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COMPARISON OF THE LEVEL OF BURNOUT AMONG THE ACADEMIC AND CLINICAL PHYSICAL THERAPISTS

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ABSTRACT

Aims of Study: To compare the level of burnout among the academic and clinical physical therapists.

Methodology: A cross sectional study was conducted from August 2019 to January 2020. Data was collected from physical therapists working in the universities and hospitals of Rawalpindi and Islamabad. Data was collected from 278 participants. Maslach burnout inventory scale was used to measure the level of burnout which was analyzed using SPSS statistics 21.

Results: The mean value of emotional exhaustion for clinical physical therapists was 20.02 ± 8.08 and for academic physical therapist was 18.6 ± 6.57 with significant *p* value ($p<0.05$). The mean value for depersonalization for clinical physical therapists was 9.22 ± 5.17 and for academic 9.29 ± 5.07 with significant *p* value ($p<0.05$). The mean value of personal accomplishment for clinical physical therapists and academic physical therapists was 35.43 ± 7.715 and 35.74 ± 6.49 respectively with non-significant *p* value ($p>0.05$).

Limitations and Future Implications: It was conducted for specific time period which not record the overall or yearly impact of burnout on participants. So time lapse and longitudinal study should be done.

Originality: The clinical physical therapists have increased level of burnout than academic physical therapists.

Conclusion: The clinical physical therapists have increased level of burnout than academic physical therapists.

Keywords: *Burnout, job satisfaction, depersonalization, physical-therapists, personal-accomplishment, emotional exhaustion.*

Introduction

In social and health services professionals' burnout is a serious problem, which represents a response to long term stress, experienced by health care professionals[1]. Freudenberg studied the burnout syndrome and described it as the symptoms of physical and mental exhaustion. Physical and mental exhaustion were observed in the health care workers as a result of their professional life[2,3]. Maslach and Jackson give the most valid definition of burnout as the chronic response to a

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persistent work-related stress and it has further 3 sub-constituents including emotional overload, cynicism/suspicion and having a reduced self-confidence[4,5].

According to a study there is high level of emotional exhaustion, low level of personal accomplishment and depersonalization with overall low level of burnout among physiotherapists14.9 %. In another study medical students have burnout either 57. 7 % are at risk[6,7]. In September 2014 at Australian college of midwives an online survey was conducted among midwives. The study concluded that the level of burnout among Australian midwives was high and there is a need to develop some strategies to manage the adverse effects of burnout like depression, anxiety and the stress. The study results showed that 46.1 % midwives had moderate and 17.4 % had high levels of burnout[8,9]. A study conducted in Pakistan which showed that it's important to timely manage those stressors or triggers which lead to burnout. The results of this study showed that 18.2 % participants have burnout which indicates that out of every 5 participants 1 had burnout[10,11].

The term burnout has its origin in sports which was later transferred to professional settings like social health professions and then to all helping professions. Physicians, nurses, health workers, psychotherapists, physical therapists, teachers and educators all are included in the helping professions and they all are at risk of developing burnout[12,13]. Physical therapists are working towards the recovery of the patients with cognitive, physical disability, and psycho motor problems using exercises, manual techniques, and electrotherapy and massage therapies. Therapists regularly assess and treat disorders in the areas of motor skills and higher cortical and visceral functions, as a result of different congenital, acquired and pathological nature diseases[7,14]. The overall personality of a PT affects the nature of the job he is required to do. Lack of support, aggressive patient behaviour and working environment can deteriorate and hit the performance of physical therapist at their work place and can lead to burnout[9,15].

Health care workers and university teachers are among those professions that involve dealing directly with the people, so they have a huge tendency to experience stressful situations related to the demands of their job. The stressful conditions due to work place bullying, working conditions, promotion and job opportunities leads to disappointment which in turn lead to job burnout[11,16]. In any job environment when the emotional workload exceeds the capacity of professionals, they can experience emotional exhaustion. The negative and indifferent attitude towards the work-related demands lead to depersonalization among professionals. Along with that evaluating the professional work or their teaching methodology negatively, leads to low level of personal accomplishment. So, when academic teachers experience emotional exhaustion, depersonalization and a reduced level of personal acquisition, it can lead to burnout which in turn affect their job demands[15,17].

Physical therapists have a very major role in the health care system so they are more prone to develop the burnout as well. Physical therapists either related to academics side or the clinical side experienced different level of burnout, to bridge this gap the purpose of this study is to compare the level of burnout among the clinical and the academic physical therapists. To the best of our knowledge with reference to literature there is limited work on this topic.

Methodology

Subjects and Methods

The design of the study was a cross sectional survey, which was conducted between March 2019 to Sep 2019. Approval was taken from the Riphah ethical committee**.** Sample size of 406 was calculated through Epitool. From the 406 sample size 203 clinical physical therapists and 203 academic physical therapists were included. Using purposive sampling technique, both males and females between age of 25- 40 years with at least 1 year of working experience and working 5 hrs.

per day were included in the study. Participants who were being involved in any other part time job or taking any sort of anti-depressive medications were excluded. The sample was raised with permission from the seventeen hospitals, clinics and universities. The participation in this survey was on voluntary basis and was assured the complete confidentiality of the responses. Informed consent forms were signed from all the participants.

Validity and Reliability of Maslach burnout inventory scale was measured

The normative scores of emotional exhaustion, depersonalization and personal accomplishment were 7.52, 2.52 and 12.12 respectively. The reliability coefficients was 0.86[18]. The questionnaire consists of 2 sections. Section 1, consists of 8 demographic questions i.e. name, age, gender, marital status, nature of employment(academic/clinical), duration of employment, working hours, any other part time job. In section 2, Maslach Burnout Inventory scale was used to evaluate the level and the risk of burnout. The scale has 3 sub-scales i.e. emotional exhaustion, depersonalization and personal accomplishment. A score of >27 shows high level of emotional exhaustion, 17-27 average level and <16 shows low level of emotional exhaustion. A score of >13 shows high level of depersonalization, 7-12 average level and <6 shows low level of depersonalization. Similarly, >39 score shows high level, 32-38 shows average level and <31 score shows low level of personal accomplishment. A high score in emotional exhaustion and depersonalization and a low score in personal accomplishment leads to high level of burnout. The reliability and validity of this 22- item scale has been confirmed in numerous studies (1-4). ICC value of emotional exhaustion is 0.847 and Cronbach alpha value is 0.849. ICC value of depersonalization is 0.774 and Cronbach alpha value is 0.773. ICC value of personal accomplishment is 0.726 and Cronbach alpha value is 0.732. Overall Cronbach's value of Maslach burnout inventory is 0.803.

Data Analysis Procedure

SPSS 21 was used to analyse the data. Descriptive and inferential statistical tests were applied. Mean and standard deviation (SD) were calculated for all quantitative variables. Percentages and frequencies were calculated for qualitative variables. Independent t-test was applied to compare the level of burnout between variables.

Results

A total 350 questionnaires were distributed between the physiotherapists of twin cities, out of which 306 were received back, after checking the received responses and excluding the null or incomplete forms, the total 278 responses were valid.

Out of these 278 responses, the frequency of males was 99(35.6%) and that of females was 179(64.4%) (Table 1). The participants with age range of 25 to 40 years were included in our study the mean age of participants was 28.67±3.010. The study shows that out of 278 participants 111(39.9%) were married while 167(60.1%) were unmarried and none of the subject was either divorced or widowed. The academic physical therapists were 153(55%) while 125(45%) were clinical physical therapists that was part of the study.

There were 98(35.3%) participants with experience of 1 year, 96(34.5%) with an experience of 1-5 years and 84(30.2%) with an experience of >5 years. In term of working hours only 4(1.4%) participants work for 4 hours only. Participants who work for 4-8 hours are 157(56.5%) and those who work for more than 8 hours are 117(42.1%). None of the participant was doing any sort of part time job which meets our exclusion criteria.

The level of emotional exhaustion among physical therapists showing that 264 (95%) have a low level of emotional exhaustion, while 12 (4.3%) have moderate level of emotional exhaustion. Physical therapists who have high level of burnout are only 2 (0.7%), level of depersonalization

among the physical therapists of twin cities participating in our study. Results shows that 48 (17.3%) have the low level of depersonalization, while 170 (61.2%) have a moderate level of depersonalization and participants having high level of depersonalization are 60 (21.5%) and 10 from total population 73 (26.3%) have a high level of personal achievement / accomplishment, 137 (49.2%) have a moderate level of personal accomplishment and 68 (24.5%) have a low level of personal accomplishment / achievement. (Table 2) To test the objective, we apply independent T-test. We compare the means of 3 dimensions of burnout i.e., emotional exhaustion, depersonalization and personal accomplishment for clinical and academic physical therapists. (Table 3).

There was an association between coping and burnout except for personal accomplishment i.e. sub component of burnout. If we talk about other dimensions so coping is directly associated with emotional exhaustion (EE), (R=-0.35, P<0.01) and depersonalization DP (R=-0.20, P<0.01). While it showed statistically insignificant association between PA and Coping (R=-0.027, P>0.01). It makes sense because if person's higher level of EE and DP high level of coping strategies required to minimize its effect, as positive association is shown.

Gender	Frequency	Percentage
Female	179	64.4
Male	99	35.6

Table 1: Details of gender

Emotional Exhaustion	Frequency	Percentage
1-Low	264	95%
2-Moderate	12	4.30%
3-High	2	0.70%
Depersonalization		
1-Low	48	17.30%
2-Moderate	170	61.20%
3-High	60	21.50%
Personal achievement		
-Low	73	26.30%
2-Moderate	137	49.20%
3-High	68	24.50%

Table 2: Frequency and Percentage of level of emotion, depression and personal achievement

Burnout dimensions	Mean ± SD		Total	P-value
	Academic PT	Clinical PT		
Emotional Exhaustion	18.61 ± 6.56	20.02 ± 8.08	19.24 ± 7.30	*p*=0.03*
Depersonalization	9.29 ± 5.07	9.22 ± 5.17	9.26 ± 5.10	*p*=0.01*
Personal Accomplishment	35.74 ± 6.49	35.43 ± 7.715	35.60 ± 7.06	*p*=0.07*

Table 3: Means and SD of level of Burnout (emotional exhaustion, depersonalization, personal accomplishment) between the Academic and Clinical Physical Therapist.

Discussion

Regarding the objective to determine frequency of burnout among physical therapists (PT) present study showed that 95 % of therapists had the low levels of EE (Emotional Exhaustion), 4.3 % had the moderate levels and 0.7 % had the high levels. While on depersonalization (DP) dimension about 17.3 % had the low, 61.2 % had the moderate and 21.5 % had the high levels. With regard to PA (Personal Accomplishment) dimension 26.3 %, 49.2 % and 24.5 % had high, moderate and low levels of the burnout. The result of the present study is in line with many past researches (as mentioned). Like the study was conducted in Andalusia (Spain) by Canadas-De la Fuente et al.

calculated the prevalence of burnout and to find out those associated factors causing burnout among the nurses. The study concluded that the participants had 41 % of low level EE(emotional exhaustion), 34 % of medium and 25 % of high level of EE among nurses. The participants had 39 % of high, 32 % of moderate and 30 % of high levels of DP (Depersonalization). Similarly the participants of the study had 30 %, 25 % and 45 % of low, moderate and high levels of PA[5,12]. Similarly a cross sectional survey was conducted by D.K.Creedy in 2014 in Australia also found the burnout traces.

The purpose of the study was to determine the level of burnout, depression, anxiety and stress among Australian midwives. The study concluded that on personal sub scale forty six percent of midwives reported medium levels of burnout, seventeen percent had high levels and 1.4 % reported the low levels[7]. A study by Gary D.Ackerley et al. concluded that 32.7 % had medium level burnout and 39.9 % had high levels. 24.7 % had medium levels of DP and 34.3 % had high levels. With respect to PA 3.8 % had moderate where as 0.9 % had high levels of burnout among participants[19]. According to the study of Khalil Ashkar et al. conducted in 2010, 10.3 %, 21.9 % and 67.7 % participants had low, moderate and high levels of EE respectively. 30.3 %, 22.6 % and 47.1 % had low, moderate and high levels of DP respectively. 23.9 %, 38.7 % and 37.4 % had mild, moderate and high levels of PA respectively[20]. K. Mctiernan concluded that 16 %, 24 % and 60 % participants had high, moderate and low levels of EE respectively. 10 %, 18 % and 72% had high, moderate and low levels of DP respectively. 31 %, 33 % and 36 % had high, moderate and low levels of PA respectively in hospital nurses[21]. Level of burnout and work-related stress were assessed among three different categories of health professionals like physiotherapists, occupational and speech therapists. Bruschini Marco et al. evaluated that work related risk factors and demographics had association with increased levels of burnout.

The study results showed that high levels of EE were 32.2 %, DP 13.8 % and PA 9.2 %. Moderate levels of EE were 25.3 %, DP 27.1 % and PA 24 %. Low levels of EE were 42.5 %, DP 59.1 % and PA 66 %[4]. Mainly all the studies including present one, predicted that burnout exist in the physiotherapist in all dimensions (Emotional exhaustion, depersonalization & personal accomplishment) although it ranges in mild to moderate level. One thing depicted from the data is that one should access the level of burnout and tried to keep it under moderate level by practicing effective coping mechanisms, else the high level of burnout resulted in the adverse effect both in professional and personal aspects.

Another objective of present study was to find the relation between burnout and coping. The results of the present study showed that there is an association between coping and burnout except for personal accomplishment i.e. sub component of burnout. If we talk about other dimensions so coping is directly associated with emotional exhaustion (EE), ($R=-0.35$, $P<0.01$) and depersonalization DP ($R=-0.20$, $P<0.01$). While it shows statistically insignificant association between PA and Coping ($R=-0.027$, $P>0.01$). It makes sense because if person's higher level of EE and DP high level of coping strategies required to minimize its effect, as positive association is shown. The result of this study is in line with the past studies.

The study conducted by Bruschini Marco et al. Showed that there is positive correlation between coping & burnout but they studied the coping mechanism in detail to see the different coping style (emotional, problem focused and avoidance) impact on all dimensions of burnout. The study also showed the impact of degree to control the work environment on emotion focused coping ($r = 0.20$, $p <0.05$) and with avoidance oriented coping ($r = -0.25$, $p < 0.01$) which shows indirect correlation. In regard with EE, emotional focused coping had direct correlation with EE ($r = 0.32$, $p <0.001$) and similarly it correlate positively with DP ($r = 0.34$, $p < 0.001$). Whereas there is an indirect or inverse correlation between PA and emotion focused coping strategy ($r = -0.34$, $p = <0.001$). Problem focused coping had negative relation with EE ($r = -0.16$, $p < 0.05$) and DP ($r= -0.16$, $p =$

<0.05) whereas positive with PA (r = 0.20, p = < 0.05). Avoidance oriented coping and the three dimensions of burnout had no significant results. In short this study showed that there is association between coping and burnout which is in line with the present study but study of Bruschini Marco et al. (2018) showed that association of the two exist with different directions based on the further coping styles bifurcations[22]. Benjamin R. Doolittle et al. in 2015 conducted the study with aim to determine the correlation between burnout with behaviour, specific coping strategies and spiritual attitudes. This study is conducted on interns. It was concluded that active coping, accepting and strong spiritual beliefs can lower the level of burnout while some specific behaviour like exercising or spending quality time with family does not have any correlation with burnout syndrome so association found between coping & burnout. Humor had direct relation with EE (r = 0.33, p< 0.01) and DP (r = 0.37, p < 0.01). Whereas there is no significant association between emotional coping style and PA, it is in line with the present study where the insignificant association found between the coping & PA[23].

The study conducted by Benjamin R. Doolittle et al. in 2007 also found the association between burnout & coping. The results of the study showed that acceptance coping (r = 0.25, p < 0.001), active coping (r = 0.32, p < 0.0001), planning coping (r = 0.24, p = < 0.001) and positive re-framing (r = 0.15, p = < 0.05) had direct association with PA (one dimension of burnout) whereas maladaptive coping had association with EE and DP(24). To determine the level of coping among therapist in the present study results showed that 54% participants had low level of coping, with regard to moderate level of coping 43.8 % had moderate levels and 2.2 % of the participants had high levels of coping. It is concluded that mostly the participants have mild level of coping because of multiple factors some obvious ones seems like lack of training to cope up with the burnout, people mostly don't know how to cope up with stressful situations, work life balance issue etc. which leads to low level of coping. There could be due to country wise social and cultural factors but for that further research required. Our results of low to moderate coping is in line with the study which was conducted by Safa Mohamed Metwaly et al. at the Psychiatric Department in 2018. The purpose of the study was to examine the effect of psychological capital on the burnout and coping style of psychiatric nurses. The result of the study showed that about 49 % had low levels of coping, 26 % of the participants had moderate level of coping and 25 % had high levels of coping[25].

Another study showed that low level of coping observed in physiotherapist is mainly due to lack of problem solving approach and its main reason is no or less number of workshops and conducted seminars on coping mechanism of burnout and stress. They also predicted that low decision making skills mainly due to low internal locus of control leads to poor coping and it would only be improved by giving the therapist control of the decisions and empowerment in their jobs. This empowerment would lead to control the situation which ultimately help in reducing burnout by adopting appropriate coping strategy. Low level of coping is also due to less job involvement and it is mainly due to monotonous routine of job. It would be better managed by hospitals management by rotation of duties of therapists which is known as ward rotation.By doing so they get the chance to work with different group of patients which really help in overcoming the monotony and result in better coping mechanism of the stressful situation which otherwise would lead to burnout[26].

Another aim of this study was to compare the level of burnout between academic and clinical therapists. As mentioned in the results that clinical physical therapists have more level of burnout as compare to academic physical therapists, the reason is that the clinical therapist directly deal with patients specially with disabilities and the main motive is to improving the patient's health, which directly impact the person's own emotions and associated with burnout. The other obvious reason is increase level of frustration in clinical physical therapist because of delayed patient recovery and aggressive patient attitude, which leads to burnout. The other possible reason of high burnout in clinical therapist seems to be the long working hrs. And direct interaction with patients

on daily basis as compared to academic physical therapist and it is also explained as a reason of high burnout in the study conducted by of Katarzyna Nowkowska et al. in 2015[10]. As clinical physical therapists are more prone to develop burnout due to monotonous nature of job so it's important to timely address their burnout level as it may affect the patient care and also the organizational benefits. It would be better managed by hospitals management by rotation of duties of therapist which is known as ward rotation, by doing so they get the chance to work with different group of patients which really help in overcoming the monotony & result in low levels of burnout as concluded in the study conducted by Maciej Wilsla in 2015[1].

The current study was the first of its kind from Pakistan as no national data has been reported earlier on it among physical therapists.Some limitation of this study were,it was conducted for specific time period or cross-sectional study which not record the overall or yearly impact of burnout on participants. Because few studies show that it's a temporal state which could be changed based upon the changing in situation, so time lapse and longitudinal study should be done. In future it is recommended that the sector wise comparison of physical therapists should be studied to see the impact of working environment in private and the public sectors as people working in both the set ups experience different working conditions and environment hence experienced different level of burnout which might directly impact the use of different coping styles to deal with that burnout.

Conclusion

As physiotherapists are among the health care workers and plays a very important role in the society. Their mental and physical health has a significant impact on people with whom they are in direct contact. The present study showed that clinical physical therapists have increased level of burnout than academic physical therapists.

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The following authors have made substantial contributions to the manuscript as under:
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Acquisition, Analysis or Interpretation of Data: Zainab Tariq, Syeda Aiman Batool, Muhammad Shakir Khan
Manuscript Approval & Writing: Saad Tariq, Mubara Rehman
All authors acknowledge their accountability for all facets of the research, ensuring that any concerns regarding the accuracy or integrity of the work are duly investigated and resolved.

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