climate, work stimulation, variation and influence over a job contribute to work satisfaction (14). The results of a Hong Kong study on dental hygiene job satisfaction suggested that respondents believed that the qualification level of dental hygienists was greater than the responsibilities assigned (15). Two South African studies indicated that the dental hygienists in that country were generally satisfied with dental hygiene as a profession, but felt under-utilized and desired expansion of their duties and more independence (16).

Body's literature review on dental hygiene career and job satisfaction appears to be the most current and complete. In Body's (12) review of 32 studies, she concluded that most dental hygienists are satisfied with the practice of dental hygiene. The most frequently cited reason for satisfaction included the enjoyment of working with people and providing a service. The least satisfying aspects were repetition, lack of variety, physical and emotional demands, and little or no opportunity for advancement.

Johns *et al.* (10) determined the factors that influence retention and attrition of dental hygienist within the workforce in Texas, USA. Texan dental hygienists who remain in the workforce are primarily influenced by salary. Family responsibility, variety of duties, participation in decisions, professional collaboration, benefits and a safe work environment are also important factors in deciding to remain in the workforce. The primary influence in deciding to leave clinical dental hygiene practice was found to be family responsibility, but boredom and lack of benefits were also important factors in deciding to leave clinical practice.

Another study that investigated reentry to the dental hygiene workforce found that there are four major incentives for reentry (8). These reasons are an increased salary, increased benefits, improved procedures for infection control and increased decision-making opportunities.

Migration of allied health professionals

This review explores migration issues encountered by allied health colleagues. From time to time, nations turn to immigration policy to satisfy labour needs, often allowing people from other countries to enter and work with temporary, non-immigrant visas (18–22). At the receiving end, jobs left vacant, for whatever reason, attract enterprising foreign workers, who successfully integrate into the labour market (20). International exchanges of skilled nurses circulate energy, ideas, cultural sensitivity and opportunity. An example of this solution to labour shortages is nurse migration to the United States.

The American Nurses Association (ANA) has stated that they believe every qualified nurse has the right to seek employment in the US, just as they believe US nurses should have the same opportunity to practice in any other country of their choice (21). What they object to is the practice of luring highly skilled nurses from South Africa, India and other countries that depend greatly on these health care practitioner skills and talents to work in health care facilities here. Finally, the ANA believes that bringing in foreign nurses does not address the underlying problems that drive shortages –nurses deteriorating working conditions.

Methodology

In January 2004 a descriptive research approach was used to survey members of the Dental Hygienists' Association of the City of New York (DHACNY). The survey as illustrated (Appendix 1) was comprised of 32 closed-ended items, four demographic questions, and two open-ended questions. This survey was developed by the primary author and reviewed by two dental hygiene educators and a behavioural scientist. A pilot test of the survey was conducted with senior dental hygiene students from the New York University College of Dentistry Dental Hygiene Programs (n = 30). Modifications were made based on the pilot test survey. Approval for the study was granted by the Institutional Review Board of Research Associates, New York University School of Medicine.

A convenience sample was mailed to all members of DHA-CNY. A packet containing a cover letter, the survey and a self-addressed, postage-paid envelope was mailed to the participants. The cover letter informed the participants of the purpose of the study, assured anonymity and explained that the completion of the questionnaire indicated their informed consent to participate in the study.

Of the 1611 surveys mailed, 90 were returned because of no forwarding address, resulting in a valid population sample of

1521. The survey and representation was tested to ensure validity and reliability by comparing the mean age with a random sample of surveys received after 15 February 2004.

Data were collected and descriptive statistics, including frequency distributions, chi-square analysis for categorical data, and an analysis of open-ended questions using standard qualitative methods of data analysis. All statistical analyses were conducted using the Statistical Package for Social Scientists (SPSS v. 12).

Results

A total of 290 responses were received for an initial response rate of 19% for the study. If section 1 (subheadings include: demographics, personal interest, geographical regions and job characteristics) had more than two unanswered questions, the respondent's survey was dismissed. Based upon this survey's inclusion criteria the n was set at 253 for section 1. If section 2 (subheadings include resources and commitment) had more than three unanswered questions, the respondents survey was dismissed. As there were substantially less responses towards the end of the survey the n was set at 228 for section 2. Data was imputed for received responses that met the inclusion criterion but had a couple of unanswered questions.

Demographic characteristics

From the 253 surveys returned, analysis of the demographic data indicated the majority of the respondents were females (97.6%) and were over 35 years of age (63.6%) (Table 1). The mean year of graduation was 1986. Table 2 illustrates all other languages fluencies of the 253 English-speaking respondents. Spanish (n = 61) was the second most common fluent language and German (n = 15) was the least spoken.

Personal interest

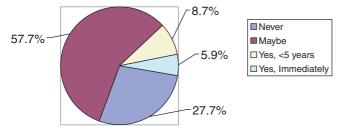
Respondents were asked about their interest in working overseas. Answers available were: never, maybe, yes (within the next 5 years) and yes (immediately). More than 85% of hygi-

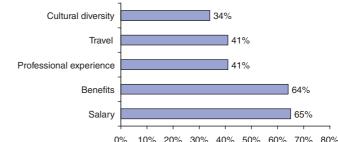
Table 1. Age of respondents

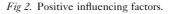
	Frequency	Valid %
Valid 25 and under	13	5.1
26–35	66	26.1
36–45	82	32.4
46 and over	92	36.4
Total	253	100.0

Table 2. Further language fluency of 253 English-speaking respondents









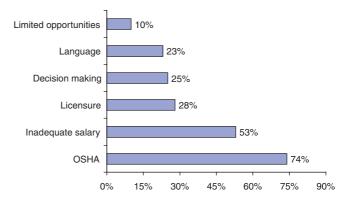


Fig 1. Personal interest.

enists said they might be interested in going overseas as illustrated in Fig. 1. Furthermore, over 75% of hygienists said that they would need to make family arrangements should they work overseas.

Geographical regions

Respondents were provided a list of countries that are members of the International Federation of Dental Hygienists and asked if they would 'yes' or 'no' be interested in working in a particular country. They were not given any information about the country or working conditions. The main region of interest was Italy and Spain (67%), followed by the UK (55%), and then New Zealand (53%). The countries with the least interest were Korea and Japan (18%). There was also an open-ended question to other regions of interest. The most frequently stated region of interest to this open-ended question was the Caribbean (3%).

Job characteristics

For the purpose of this study 'job characteristics' are defined as salary, benefits, travel, cultural diversity, professional experience, clinical duties and licensure. The survey divided job characteristics factors into two main sections. The first section was positive aspects related to job satisfaction and the other section was perceived barriers. Participants were given a modified Likert style scale to assess their responses. Salary (65%) was the most frequently cited factor as very important and importance of cultural diversity (34%) was cited as the least important factor as shown in Fig. 2. On the contrary, Fig. 3 demonstrates

Fig 3. Barrier to practice.

that offices not complying with the equivalent standards to Occupational Safely and Health Administration (OSHA) (74%) was the most problematic. OSHA's mission is to assure the safety and health of America's workers by setting and enforcing standards. Limited opportunity to use expanded duties (10%) was cited as the least problematic perceived barrier.

Resources used to learn about working overseas

The participants were asked about resources they would use to learn about working overseas. Both the International Federation of Dental Hygienists website and an international placement service were noted by 53% of participants as resources they would use to learn about working overseas. This was followed by library/internet browsing (50%) and 48% said that they would ask a dental hygiene educator. One-third of hygienists did not respond to this question or marked that they were uncertain of such resources.

Commitment

There were three questions each related to the length of commitment of the dental hygienist to work internationally. The 6-month contract (70%) was cited the most popular, followed by a 1-year contract (52%), and the 2-year commitment (17%) was the least popular. The length of contract term and commitment level is inversely related.

Family responsibilities/interest

The relationship between dental hygienists who are interested in working overseas and dental hygienists who need to make family arrangements is statistically significant (0.001).

Age/personal interest

Dental hygienists who are 45 years of age or older were compared with those under 45 years of age. The chi-square reflects that the relationship between age and interest in working overseas is not statistically significant (0.462).

Bilingual/personal interest

Hygienists who could speak more than one language were placed into a category called bilingual speaker. A cross-tabulation was then created to examine any statistically significance between these two factors. Results indicate that it is statistically significant (0.003) that hygienists who speak more than one language are also more interested in working overseas.

Discussion

Mail survey questionnaires are well established for soliciting information from a targeted population. Mail surveys have the advantages of being relatively low in costs, the ability to reach a large number of people, and because responses are anonymous, may encourage more candid responses. For this survey, only one mail out was initiated because of time and financial constraints.

It is not surprising that the demographic information revealed that if women are over 35 years of age then there is a greater chance that they will have familial responsibilities. Bilingualism is a trait that is perhaps more representative of the diversified New York City culture compared with that of other regions.

An overwhelmingly high percentage of dental hygienists (78%) said that they are or may be interested in working overseas. Of course, there are many factors related to their interest and feasibility of such a feat. As a result of the nature of this study it has only taken a broad look at some of the influencing factors. As the geographical regions listed in this study are only members of the IFDH, further studies could list countries that are not part of the IFDH. In addition, studies could specifically focus on assessed regions of need and provide participants of the survey with applicable background resulting in more informed decisions and responses.

Job characteristics cited salary and benefits as the most influencing factors to working overseas. Although overseas employment offers an opportunity to experience cultural diversity it was the least cited. Many of the dental hygienist may want to work overseas but in a region or culture similar to what they are familiar. Although there is an increase in further training and legislation of expanded duties, it played a small role as an influencing factor. The reverse scenario in which a dental hygienist lacks the required clinical skills or mandatory bachelor degree was not investigated but also needs to be explored. This study provided insights related to job satisfaction that can be used for international recruitment as well domestic recruitment.

Although most respondents graduated over 15 years ago, 48% of respondents said that they would ask a dental hygiene educator about learning to work overseas. Many educators may not incorporate such information as part of their curriculum or continuing education courses.

It is surprising that there is no statistically significant relationship evident between familial responsibilities/age and interest in working overseas. There appears to be a shift to working full-time, financial responsibility and career opportunities. Single dental hygienists and those with familial responsibilities should both be considered. Thus, policy planners and employers should be aware of such demographics and not target graduates who are under 25 years old.

Most dental hygienists are interested in working overseas for a short-term contract as opposed to a long-term contract. As the contract time increases their level of commitment diminishes. This relationship shows that hygienists are looking to international employment a part of their career experience but are not looking to permanently relocate, probably because of family responsibilities.

The profiles, attitudes and trends of the international profession are changing. Although the scope of practice is similar there appears to be significant disparities in the supply and demand of dental hygienists. Crossing borders to combat shortages of licensed professionals appears to be a feasible shortterm solution. The dental hygiene profession may want to adopt the concept of the 'travelling hygienist' similar to that of the 'travelling nurse'. Travelling nurses are part of large network of short-term assignments. International recruitment is a fairly new concept to the dental hygiene profession. Dental hygienists can look to the nursing profession for challenges, obstacles and complexities that they have faced with similar migration issues.

Conclusion

As the dental hygienist plays a key role in the delivery of preventive care to healthy patients and therapeutic care to patients with periodontal disease their global reach is critical. Unfortunately, there are many countries, which have a shortage of dental hygienists. Possible solutions concerning the shortage of hygienists have been cited, including preceptorship, development of more dental hygiene programmes and recruitment of licensed dental hygienists. This study assessed demographics, job characteristics, geographical regions; job characteristics, resources and commitment, which influence dental hygienists about international clinical practice employment opportunities.

Seventy-two per cent of respondents said they are or may be interested in working overseas. Italy and Spain (67%) was the geographical region of interest. Salary (65%) was cited as the most influencing factor in selection while non-compliance with OSHA standards (74%) was the most frequently perceived barrier. The relationship between age and interest to overseas employment was not statistically significant. However, multiple language fluency was statistically significant regarding interest to overseas employment.

As the scope of practice is considered quite homogenous worldwide creating an international licensure or accreditation would make portability easier for all. The concept of 'travelling nurse' (23) might be of future interest or planning for the dental hygienist. Specifically pertaining to recruitment of licensed dental hygienists, policy makers first need to determine the attitudes and opinions of currently licensed hygienists before they take into account recruitment strategies.

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Appendix 1

SURVEY

An investigation of dental hygienist's attitudes and opinions regarding international clinical practice employment is in progress. An integral part of the investigation is this survey. The survey will take 10 min of your time. If you do not wish to answer a particular question, please omit the item and complete the remaining questions. For each of the questions, please pencil-in the appropriate circle. All responses will be kept confidential. Please return the completed survey in the self-addressed, stamped envelope provided.

Demographics

- 1. Gender:
 - Male
 - Female
- 2. Age:
 - \bigcirc under 25
 - 26–35
 - 36-45
 - \bigcirc over 46

3. If you were to work abroad would you need to make arrangements for family members (spouse, children, etc.)?

- O Yes
- O No
- 4. Which languages do you speak? (Bubble all that apply)
 - English
 - \bigcirc Italian
 - Spanish
 - German
 - \bigcirc Other

5. When did you graduate from your dental hygiene program or proposed date of completion? (Write the date that corresponds to your graduating year on the following line):

- 6. Would you be interested in working overseas as a hygienist?
 O Never
 - O Maybe

 \bigcirc Yes – within the next 5 years

○ Yes – immediately

Countries of Interest

In which countries would you consider working? {If you responded to question# 6 that you would never be interested in working overseas as a hygienist consider the following. In the future, should you change your mind, in which countries would you consider working? } (Refers to question numbers 7–16)

7. Canada	○ Yes	\bigcirc No
8. Norway, Sweden, Denmark,	○ Yes	\bigcirc No
Finland, Holland, Latvia, and Lithuania		
9. Switzerland, Germany, Austria	○ Yes	\bigcirc No
10. Italy, Spain, and Portugal	○ Yes	\bigcirc No
11. United Kingdom	○ Yes	\bigcirc No
12. Korea and Japan	○ Yes	\bigcirc No
13. New Zealand and Australia	○ Yes	\bigcirc No
14. Nigeria and South Africa	○ Yes	\bigcirc No
15. Israel	○ Yes	O No

16. Other (please write on the following line)

What factors would be critical to your decision in working overseas?

Refers to question numbers 17-21

	V 7			Some-	Not
	Very Import- ant	Import- ant	Uncer- tain	what Import- ant	
17. Salary (equal to or greater than present salary)	0	0	0	0	0
 Benefits (pension, vacation, healthcare insurance) 	0	0	0	0	Ο
19. Travel/ Adventure	0	0	0	0	0
20. Cultural Diversity (language, customs)	0	0	0	0	0
21. Professional Experience (learning new skills)	0	0	0	0	0

Which of the conditions below would you consider a hindrance in deciding to work in an office in a particular country?

Refers to question numbers 22-27

	Very Problem- atic	Problem- atic	Uncer- tain	Some- what Problem- atic	Not Problem- atic
22. Inadequate salary offer	0	0	0	0	0
 You have limited opportunity to use expanded clinical duties (e.g. local anesthetic) 	0	0	0	0	0
24. You are required to undertake Licensure examination for employment in that country?	0	0	0	0	0
 You are unable to collaborate in decision-making? (dental hygiene treatment needs and scheduling) 	0	0	0	0	0
26. The office does not comply with OSHA standards	0	0	0	0	0
27. You are required to learn a new language for employment in a particular country?	0	0	0	0	0

How important are the following sources as you search for an international dental hygiene job/position? (Refers to question numbers 33-35)

~

				Some-	
	Very			what	Not
	Import-	Import-	Uncert-	Import-	Import-
	ant	ant	ain	ant	ant
33. Newspaper	0	0	0	0	0
34. Placement Agency	0	0	0	0	0
(either local or					
international)					
35. Internet Browsing	0	0	0	0	0
for Job Postings					

Commitment

Which contract term would you be willing to accept?

36. 6 month contract?	○ Yes	\bigcirc No
1 year?	○ Yes	O No
2 year?	○ Yes	O No

28. Among the following resources which would you use to learn about working abroad in a particular country (circle all that apply)?

O IFDH website

Employment Resources

- O International Placement Agency
- Library/Internet Browsing
- O Dental Hygiene Educator
- O Uncertain

How important are the following resources in learning about working abroad? (Duties, salary, taxes, licensure etc): Refers to questions 29-32

1		Very			Some-	Not
		Import-	Import-	Uncert-	what	Import-
		ant	ant	ain	Important	ant
29.	IFDH website	0	0	0	0	0
30.	database? International	0	0	0	0	0
	Placement Agency?			0	0	0
31.	Library/ Internet	0	0	0	0	0
32.	Browsing Dental Hygiene Educator	0	0	0	0	0

Comments

Please note any comments that you wish to express regarding international clinical practice opportunities?

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