

Physiotherapy in Papua New Guinea: Assessment of employment opportunities

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Abstract

This study explores the need for and the knowledge of physiotherapy in hospitals in Papua New Guinea (PNG) and the process of creating employment opportunities for trained national physiotherapists. A questionnaire was administered in order to gain an understanding of physiotherapy and need for physiotherapy services in hospitals. The participants of this study included staff from twenty-one hospitals throughout PNG. Of the 105 questionnaires sent out to the hospitals, 76 (72%) were returned. The results indicate that there is limited knowledge in various areas related to the physiotherapy profession in hospitals in PNG. Knowledge of physiotherapy is important in creating employment opportunities for the trained national physiotherapists. Improvement in the accuracy of information conveyed by the physiotherapists and physiotherapy students themselves, and awareness activities in hospitals and communities, are needed. Employment opportunities in the hospitals will hopefully follow with the recognition of the profession as a valuable service to patients.

Key words: physiotherapy, employment, community based rehabilitation, disabilities

Background of the research

In 2003, Divine Word University (DWU) introduced a Diploma in Physiotherapy program to address the rehabilitation needs for people with disabilities. Until 2008 the country had only four national physiotherapists, who all had been trained abroad. Physiotherapy services were mainly provided by expatriates working on temporary contracts in different fields of rehabilitation. These physiotherapists supervised the residents during their period of internship. For the physiotherapy services to be sustainable, national physiotherapists should deliver these services which were previously provided by expatriates.

In March 2008, the first ten trained national physiotherapists completed their internships; they will be followed by another twelve in March 2010. With an annual intake of a maximum of 20 students, the number of trained national physiotherapists will continue to grow over the years. These physiotherapists will play an important role in developing the profession within the different health facilities as well as in the communities.

Community Based Rehabilitation (CBR) is a holistic approach towards disability which is currently being supported in many parts of the world, including PNG. Physiotherapists can play an important part in hospital and community based rehabilitation improving independence and quality of life of persons with disabilities.

Literature review

Little research has been done about the need for physiotherapy services in PNG. Powell (2001) stated that there is a poor understanding of the role of physiotherapy within hospitals from colleagues working in the delivery of clinical services, managers and senior administrators. For example, there is no direct mention of developing physiotherapy services in the Papua New Guinea National Health Plan 2001-2010 (Papua New Guinea Department of Health), although the need to 'investigate the feasibility of training physiotherapists' is proposed.

Powell (2001) used an audit to examine the impact of physiotherapy within the Mount Hagen General Hospital during the period 1 March to 31 August 2000. The aim of the audit was to examine the caseload seen and quantity of intervention given to allow increased awareness of physiotherapy among clinicians and health managers who may have had little exposure to such a service. Powell concluded that the audit illustrated the value of physiotherapy service to a provincial hospital in PNG.

Previous research identifying causes of disability in PNG highlighted the need for rehabilitation services. According to Watters and Dyke (1996), injury caused by trauma is the most common cause of death in the 15-44 age group in one area of the Highlands. They also estimate that 25% of injuries caused by domestic violence led to permanent disability.

Some studies have attempted to investigate the need for services. Van Amstel (1993) concluded that there is a limited need for a community-based rehabilitation program in the Highlands. In a study by Foimae (2004), only 11% of the respondents said they had received help from organizations and individuals to support their disabilities.

In 2006, a pilot study by the physiotherapy department at DWU titled, 'the appropriateness of the diploma in physiotherapy program of the DWU to the rehabilitation needs of people with a physical disability in PNG' (Pronk & Thornton, 2006), offered the following conclusions:

- There was a high need for raising awareness. People mentioned awareness raising for both patients and colleagues in the medical field about physiotherapy; educating them what physiotherapy is, and why it is important.
- The need for further research in disability in PNG must be emphasized, as it creates data that helps with reporting systems and information is gathered from which all stakeholders in disability can benefit.

- Many people in the rural areas have minimal access to health care services. It was said that raising awareness in rural areas about the rehabilitation services that are available, as well as increasing the capacity of CBR, is important to address this issue.

Another part of Pronk and Thornton's (2006) research was the 'analysis of physiotherapy patients' records across various hospitals in PNG'. This was the first study on the physiotherapeutic care on patients' records from various hospitals across PNG. It showed that awareness and the use of physiotherapy services were in demand by the people of PNG. These data also suggested that the medical professionals were referring many patients to the physiotherapy departments.

Study design

This study concerning 'The assessment of employment opportunities for physiotherapists graduated at Divine Word University' contained two parts.

The first part was a descriptive study using a researcher made questionnaire in a survey design to assess the need for and knowledge of physiotherapy. The participants were 105 employees currently working in the health sector. Questionnaires were sent to 21 hospitals, including 19 general hospitals and two private hospitals. Five participants from each hospital were asked to participate to ensure a valid study population. The questionnaires were distributed among health workers and administrators. Staff included were Chief Executive Officers, nurses, human development managers and physicians.

The second part describes how employment opportunities for physiotherapists were created and clarified the roles of hospitals, the National Department of Health and the Department of Personnel Management in the creation of physiotherapy positions. The responsible officers in the hospital, the National Department of Health and the Department of Personnel Management were contacted in person or by email to explain the background of the study and to gain consent for interviews.

The coding and analyzing of the data for part one was completed using SPSS software version 15. Fisher's exact test was used to compare outcomes between different answer categories. Part two of the results were analysed using descriptive statistics

Pilot study questionnaires

To obtain an understanding of possible difficulties, a pilot study was done by administering the questionnaires to ten health workers in Modilon General Hospital in Madang. Participants did not report any difficulties completing the questionnaire. For this reason, it was decided to use the questionnaire without any changes.

Analyzing questionnaires

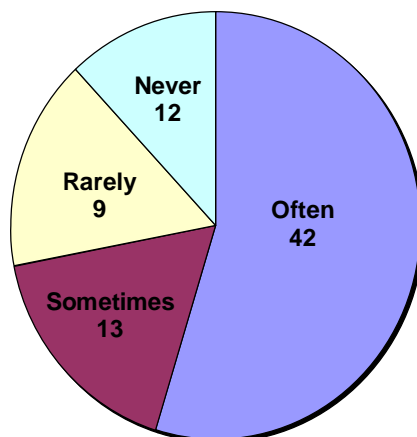
The 105 questionnaires were sent to 19 public hospitals and two private hospitals throughout Papua New Guinea (representing 80% of hospitals in the country). Seventy-six questionnaires were returned, a return rate of 72%.

Table 1. Questionnaire response

Topics	Respondents n = 76 (72%)	Missing data
Gender		
Male	44 (57.9%)	3 (3.9%)
Female	29 (38.2%)	
Total	73 (96.1%)	
Age (in years)		
Mean (range), SD	39.6 (23 – 64), SD 9.4	9 (1.2%)
Profession:		
Healthcare worker	58 (76.3)	4 (5.3%)
Administrator	14 (18.4)	
Total	72 (94.7%)	
Working in hospital with Physiotherapy Dept.	64 (84.2%)	
Working in hospital without Physiotherapy Dept.	12 (15.8%)	
Total	76 (100%)	

Figure one shows the frequency with which respondents worked with physiotherapists in their hospital.

Figure 1: Respondents working with physiotherapists in their hospital

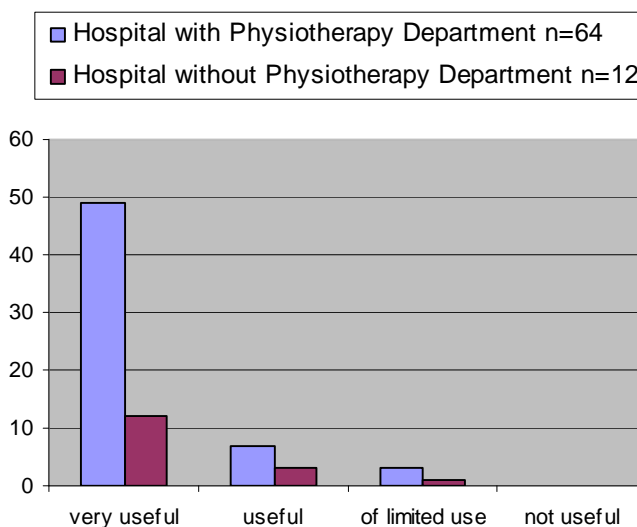


Fisher's exact test was used to analyse any statistical significance in responding to the five questions of the questionnaire between male and female staff, between health care workers and administrative personnel and between staff of hospitals with or without an established physiotherapy department.

Is physiotherapy useful?

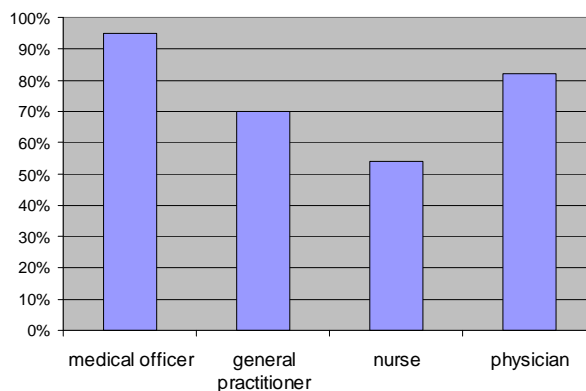
The first question of the questionnaire asked if physiotherapy is useful (in the case the respondent works with physiotherapists) or if physiotherapy would be useful in their hospital (if the service is not available yet). Seventy-one (93%) of the respondents believed physiotherapy is a useful service in their hospital, even if physiotherapy services are not available at this time. No statistically significant difference, using Fisher's exact test, was seen between male and female participants, between healthcare workers and administrative personnel and between staff of hospitals with or without an established physiotherapy Department in responding to the first question.

Figure 2: Usefulness of physiotherapy as a service to the public



Referrals to Physiotherapy

The second question explored the understanding of health care workers of persons who refer patients to physiotherapists. Four categories were listed including medical officer, general practitioner, nurse and physician. Participants were given an option to add any persons who they might think could refer. All the listed categories are possible persons who could refer patients to physiotherapists.

Figure 3: Knowledge of persons referring patients by percentage

Other professions indicated by participants who could refer patients for physiotherapy included: informal sector, self referral and social worker. A statistically significant difference ($p < 0.05$), using Fisher's exact test, was seen between staffs working in a hospital with a physiotherapy department and without a physiotherapy department in being able to identify medical officers and nurses as persons who may refer patients to physiotherapists.

Need for physiotherapy

The participants' perception of the overall need for physiotherapy services in hospitals is represented in Table 2.

Table 2. Need for physiotherapy

Rating of need	Frequency	Percentage
Very much needed	61	80.3
It is needed	14	18.4
Somewhat needed	0	0.0
It is not needed at all	1	1.3
Total	76	100.0

No statistically significant difference, using Fisher's exact test, was seen between male and female participants, between healthcare workers and administrative personnel and between staff of hospitals with or without an established physiotherapy department in responding to question 3: 'How do you assess the overall need for physiotherapy services in your hospital'.

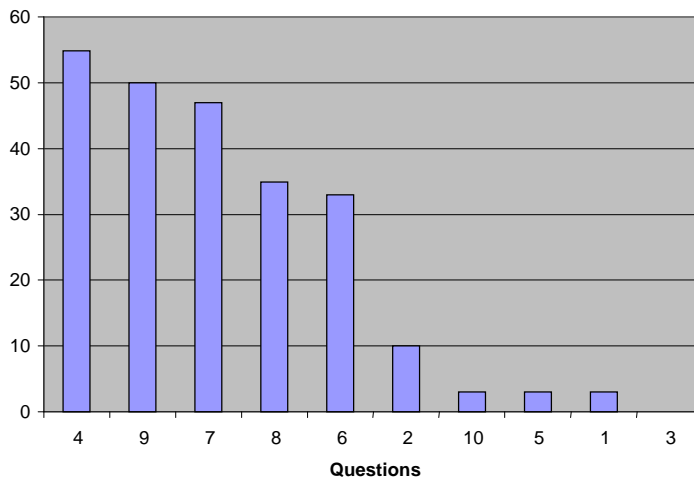
Knowledge of physiotherapy

Ten statements were given to gain an understanding of the knowledge of physiotherapy. The statements were as follow:

A physiotherapist:

- 1 Instructs a client in exercises
- 2 Gives massage
- 3 Plans a treatment program
- 4 Assists in surgery
- 5 Works with joints to decrease pain
- 6 Gives emotional support
- 7 Assists in childbirth
- 8 Teaches daily living skills
- 9 Prescribes medication
- 10 Assesses the need for Physiotherapeutic treatment

Figure 4: Percentage of 'no' / 'not sure' responses for each statement are presented



Results indicated limited knowledge of the roles of physiotherapists. Fifty-five percent of the participants responded that the role of a physiotherapist includes assisting in surgery while 50% responded that the role includes prescribing medication and 47% assisting in childbirth. Participants reported a general understanding of the roles of physiotherapists involving massage, assessing the need for treatment, decreasing joint pain, instructing exercises and planning treatment plans. No statistically significant difference, using Fisher's exact test, was seen between male and female participants and between healthcare workers and administrative personnel in answering the questions. The same

applied to the answers given by staff of hospitals with or without established physiotherapy department.

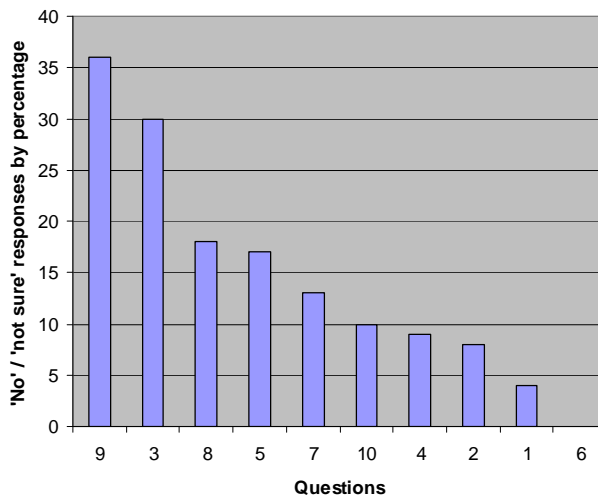
Involvement of physiotherapy in treatment of patients

Ten treatment options were given to gain an understanding of the knowledge of physiotherapy in the treatment of different conditions.

Physiotherapists are involved in the treatment of patients with:

- 1 Back pain
- 2 Fractures
- 3 Diarrhea
- 4 Amputation of a limb
- 5 Chronic airway disease
- 6 Rehabilitation after surgery
- 7 Stroke
- 8 Developmental paediatric problems
- 9 Fever
- 10 Cerebral palsy

Figure 5: Percentage of 'no' / 'not sure' responses for each option are presented



Results show respondents have a general understanding of the roles of physiotherapists in the treatment options given, however, one-third of the participants considered the role of physiotherapists to include the treatment of diarrhoea and fever. No statistically significant difference, using Fisher's exact test, was seen between male and female participants and between healthcare workers and administrative personnel in answering the questions. The same applied to the answers given by staffs of hospitals with or without established physiotherapy department.

The way to recruitment

The need for physiotherapy among the community was recognized in part one of this study. Part two summarizes how employment opportunities can be created within the hospitals to fulfill those needs. This process is explained in detail in the National Public Service General Order: General Order No1/Provincial Administrations (Revision0) 1st June 2002. This order is made under the Public Services (Management) Act 1995.

All recruitment, promotions and transfers must be made through the selection process described in the General Order. Recruitment and selection functions have been delegated to Departmental Heads, and decentralized in order for departments and administrations to be accountable for selection and appointment decisions and to streamline and 'speed-up' the process.

Creating employment opportunities in the hospitals must fit within the strategic/corporate plan of the organization. As the hospitals are restructuring their organizations at the moment we must prove the necessity for physiotherapists within their organization. Currently physiotherapy positions are created in hospitals throughout the country and advertised within a short period of time. Due to restructuring, it is difficult to determine an exact number of positions that will be created.

The process of creating a physiotherapy position is complex and starts with a recommendation given by the head of the physiotherapy department. Important in this is a standardized job description. For physiotherapy, this description is not available yet. Writing a standardized job description must be one of the priorities within the Allied Health Association or within the Physiotherapy Association when established.

After the head of department has justified the need to recruit a physiotherapist, the source of funds should be identified. The HOD shall make a submission to the steering committee in the hospital. While hospitals are semi-autonomous institutions, the whole process will be finalized and accepted by the steering committee in the hospital. The National Department of Health and the Department of Personnel Management can provide technical advice to ensure the correct process will be followed. If the vacancy is approved the job description will be advertised in the National Gazette. Departments will normally only advertise in the local media if they have not been able to select a suitable candidate through the National Gazette.

Discussion

In Papua New Guinea, physiotherapy is a relatively young profession. In 2003 Divine Word University became the only university in the country to offer a Diploma in Physiotherapy. Between 2003 and 2007 students enrolled biannually. Beginning in 2008, students are enrolled annually. Therefore, the number of physiotherapy students who will graduate in PNG will increase

substantially. Although the total number of physiotherapists will increase, there is currently no evidence that sufficient jobs will be created.

The first part of this study explored the need for physiotherapy and knowledge of physiotherapy in Papua New Guinea. Ninety-two percent of participants responded that physiotherapy is a useful service in their hospital. Almost all (99%) of the participants responded that physiotherapy is very much needed.

Personnel working in hospitals with a physiotherapy department seem to have a better understanding regarding the referral of patients by healthcare workers. A statistically significant difference ($p < 0.05$) was found using Fisher's exact test in these participants' knowledge of patient referrals by medical officers and nurses. Although participants reported a general knowledge regarding the referral of patients to physiotherapists, an increased awareness of persons who may refer patients to physiotherapy, including family members and self referrals is needed.

No statistical significance was found between male and female staff, between healthcare workers and administrative personnel and between staff working with or without Physiotherapists in their hospital in answering the other questions.

Although there is a general knowledge of physiotherapy, there are some areas of concern. Nearly 50% of the participants indicated the roles of physiotherapists to include surgery, prescribing medication or assisting in childbirth. The roles of physiotherapists in teaching daily living skills to increase functionality, independence and quality of life were not indicated by 35% of the participants. Social aspects, support to the client and/or family, were also underestimated. Participants seemed to have a general understanding of the conditions treated by physiotherapists, but alarmingly more than one-third of the participants responded that physiotherapists were involved in the treatment of fever and diarrhoea.

The results of the current study show that the need for physiotherapy is recognized. Although there is general knowledge of the physiotherapy profession among health care personnel, there are still limitations.

Hopefully knowledge of physiotherapy will increase among hospital personnel by improvement in the accuracy of information conveyed by the professionals and physiotherapy students themselves and awareness activities in hospitals and communities. A gap in knowledge will lead to an underestimation of the possibilities within the profession and a lack of interest to create employment opportunities in the hospitals.

This study focused mainly on physiotherapy services in hospitals rather than Community Based Rehabilitation. In PNG, CBR services are primarily provided by non-governmental organisations. In the future, need for physiotherapy, knowledge of physiotherapy in the community and employment opportunities in the field of CBR must be explored.

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