

Nigerian Physical Therapists' Job Satisfaction: A Nigeria - U.S.A. Comparison

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Background and Purpose

In recent years the emigration of highly trained health personnel has caused deeply troubling manpower shortages in many developing countries, while also providing a ready pool of skilled, well-qualified job-seekers for developed and affluent countries (Bergen and Lenoble, 1975; Joorabchi 1973; Eiler 1982.) This study was designed to fulfill a dual purpose: first, to determine the extent of job satisfaction among Physical Therapists (PTs) in Nigeria, and second, to assess whether Nigerian PTs practicing in the United States are more satisfied with their jobs than the PTs in Nigeria. The paper will demonstrate the linkage between the lack of job satisfaction, and the push to seek employment in foreign countries that offer the possibility of more rewarding employment opportunities as well as upward mobility.

Materials and Methods

A questionnaire was administered to PTs in Nigeria (n=110) and Nigerian PTs based in the US (n=31). The questionnaire consisted of 2 parts: Part 1 sought demographic information and part 2 consisted of 10 statements relating to paper work, job challenge, physical demand, job autonomy, fulfillment and stress.

Results

Overall, these cohorts of PTs were satisfied with the "clinical practice" aspects of their jobs. The two groups were comparable except in areas relating to stress, paperwork and physical demand.

Conclusion and Discussion

Nigerian PTs practicing in the US are not more satisfied than their counterparts in Nigeria. The study suggests that factors other than those related to the "clinical practice" aspects of physical therapy are responsible for the wave of emigration of PTs from Nigeria in the past decade.

Introduction

Within the past decade there has been a wave of emigration by highly skilled professionals including Physical Therapists (PTs) from developing countries such as the Philippines, India, Brazil, Nigeria and Egypt. The most popular destination countries for such emigration are countries in Europe, the Middle East, and the North America. While highly skilled professionals are unemployed, underemployed, underpaid, and dissatisfied with their condition of service in their own countries, high-paying jobs were known to be available in some regions of the world. Paradoxically, highly skilled professionals are also in short supply in poor countries, but economic hardships and lack of job satisfaction may cause the very same professionals to seek "greener pastures" in countries with more favorable economic conditions.

Nigeria with a population estimated at 118,369,000 is served by only 300 PTs (Irikefe-Onoriode, 1997.) In the past two decades, the country was governed by several military regimes whose administration were characterized by economic hardship and numerous incidences of social unrest. Currently, there is a dearth of information on possible reasons for the emigration of Nigerian PTs. It is often speculated that job dissatisfaction and economic hardships are the primary reasons for the wave of emigration from Nigeria in the past decade (Irikefe-Onoriode.) However, there is no empirical data on the level of job satisfaction of Nigerian Physical Therapists and no firm data on the number of PTs that emigrated from Nigeria due to the country's deleterious economic condition. A conservative estimate put the number of Nigerian PTs that emigrated to the United States (US) at 150 (Irikefe-Onoriode.) Another 50 are estimated to currently practice in Britain, Canada, Middle East and South Africa. Considering the fact that Nigeria is a medically underserved country with low proportions of health personnel to the population, this number represents a great loss to its citizenry (Irikefe-Onoriode; Obasanjo, 2002.)

This is part of a larger study that investigated the job satisfaction and self esteem of Nigerian PTs. Only the job satisfaction data of the larger study is reported in this article. The results of a study of the possible reasons for the large-scale emigration of highly skilled health professionals could help employers and government in the source countries of emigration to formulate and implement policies that might facilitate staff retention and stem the tide of the "brain drain."

Literature Review

Very few studies have been published on Physical Therapists' job satisfaction.

(Barnes and Crutchfield, 1977; Bronski and Cook, 1978; American Physical Therapy Association, 1989; Okerlund et al, 1994; Speakman et al, 1996; Rozier et al, 1998). The existing studies reported varying degrees of job satisfaction among PTs. In 1977, Barnes and Crutchfield compared the job satisfaction of 25 PTs engaged in private practice and 25 PTs employed in administrative positions. All subjects were randomly chosen from a list of physical therapists residing in metropolitan Pittsburgh, Washington and Baltimore in the United States. The study utilized a scale consisting of 16 factors, six of which were called "motivators" such as "opportunity for advancement", and "the possibility of growth". The remaining 10 factors were called "hygienes" and include "salary", and "job security". The result showed that both groups were significantly satisfied with "achievement", "salary", and "responsibility", but were dissatisfied with "policies and administration of the organization" aspect of their work.

In 1978, Bronski and Cook surveyed 334 graduates of Ohio State University physical therapy program. A Job Discriminative Index questionnaire consisting of five subscales ("the job", "coworkers", "supervisors", "present pay" and "promotional opportunities") was administered. The scale utilized showed a preponderance of statements not directly related to the practice aspects of physical therapy. The authors concluded that physical therapists had a relatively low degree of job satisfaction (Bronski and Cook, 1978).

In 1989, the American Physical Therapy Association (APTA) investigated the recruitment and retention patterns of PTs and PT Assistants (N=1074) using the Health Professional Work Satisfaction Survey. This study showed that PTs were satisfied with their jobs. The findings revealed "autonomy" as the most satisfying factor and "pay" as the least satisfying factor for retention (American Physical Therapy Association, 1989).

In 1994, Okerlund et al surveyed 509 PTs in Utah, United States using a scale developed by the authors in collaboration with a group of PTs. From this study, the authors concluded that PTs in Utah were satisfied with their jobs. "Freedom on the job", "support to develop skills", and "pay and fringe benefits" were cited by the respondents as the most important factors to their job satisfaction (Okerlund et al, 1994).

More recently, Rozier et al in 1998 developed a 78-item questionnaire consisting of four subscales: descriptive information, items important in characterizing career success, items perceived to enhance or inhibit career success, and items assessing self

esteem. The internal factors included in the questionnaire are statements on ethical practice, improvement in patient health, personal satisfaction, personal goal achievement, challenge in the work environment, recognition by patients and public, and respect from other Physical Therapists. The external factors in the questionnaire included statements relating to the attainment of an executive position, high income, provision of free services or services at reduced rates, and access to substantial benefits. The respondents (N=1906) indicated that internal factors such as practicing ethically, improving patients' health, and feeling satisfied were more important in determining success than high income or status. These unique sets of indicators were however influenced by gender issues related to the ability to manage family responsibilities (Rozier et al, 1998).

Barnes in 1998 studied the job satisfaction of rehabilitation professionals including PTs, Occupational Therapists and Speech-Language Pathologists. He identified three factors that determine the job satisfaction of rehabilitation professionals as extrinsic and intrinsic context as well as intrinsic content. The extrinsic factors identified are competitive pay and employer provided benefits such as family leave, flexible schedules, and support for child care. The identified intrinsic-context factors are "factors less tangible but inherent to the job." These include factors that are controlled by outside forces and those that affect the internal satisfaction of professionals. Adequate staffing, a realistic workload, stable work environment, and support by the administration are regarded as intrinsic-context factors. Barnes identified intrinsic-content factors as those that are controlled primarily by the professional and are believed to affect his or her sense of effectiveness and competence. They include the rewards of helping people to overcome their disability, meaningful work, proper training and the provision of quality care. The author concluded that intrinsic factors are more important than extrinsic factors in determining the career satisfaction of Physical and Occupational Therapists. In the study by Carr and Kazanowski (1994), intrinsic factors such as sense of autonomy, peer recognition, challenge to develop skills and recognition as well as positive feedback about performance were identified as the most important determinants of job satisfaction among nurses.

In order to investigate the job satisfaction of PTs, Speakman et al (1996) developed a ten-item questionnaire consisting of the internal factors that are directly related to clinical practice aspect of physical therapy. In developing the questionnaire, factors such as salary, distance from work, and vacation time were excluded as these were considered not to be clinical practice issues. Physical Therapists (N=106) licensed to practice by the Texas State Board of Physical Therapy Examiners, and residing in El Paso, Texas, participated in the study. Respondents revealed that their

job was challenging in a positive sense, enabled them to use their abilities, and was interesting. They also indicated that they had sufficient independence in decision-making, were learning and improving in their work, and were given significant autonomy. However, they were not satisfied with the paperwork aspect of their work. Overall, the subjects agreed that all statements measured important aspects of job satisfaction of Physical Therapists.

The available published studies revealed two points of interest. All the investigations were conducted in the United States. Secondly, only in Speakman et al's (1996) study were statements relating to clinical practice aspect of Physical Therapy (internal factors) solely utilized. In the other studies, internal factors were mixed with statements unrelated to clinical issues in Physical Therapy (external factors like pay, commuting distance and benefits). Results from the studies that utilized scales with both internal and external factors could have been influenced by the divergent factors utilized in these studies. In investigating the job satisfaction of PTs in different countries, a scale that contains both internal and external factors may not accurately compare the level of satisfaction with the practice aspect of physical therapy. A ten-item scale by Speakman et al (1996) is therefore more appropriate for assessing the job satisfaction of PTs in Nigeria and Nigerian PTs based in the US.

Purpose of the Study

This study has two aims. The first is to provide evidence on the job satisfaction of PTs in Nigeria. The second is to assess whether Nigerian PTs practicing in the US are more satisfied with their jobs than their counterparts in Nigeria.

I hypothesized that (1) PTs in Nigeria will be more satisfied with the clinical practice aspects of their job and (2) Nigerian PTs practicing in the US will be more satisfied with the clinical practice aspects of their job than PTs in Nigeria.

Methods

Sample

The sample is comprised of one hundred and ten PTs practicing in Nigeria and thirty-one PTs of Nigerian origin practicing in the US participated in the study. The Nigerian PTs in the US practice in hospitals, home care and school (academic) settings, while PTs in Nigeria practice in hospitals and school settings. Of the one hundred and ten PTs in Nigeria, seventy-nine (72%) are male and thirty-one (28%) are

female. Fifty-seven (51%) are single and fifty-three (49%) are married. Ninety-three (84%) of PTs in Nigeria have bachelors degrees, fifteen (14%) have masters degrees while two (2%) have doctoral degrees. Of the thirty-one PTs in the US, twenty-four (77%) are male and seven (23%) were female. Five (16%) of the US group are single, and twenty-six (84%) married. Twenty-three 74%) of the US group have bachelors degrees, four (13%) have masters degree and four (13%) doctoral degrees.

Instrumentation

A questionnaire was selected as the most appropriate method to gather data to answer questions posed in the study. The questionnaire utilized consisted of two parts. Part one sought demographic data and part two consisted of job related questions. In part one, respondents were asked to answer questions about age, sex, marital status, highest degree and primary employment. Nigerian PTs practicing in the US were also asked questions on career goals and future relocation plans. Specifically, they were asked whether or not they would prefer to practice if pay and societal recognition (prestige) perceived to be enjoyed by PTs were comparable between US and Nigeria. They were also asked whether or not they intend to relocate to Nigeria in future and when they hope to relocate if they did.

The second part of the questionnaire was divided into two sections. In the first section, respondents were asked to rate their level of agreement or disagreement with statements on job satisfaction (Table 1) is based on a ten-item scale developed by Speakman et al (1996). Respondents indicated their level of agreement or disagreement on a seven-point Likert scale ranging on a continuum from strongly disagree to strongly agree. Five of the questions were worded positively and the remaining five worded negatively. In the second section, respondents were asked to rate the level of importance they attached to each of the 10-item statements (Speakman's scale) on a seven-point scale from extremely unimportant to extremely important.

On the positive questions, an agreement score of 7 indicates the highest degree of satisfaction and a score of 1 indicates highest dissatisfaction. On the negative questions, a score of 1 indicates the highest degree of satisfaction and 7 the highest dissatisfaction. An ideal (satisfied) PT will score 7 on all positive questions and 1 on all negative questions. Thus while the maximum possible agreement score is 70, the ideally satisfied physical therapist will score 40. For the importance rating, the maximum possible score is 70.

Only statements relating to paperwork, job challenge, physical demand, job autonomy, fulfillment and stress (direct practice issues as opposed to pay and

commuting distance for example, which are unrelated to clinical practice) were considered relevant to assess and compare the job satisfaction of PTs practicing in different countries. A harsh living condition created by the economic policies in a country is an external factor unrelated to the clinical practice of Physical Therapy.

Table 1

Job Satisfaction Scale by Speakman et al

Statements	Key word	Wording
There is too much paperwork	Paperwork	-
My job is challenging in a positive sense	Challenge	+
I am not given enough autonomy (freedom to do my work the way I want to)	Autonomy	-
My job is fulfilling (i.e. enables me to use my abilities)	Fulfilling	+
My job is mentally stressful	Stress	-
I have sufficient independence in decision making	Independence	+
My job is too physically demanding	Physical Demand	-
My work is interesting	Interesting	+
I am overworked	Overworked	-

I am learning and improving on my work

Learning

+

+ denotes positively worded statement

- denotes negatively worded statement

Procedure

All prospective participants were sent a cover letter, a copy of the questionnaire, and a postage paid return envelope. The letter described the purpose of the project, assured anonymity and invited the subjects to participate. One hundred and twenty questionnaires were sent out to Nigeria. Of the one hundred and twenty, one hundred and ten completed questionnaires were returned within two months, making the response rate 95%. Fifty-five questionnaires were sent to Nigerian PTs resident in the US. Within two months, thirty-one of the questionnaires were returned completed. Here the response rate was only 56%. Follow-up letters to the PTs practicing in the US did not yield any further response. All returned questionnaires were usable.

A source (Irikefe-Onoriode, 1998) put the population of PTs in Nigeria at 300, responses from 110 PTs in Nigeria was therefore considered an adequate sample. There is no national register of PTs of Nigerian origin currently in the United States, therefore, questionnaires were sent to contact persons in selected locales (Michigan, Texas, Washington D.C. and Tennessee) to distribute within their regions. To avoid multiple entries by one person, respondents were asked to fill only one questionnaire. At the time of this study, it is estimated that the number of PTs of Nigerian origin in the US is not more than 150. Responses from 31 Nigerian PTs in the US is considered representative of this group.

Data Analysis

Subjects were divided into two groups: the PTs in Nigeria (N=110) and the Nigerian PTs practicing in the United States (N=31). Data analysis was accomplished using the Statview 513+ statistical package. Descriptive statistics were computed for all items. The score on each statement is for both the agreement rating and importance rating for each respondent. Group comparisons were developed with paired t-test. Multiple stepwise regression analysis was carried out to determine the relative

contribution of each item on the questionnaire to the importance scores.

Results

The demographic data for the two groups are presented in Table 2. Seventy-three percent of the subjects are male and 38% are female. Fifty-six percent are married while 44% are single. Eighty-two percent of the participants have bachelors degrees, 14% have masters degrees and 4% doctoral degrees. The data was analyzed to ascertain differences in age, marital status, terminal degrees, employment settings and years of clinical experience between the two groups. Significant differences were found between the two groups. The Nigerian PTs practicing in the US are significantly older ($p < 0.002$), have more children ($p < 0.003$) and more years of practice experience ($p < 0.009$) than the PTs in Nigeria.

Table 2

Demographic Data for the Physical Therapists (PTs) in Nigeria and Nigerian PTs Based in the US

t-value P	PTs in Nigeria level	US based PTs	Combined
Gender			
Male	79	24	104(73%)
Female	31	7	37(27%)
Marital Status			
Single	57	5	62(44%)
Married	53	26	79(56%)
Degree			
Bachelor	93	23	
	116(82%)		

Master	15	4	
	19(14%)		
Doctorate	2	4	6(4%)
Number of Children	1	2.1*	1.3
	-3.75	0.003	
Age	33.5(7.2)	37.0(6.2)*	33.5(7.2)
	-3.13	0.002	
Years of clinical experience			
	7.6(6.5)	12.0(5.3*)	8.5(6.5)
	-3.42	0.009	

*Significant at the indicated p-level

For age and years of clinical experience, the values indicated are means with standard deviation in parentheses.

Table 3 contains the mean agreement scores for each of the 10 statements for each group separately and both groups combined. As shown on the table, the agreement scores for the positive statements for both groups combined ranged from minimally agree (5.7, SD=1.3) to agree (6.1, SD=0.9), while those of the negative statements ranged from minimally disagree (3.4, SD=2.1) to minimally agree (4.8, SD=1.9). Significant differences were noted between the groups on statements relating to stress, paperwork and physical demand. The mean agreement score was significantly higher ($p<0.05$) for the Nigerian PTs practicing in the US on statements relating to paperwork and stress, but lower on the statement relating to physical demand.

Although the total agreement score for the subjects has no practical value, differences are observed by practice settings, by gender and by marital status. The PTs teaching in schools (academic) setting recorded significantly higher ($p<0.05$) total agreement scores than the hospitals and self employed PTs. Also, the males and married PTs recorded significantly higher ($p<0.05$) total agreement scores than the females and the single PTs respectively. Age and clinical experience has no effect on total agreement scores.

Table 3

Mean Agreement Scores on Statements Measuring Job Satisfaction.

Key Word	PTs in Nigeria X(SD)	US based PTs X(SD)	t-level	Combined Data X(SD)	p-level
Paperwork(-)	2.6(1.6)	6.3(.9)*	-12.60	3.4(2.1)	.0001
Challenge(+)	6.1(1.2)	5.8(1.5)	1.30	6.0(1.2)	.1911
Autonomy(-)	3.5(1.2)	4.1(2.4)	-1.40	3.7(2.2)	.1653
Fulfillment(+)	5.7(2.1)	5.6(.5)	.21	5.7(1.3)	.8344
Stress(-)	4.3(1.3)	5.3(1.7)*	-2.4	4.5(1.9)	.0159
Independence(+)	5.2(1.7)	5.1(1.7)	.26	5.1(1.7)	.7929
Physical demand(-)	6.0(1.2)	4.6(2.0)*	5.01	5.7(1.6)	.0001
Interesting(+)	6.1(1.0)	5.8(1.4)	1.72	6.1(1.1)	.088
Overworked(-)	4.8(2.0)	5.9(1.8)	-.34	4.8(1.9)	.731
Learning(+)	6.1(.8)	5.8(1.1)	-2.41	6.1(.9)	.508
Total	50.5(1.2)	53.7(8.0)		51.2(6.8)	

* Indicates significant difference between groups

+ Indicates positively worded statements

- Indicates negatively worded statements

For positively worded statements, the higher the value the more satisfied the subjects.

For negatively worded statements, the higher the value the less satisfied the subjects.

Table 4 contains the mean importance scores for each of the 10 statements for the two groups. All statements had mean importance scores ranging from minimally important (4.5, SD=1.8) to important (6.4, SD=0.9) for the groups combined. A mean total importance score of 55.9 (SD=7.4) was obtained for the subjects in the study.

Significant difference was found on importance scores for statements relating to paperwork, job challenge, interesting, fulfillment and physical demand between the groups. The PTs in Nigeria recorded a significantly ($p<0.05$) higher importance scores

on statements relating to job challenge, physical demand, fulfillment and on the statement "my job is interesting". The Nigerian PTs practicing in the US had higher ($P<0.05$) scores on the statement relating to paperwork.

The PTs terminal degrees had a significant influence ($p<0.05$) on the importance scores. Physical therapists with masters degree had higher total importance scores (59.3, $SD=7.3$) than those with doctoral degree (50.2, $SD=11.2$). Although the average total importance scores reported by those with bachelors degree (56.1, $SD=7.0$) was

higher than those who were doctorally prepared, the difference was not significant. No significant importance score differences were found between those with bachelors degree and those with masters degree nor between PTs in Nigeria and the Nigerian PTs practicing in the United States.

For clarity, the data in this study was compared with the data published by Speakman et al (1996) for American PTs. The mean agreement score on positive and negative statements were compared. As shown in Figure 1, the American PTs in Speakman et al's study scored higher in all positive statements and lower in all negative statements, than the Nigerian PTs. The average importance score reported by Speakman et al in their study (5.7) was however comparable with those of PTs in Nigeria (5.8) and that of the Nigerian PTs practicing in the United States (5.4).

On further analysis, the statement "my work is interesting" was rated highest in importance by subjects ($R^2 = .361$). It is followed by the statements "my job is mentally stressful" ($R^2 = .571$) and "my job is too physically demanding" ($R^2 = .642$). The statements on autonomy, independence, paperwork, overworked, fulfillment and learning followed in that order with $R^2 = .691, .725, .764, .792, .816, .831$ and $.846$ respectively. The least important statement according to the respondents was "my job is challenging in a positive sense" ($R^2 = .846$). The scale did not account for about 15% of the variance in importance scores. This finding suggests a high consistency and validity of the 10-item scale measuring job satisfaction.

Table 4

Mean Importance Rating on Statements Measuring Job Satisfaction.

Key	PTs in Nigeria	US based PTs	t-level	Combined Data	p-level
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Word	X(SD)	X(SD)		X(SD)	
Paperwork(-)	4.1(1.7)	6.0 (1.4)*	-5.9	4.5 (1.8)	.0001
Challenge(+)	6.3(1.9)	5.7 (1.5)*	2.60	6.2 (1.1)	.0106
Autonomy(-)	3.54(1.8)	4.8(2.1)	1.60	5.2(1.9)	.1158
Fulfillment(+)	6.4(.7)	5.9(1.4)*	2.90	6.3(.9)	.0045
Stress(-)	5.2(1.7)	4.9(1.5)	9.0	5.1(1.7)	.3459
Independence(+)	6.0(1.3)	5.5(1.5)	1.50	5.8 (1.4)	.0705
Physical demand(-)	6.0(1.5)	4.6(1.6)*	4.40	5.(1.6)	.0001
Interesting(+)	6.4(.8)	5.9(1.4)*	2.60	6.3(1.0)	.0095
Overworked(-)	5.2(1.8)	4.9(1.5)	.80	5.2(1.8)	.4070
Learning(+)	6.4 (1.0)	6.2(.8)	1.07	6.4 (.9)	.2878
Total	56.8(7.4)	54.2(6.9)		55.9(7.3)	

*Indicates significant difference, the higher the value, the higher the importance

of the statement in measuring job satisfaction. All statements are represented by their key words.

Discussion

Demographic data showed that PTs in Nigeria were significantly younger and had fewer years of practice experience than Nigerian PTs based in the US. The significant difference in the age and the clinical experience between the groups suggests that a greater proportion of the more experienced PTs of Nigerian origin have emigrated abroad. This indicates the operation of a "brain drain" phenomenon where the well educated and more experienced personnel are more likely to leave their countries for "greener pastures" when faced with harsh economic conditions. In consequence, Nigeria, a country that is grossly underserved by PTs loses even more, with negative ramifications for the health care system and the well-being of the population.

The primary objective of the study was to provide evidence as to whether PTs in Nigeria were satisfied with their job. Related to this is the consideration of whether there is a relationship between job satisfaction and the desire to emigrate. Overall, PTs in Nigeria reported being satisfied with the "clinical practice" aspects of their job. The above findings are consistent with the results of previous studies (APTA, 1989; Speakman et al, 1996; Barnes and Cruntchfield 1977; Okerlund et al, 1994; Rozier et

al, 1998) of American PTs. This cohort of Nigerian PTs indicated their job was challenging, that they enjoyed some measure of independence in decision making, thought their job was interesting and believed they were learning and improving on their job. To a limited degree, PTs in Nigeria claimed that they enjoyed some autonomy, but were "minimally" overworked. They agreed that their work was too physically demanding.

A second objective of this study was to assess whether Nigerian PTs based in the US were more satisfied with their jobs than their counterparts in Nigeria. The PTs in Nigeria scored higher in all positive statements than the Nigerian PTs based in the US. Physical therapists in Nigeria also recorded lower scores in all negative statements except in the statements relating to physical demands. The above findings did not support the hypothesis that Nigerian PTs based in the US were more satisfied with the clinical practice aspect of their job than the PTs in Nigeria.

Responses to questions on future career goals posed to the Nigerian PTs based in the US further elucidated the job satisfaction status of this group. This group of PTs practiced in Nigeria before coming to the US. Fifty-two percent of the subjects responded "Yes" to the question "Do you think Physical Therapists enjoy adequate professional autonomy in Nigeria?" Sixty-two percent responded "No" to the question "Do you think Physical Therapists in the United States enjoy adequate professional autonomy?" Eighty-seven percent responded "Yes" to the question "Do you plan to return to Nigeria to live permanently?" Sixty percent of those who responded "Yes" to this question expressed the hope that they would be able to relocate within the next 10 years. More than 60% of the respondents also planned to engage in Physical Therapy practice or teach in a Physical Therapy programs when they return to Nigeria.

Nigerian PTs based in the US were also asked questions regarding pay and professional prestige. Eighty percent of the respondents expressed a preference for practice in Nigeria if financial remunerations were comparable between US and Nigeria. Eighty-Four percent of the respondents expressed preference for practice in Nigeria because of perceived better professional prestige accorded to PTs in Nigeria. A previous study had linked the job satisfaction of physical therapists and nurses directly with "Autonomy" (APTA, 1989; Okerlund, 1994; Carr and Kazanowski, 1994). The enjoyment of prestige through recognition by patients and public is also directly related to job satisfaction. (Carr and Kazanowski, 1994; Rozier et al, 1998). From the responses on future plans and preferences expressed by the US based PTs, it is conceivable that PTs in Nigeria were more satisfied with their jobs than the Nigerian PTs based in the US who have had the opportunity to practice in both countries.

Nigerian PTs based in the US reported higher agreement scores on the statement relating to paperwork than PTs in Nigeria. A plausible explanation for this difference could be attributed to the disparities in the health care delivery system in Nigeria and in the US. After the United States Balanced Budget Amendments Act of 1997 and the budget cut that followed it, the Health Care Financing Administration and the third party payors have demanded more detailed records of treatment and evidence of positive functional outcome from providers. Managed care organizations gained prominence, as their employee gatekeepers were highly involved in important care decisions. Quality assurance, utilization review and legal implications were key considerations that drove the requirement for detailed documentation. On the other hand, there are neither health insurance companies nor managed care organizations in Nigeria's health care system. No government programs exist that are comparable to Medicare or Medicaid payer systems, which are parts of the system in the US, exist in Nigeria. Hospitals are mainly owned by Federal, State or local governments and are subsidized for the citizenry. Very few private hospitals or clinics exist in Nigeria and payment for health services are on a "fee for service" basis. Furthermore litigation on health or malpractice issues is rare. Therefore, the pressures from clinical documentation and paperwork requirements are much less in the Nigerian health care system.

Significant difference was also noted between the two groups on the statement: "my job is mentally stressful." Physical Therapists in Nigeria had lower agreement scores on the statements relating to stress than the Nigerian PTs practicing in the US. A possible explanation could again be found in the employment status of the respondents. While the Nigerian PTs in the US are mostly self-employed (N=20), PTs in Nigeria are predominantly salaried employees in hospitals (n=110) salaried employees are paid while on leave and while out sick. They also have health and pension benefits. On the contrary self-employed PTs pay for these benefits wholly out of their pockets. A previous study of physicians reported a strong direct relationship between paperwork and stress level (Krakowski, 1982). The findings in the present study similarly suggest that the amount of paperwork involved in the job of the US based PTs may have contributed to the feeling of stress expressed by this group.

Physical Therapists in Nigeria report higher agreement scores on the statements "my job is too physically demanding" than the Nigerian PTs practicing in the US. A possible explanation for the significant difference may be attributed to the equipment availability and the disparity in the sophistication of available equipment in the practice settings in the two countries. Mechanical lifting devices (e.g. Hoyer's lift), Isokinetic machines and mechanical traction instruments are frequently utilized by

PTs. The use of the above mechanical devices puts less physical strain on the therapist. Mechanical devices and isokinetic equipments allow therapists to use less physical effort in clinical practice. These items are most readily available in many hospitals and private offices in the US, but are rarely available to PTs in Nigeria.

Another contributing factor to the significantly higher job physical demand perceived by the PTs in Nigeria can be found in the employment settings. Physical Therapists in Nigeria were almost solely (98%) employed in hospitals with acute orthopedic, neurological and cardiopulmonary caseloads mixed with outpatient care. The US based PTs were predominantly (66%, n=21) in independent practice (homecare, early intervention, private office) with post acute and ambulatory patient caseloads. Patients are normally discharged from the hospital with some functional capability and having achieved independence in some Activities-of-Daily-Living tasks. Managing acute in-hospital patients could be more demanding than managing ambulatory and post hospital discharge patients, as lifting and other physically demanding maneuvers are more frequently involved in treating in-patients.

Apriori, the data from this study was compared to that of Speakman et al. (Figure 1). While the Nigerian PTs did not claim that there was too much paperwork involved in their job, American PTs in Speakman et al's study and the Nigerian PTs practicing in the US felt so. The PTs in Nigeria "minimally" disagreed with the statement "I am not given enough autonomy". While the American PTs disagreed with the statement, the Nigerian PTs based in the US were however neutral on this statement. The PTs in Nigeria were closer to the American PTs on the statement "my job is mentally stressful" as they were neutral, while the Nigerian PTs based in the US "minimally agreed" with the statement. While the PTs in Nigeria expressed minimal agreement to the statement "my job is too physically demanding", the American PTs and the Nigerian PTs based in the US were mostly neutral. On the statement "my work is interesting", PTs in Nigeria were closer to the American PTs than the Nigerian PTs based in the US.

When the average agreement scores on the positive statements were compared to the average scores on the negative statements for the Nigerian PTs as well as the American PTs, a greater difference between the positive and negative statements reported by the American PTs suggests a higher level of satisfaction than the Nigerian PTs based in the US. Overall, the responses of the PTs in Nigeria were closer to those of the American PTs. A possible explanation for this similarity may also be found in the similar employment status of the American PTs and PTs in Nigeria. As with the PTs in Nigeria, the majority of the participants in Speakman et al's study were employed in

the hospital setting.

The importance rating by the Nigerian PTs based in the US on the statement relating to paperwork was significantly higher ($p < 0.05$) than that of PTs in Nigeria. This difference may be explained by the larger amount of paperwork involved in the job of the US based PTs. The PTs in Nigeria with less paperwork involved in their jobs did not perceive the statement relating to paperwork as having much importance in assessing their job satisfaction.

Conclusion

Nigerian PTs practicing in the US tend to be older with more clinical practice experience than those in Nigeria. The "brain drain" phenomenon was therefore inferred from the findings in this study. Overall this cohort of Nigerian PTs was satisfied with their jobs. Nigerian PTs practicing in the United States were not more satisfied than the PTs in Nigeria. Physical Therapists practicing in Nigeria felt their job was too physically demanding, whereas the Nigeria PTs based in the US did not feel so. Nigerian PTs based in the US reported too much paperwork and more stress.

The findings in this study suggest that factors outside the clinical practice aspect of Physical Therapy (e.g. pay, harsh economic conditions) were responsible for the recent emigration of one hundred and ten Physical Therapists and other highly trained personnel from Nigeria. While wars, famine and natural disasters have historically contributed to waves of emigration, the search for greater economic opportunities have probably been instrumental to the migration of highly skilled Nigerian trained health personnel in recent times.

Coming from a different training and sociocultural background, foreign trained health personnel may benefit from supports to make necessary adjustments in their new practice situation. An orientation to include in-service training on the health care delivery system, its philosophy and major features and players, may set the newly recruited on the path toward a successful career. Techniques of stress reduction and paper work management skills to include concise writing, and computer skills, as well as in-service training on equipment and instrumentations are recommended measures that could assist the foreign trained health personnel in achieving job satisfaction.

As long as the demand for highly skilled personnel remains high in the developed countries, developing countries may remain vulnerable to the disastrous effect of "brain drain". Developing countries that are set on the path to social stability and

economic growth may be well on the way to curtailing the "brain drain" phenomenon. Therefore in their efforts to retain staff, Physical Therapist managers and health care administrators in the developing countries should seek to influence policies within and outside their places of employment, agencies or local authorities.

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