

ARE WE GRADUATING PHYSIOTHERAPISTS WITH THE BURNOUT SYNDROME

EVALUATING PHYSIOTHERAPY EDUCATION AT THE UNIVERSITY OF THE WESTERN CAPE

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INTRODUCTION

The physiotherapy education programme at the University of the Western Cape, established in 1983, admitted its first set of undergraduate students in 1984. From the onset, the training programme was accessible to students from historically disadvantaged communities in South Africa. The programme has been committed to a student education which promotes an interdisciplinary approach to health care, and the role of physiotherapy at primary, secondary and tertiary levels of health care. The university also strives to be a leading academic institution in the provision of competent and reflective practitioners of comprehensive health care.

Burnout has been defined as a clinical syndrome of physical and emotional exhaustion involving the development of both a negative self-concept and a poor or negative attitude towards one's job¹. Wolfe², through a study on physiotherapists in acute care hospital settings in the United States of America, developed a definition of burnout specific to physiotherapy. Burnout was defined as a feeling of emotional and physical exhaustion, coupled with a deep sense of frustration and failure. The high incidence of burnout syndrome in human service professions such as medicine and nursing have been reported³. It is characterised by three components^{1,4} namely:

1. Emotional exhaustion: being overextended and exhausted by one's work. This is considered as the key aspect of burnout.
2. Depersonalisation: the development of a negative and impersonal response towards recipients of one's care or

ABSTRACT

Burnout has been identified in physiotherapists. Based on the postulation that burnout actually begins during physiotherapy educational training, this study set out to determine if burnout exists among physiotherapy students in the University of the Western Cape. Using a modified version of the Maslach Burnout Inventory, 80.3% of the study sample (N=76) were found to have moderate to high levels of emotional exhaustion, while 14.5% indicated moderate to high levels of depersonalisation. However, 72.4% reported moderate to high levels of personal accomplishment. Some factors which contributed to burnout were also reported. It was concluded that burnout existed in the subjects involved in the study.

services.

3. Lack of personal accomplishment: the tendency to negativity with regard to one's achievements.

The Maslach Burnout Inventory (MBI) is the commonly accepted tool for the measurement of burnout^{1,4,6}. It was originally designed for educators and health professionals. It has been shown to be a valid and reliable psychometric instrument. The MBI consists of 22 items and provides a measure of degree of burnout in terms of three subclasses namely emotional exhaustion (EE), depersonalisation (DP), and personal accomplishment (PA). Respondents are requested to rate the frequency with which they encounter each of the feelings expressed in the 22 items on a 7-point scale in a Likert format, running from zero (never) to six (everyday).

The scores for each subscale are classified as low, moderate or high according to ranges specified in the MBI manual⁵, placing each individual on a scale of the degree of burnout. The scores in the EE, DP and PA subscales are categorised as shown in Table 1. The instrument is not a diagnostic tool since there is no score above or below which an individual is categorised as suffering from burnout or not. Respondents with high scores on the EE and DP subscales, and a low score on the PA subscale, are categorised as being more burned out.

Table 1: Maslach Burnout Inventory (MBI) scoring key⁴

Subscale	MBI score		
	High	Moderate	Low
Emotional Exhaustion	27 or over	17 – 26	0 – 16
Depersonalisation	14 or over	9 – 13	0 – 8
Personal Accomplishment*	0 – 30	31 – 36	37 or over

*Scored in opposite direction to emotional exhaustion and depersonalisation

The prevalence of burnout among clinical physiotherapists in the United States^{1,2,7-8}, and Australia⁴ has been documented. Schuster *et al*⁸ surveyed 176 physiotherapists in the United States and found that about 53% believed they were experiencing burnout. In a similar sample of Australian physiotherapists with more than five years experience (reported by Scutter and Goold⁴), 35% of the subjects were found to have moderate to high levels of emotional exhaustion. In another sample of 129 physiotherapists working in rehabilitation hospitals in the United States, the majority of whom had three years or less experience, about 72% of the sample had moderate to high scores on the emotional exhaustion subscale. Twenty percent of the same sample scored high on the depersonalisation subscale, and 60% scored low on the personal accomplishment subscale¹.

Studies by Donohoe *et al*¹ and Scutter and Goold⁴ suggested that burnout may be more prevalent in newly

graduated physiotherapists. In a sample of 66 physiotherapists with five years or less experience and working in different clinical settings in Australia, 60% of the subjects recorded moderate or high emotional exhaustion, 44% reported moderate or high depersonalisation, but only 6% had low scores in personal accomplishment. It was postulated by Kolb⁹ that the burnout syndrome actually begins during the physiotherapy educational training. Commenting on the study by Donohoe *et al*¹, Kolb⁹ reported that the factors contributing to burnout were also present among physiotherapy students, suggesting that there are numerous physiotherapy graduates who are already burned out before they even start working.

In order to test this postulation, Balogun *et al*¹⁰ first adapted the educators' version of the MBI and tested it with 21 physiotherapy students in the United States, on three different occasions in one academic year. The adapted instrument was found to be reliable. A follow up study⁶ on 56 physiotherapy students from the same institution revealed that overall, the students reported high emotional exhaustion and a moderate level of depersonalisation, but high feelings of personal accomplishment, although senior students reported lower scores on personal accomplishment.

Similar reports have been documented on medical and dental students in the United Kingdom¹¹⁻¹⁴, and the United States¹⁵. Factors contributing to emotional exhaustion and drug addiction were identified among medical students¹⁴. This led to reforms to improve medical education. The reforms included stress management and self evaluation management with a view to enhancing the health and well-being of medical students. Further reforms in the curriculum shifted emphasis from passive to active and self-directed learning, and placed greater emphasis on health promotion and prevention of disease.

One of the mission statements of the physiotherapy education programme at the University of the Western Cape is the establishment of a programme that is student-centred, interdisciplinary, and both community- and hospital-based. The students are trained to play active roles, not only as providers of curative services, but also providers of rehabilitative and preventive services. Since burnout affects the quality of care delivered, Kolb⁹ believes that unless the burnout rate among physiotherapy students is reduced, physiotherapy education programmes cannot turn out clinicians who are confident, assertive, and realistic strategists. The purpose of this cross-sectional study, therefore, was to-

1. Determine whether burnout syndrome exists among physiotherapy students in the University of the Western Cape;
2. Identify the factors associated with burnout in the students.

We hypothesised that with the students' support systems available in the University of the Western Cape, and particularly in the Department of Physiotherapy, there is little or no cause for our students to exhibit the burnout syndrome.

METHOD

All the 126 physiotherapy students registered for the 1995 academic session were eligible to take part in the study. The survey instrument was a questionnaire divided into three sections. The first section contained three questions about demographic characteristics namely age, gender and year of study. The second section was the modified Maslach Burnout Inventory adapted by Balogun and his colleagues⁶, containing 22 statements about the potential impact of the physiotherapy education programme on the lives of the students. The third section included two open-ended questions. The first question requested students to indicate the factors in the training programme which contributed to burnout. The second question requested recommendations to reduce the burnout syndrome.

The survey instrument was first tested in a pilot study. Based on the feedback, some revisions were made concerning the complexity of the questions. Copies of the questionnaire were hand-delivered to the students, with a covering letter, at the beginning of the 4th term in 1995. Participation was voluntary and anonymity was guaranteed.

Scoring of the Maslach Burnout Inventory

On the EE subscale, a subject was considered to have a low score if the sum of the individual scores was between 0-16 (Table 1). This suggested that the subject experienced a low level of emotional exhaustion. Similarly on the DP subscale, a subject was considered to have a low score if the sum of the individual score was between 0-8. This was also interpreted as a low level of depersonalisation. On the PA subscale, scoring is in opposite direction to EE and DP subscales. When the sum of the individual scores was between 0-30, the subject was considered to have a high score, and interpreted as having a high level of personal accomplishment. When the sum of the individual scores was between 31-36, the subject was considered to have a moderate score, suggesting a moderate level of personal accomplishment. A total score of 37 and above was considered a low score, and interpreted as a low level of personal accomplishment.

Data Analysis

The MBI scores for each subject were calculated and categorised as high, moderate or low on each of the three subscales⁵. The mean score in each subscale was calculated. The student t-test for independent samples, unequal sizes, was used to determine if there was a significant difference between the scores of male and female students, and between the scores for each of the four years of training¹⁶. The level of significance was set at $p < 0.05$ on the rationale that there is little or no chance of a disastrous outcome if there is really no significant difference between the sexes, and between each year of training¹⁷.

RESULTS

Seventy-six students (55 females, 21 males) completed and returned the questionnaire. This gave a response rate of 60.3% from a total of 126 students. The average age was

20.9 years (17-37 years). The scores for the respondents are shown in Table II. Sixty-one students (80.3%) had moderate to high scores in emotional exhaustion, while 11 students (14.5%) had moderate to high scores on the depersonalisation subscale. Only 21 students (27.6%) scored low on the personal accomplishment subscale. An overall view of the respondents shows that moderate scores were reported on the emotional exhaustion subscale and personal accomplishment subscale, and a low score on the depersonalisation subscale.

Subscales	MBI score ^b					
				High score	Moderate score	Low score
	Mean	Median	SD ^a	n (%)	n (%)	n (%)
EE ¹	24.00	24.00	8.56	26 (34.2)	35 (46.1)	15 (19.7)
DP ²	3.99	3.50	3.58	1 (1.3)	10 (13.2)	65 (85.5)
PA ³	31.54	31.00	7.67	37 (48.7)	18 (23.7)	21 (27.6)

¹ Emotional Exhaustion
² Depersonalisation
³ Personal Accomplishment
^a Standard Deviation
^b Burnout is characterised by high scores on EE and DP, and low scores on PA scores

Subscales	Males (n = 21) Mean (SD)	Females (n = 55) Mean (SD)
EE*	26.38 (9.4)	23.07 (8.1)
DP*	5.24 (4.5)	3.51 (3.2)
PA*	33.86 (9.0)	30.65 (7.0)

* p<0.05

Male students (n=21) had significantly higher scores (p<0.05) on the EE and DP subscales, and significantly lower scores (p<0.05) on the PA subscale, than the female students (n=55) (Table III). The mean scores of the male students placed them in the high level of emotional exhaustion, while the female students were placed in the moderate level of emotional exhaustion. Both sexes fall into the low level of depersonalisation and moderate level of personal accomplishment.

Year of training	EE ^a Mean (SD)	DP ^b Mean (SD)	PA ^c Mean (SD)
1st-year (n = 27)	23.81 (9.4)	4.70 (4.5)	32.37 (6.9)
2nd-year (n = 18)	24.89 (9.2)	3.11 (3.1)	31.56 (8.1)
3rd-year (n = 9)	22.89 (9.9)	3.44 (2.4)	29.89 (8.6)
4th-year (n = 22)	23.91 (6.7)	4.05 (3.1)	31.18 (8.2)

^a No significant difference in emotional exhaustion (p>0.05)
^b No significant difference in depersonalisation (p>0.05)
^c No significant difference in personal accomplishment (p>0.05)

Comparing the mean scores for students at different levels of training (Table IV), there were no significant differences (p<0.05) between the scores on each subscale. However, on the EE subscale, 2nd-year students (n=18) had the highest mean EE score while the 3rd-year students (n=9) had the lowest. On the DP subscale, the 1st- and the 2nd-

year students had the highest and the lowest mean scores respectively. Similarly, on the PA subscale, the 3rd- and the 1st-year students respectively had the highest and lowest mean scores.

A perusal through the answers provided to the open-ended questions revealed that academic demands was the most problematic factor contributing to emotional exhaustion. Students were concerned about the massive amount of material to be mastered in preparation for class tests or examinations, but only two students recommended an increase in the period of training from 4 years to 5 years. The majority of the students were also bored with didactic teaching and recommended that group work activities should take place more often. The students were also concerned that there was very little social interaction among themselves, and between students and the academic staff. The 1st- and 2nd-year students desired a greater interaction with the senior students. The students in the 3rd and 4th years found the assessments at the end of each clinical block very stressful. At the moment, academic staff are primarily responsible for assessing the clinical ability of the students at the end of each clinical block. The students recommended that clinical supervisors should have a greater responsibility in the end-of-block assessment. They also requested that more time to be spent in the clinics than in the classroom. Furthermore, they requested periodic positive feedback from their clinical supervisors and lecturers.

DISCUSSION

The study set out to determine whether burnout syndrome exists among physiotherapy students at University of the Western Cape. Using the adapted version of the Maslach Burnout Inventory⁶, the data we collected from 76 students (60.3% of the student population) revealed that emotional exhaustion was the most prominent burnout characteristic demonstrated. Approximately 80% of the subjects reported moderate to high scores on the emotional exhaustion subscale; fewer students (14.5%) demonstrated moderate to high depersonalisation. On the positive side, 72.4% of the subjects reported moderate to high scores on personal accomplishment subscale. Since emotional exhaustion has been identified as the key aspect of burnout⁴, our findings suggest that the burnout syndrome exists among the students involved in this study. In addition, our graduating students (4th year) reported higher levels of emotional exhaustion than the 1st and 3rd year students. This confirms the suspicion of Kolb⁹ that there are numerous physiotherapy graduates who are already burned out before they even start working.

The overall outcome of this study was compared with that of Balogun and others⁶, which was carried out in an institution which also caters primarily for students from disadvantaged communities in the United States. In our study, though the students experienced a moderate level of emotional exhaustion, they expressed a moderate feeling of personal accomplishment. Balogun *et al*⁶ reported a high feeling of personal accomplishment among their students in spite of the high level of emotional exhaustion. On the

depersonalisation subscale, the students in this study had a more positive opinion of themselves and the people they interacted with, than the students in the study by Balogun *et al*⁶. A better understanding of the communities which the two institutions serve may reveal the reasons for the differences reported.

Studies carried out on medical students identified sex differences in the way students responded to the stress of medical education¹⁴. Female students reported more negative affect and physical symptoms, and a greater decrease in positive emotion and perceived peer friendliness than the male students. In our study, male students reported higher levels of emotional exhaustion and depersonalisation, and lower levels of personal accomplishment than the female students. We recommend that further studies be carried out to identify the reasons for the gender difference.

The subjects in this study reported a number of factors contributing to emotional exhaustion in the physiotherapy education programme at the University of the Western Cape. A common struggle faced by students is how to strike a healthy balance between their personal and academic lives. Students often place greater priority on one to the detriment of the other. This leads to imbalanced lifestyles, which have been identified as factors contributing to physical and emotional exhaustion, depression and drug addiction¹⁴. A competitive educational environment also tends to promote conflicts between student and student, and between student and the lecturer. These conflicts are potentially stressful and may lead to emotional exhaustion⁶. It has also been observed that periodic review of the physiotherapy education curriculum often resulted in increased academic demand on students and lecturers, leading to further emotional exhaustion. An appreciable number of our subjects expressed negative and impersonal responses towards their school work, classmates, lecturers and clinical supervisors.

Based on the responses of the students in this study, we recommend that a modification of the educational environment should be considered in order to address the stressors responsible for emotional exhaustion. A reduction in the

stressors may assist in our mission to train competent, reflective practitioners. It may also be beneficial for students, lecturers, clients and prospective employers.

CONCLUSION

The burnout syndrome exists among physiotherapy students in the University of the Western Cape. There is a need to identify the causative factors and make necessary adjustments.

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■ Dr Lisa de Blois
Executive Director

