ORIGINAL ARTICLE

Stress, Burn Out, Anxiety and Depression among Health Professionals of Majmaah University.

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Abstract

Background and Aims: Stress, Burnout, Depression and Anxiety are the most common work related mental and behavioral disorders. Recent studies have shown that professions such as medical and health care fields are most predisposed to such disorders. Very few have been conducted on health professionals working in universities. This study was designed to identify the presence of these disorders among the health professionals in Majmaah University

Methods: The study was conducted among the health specialties colleges of Majmaah University, Kingdom of Saudi Arabia. An observational cross-sectional study design was adopted for this research. A convenience sample of 90 subjects with 30 subjects each from medicine, dentistry and applied sciences were randomly selected. The Depression, Anxiety and Stress Scale - DASS 21 and the Maslach Burnout Inventory (MBI) was used to measure Depression, Anxiety and Stress and Burnout. All the results were tabulated and analyzed for statistical difference using SPSS version 23.

Results: A moderate amount of total burnout

الملخص

أهداف الدراسة: يعتبر الإجهاد والإرهاق والاكتئاب والقلق من العوامل الأكثر شيوعا المتعلقة بالاضطرابات العقلية والسلوكية. وقد أظهرت الدراسات الحديثة أن العاملين في المهن الطبية والرعاية الصحية هم أكثر عرضة إلى مثل هذه الاضطرابات. وقد أجريت القليل من الدراسات على المهنيين الصحيين العاملين في الجامعات. وقد تم تصميم هذه الدراسة للتعرف على وجود هذه الاضطرابات بين العاملين في المجالات الصحية في جامعة المجمعة.

طرق البحث: أجريت الدراسة في الكليات ذات التخصصات الصحية في جامعة المجمعة، المملكة العربية السعودية.

تم اعتماد تصميم الدراسة العينية لهذا البحث. وقد تم اختيار عينة عشوائية من ٩٠ شخصا في هذه الدراسية ٣٠ شخصا من كلية الطب و٣٠ من كلية طب الأسنان و مثلهم من كلية العلوم الطبية التطبيقية. وقد استخدم مقياس DASS 21 لقياس الاكتئاب والقلق والإجهاد ومقياس Maslach MBI لقياس الإرهاق وقد تم جدولة جميع النتائج وتحليلها احصائيا باستخدام SPSS النسخة ٢٣.

النتائج: وجدت كمية معتدلة من الإرهاق الكلي بين العاملين في جميع الكليات الثلاث بينما كان القلق والاكتئاب

was seen in all the three faculties, Anxiety and depression was significantly more in the applied sciences group whereas stress was significantly more in the medical group.

Conclusions: Mild to moderate levels of stress,anxiety, depression and burnout was seen in this study. It is a significant finding and both the individuals and the University should create awareness regarding identification and management of signs and symptoms of these disorders.

Key words: Anxiety, Burnout, Depression, Health professionals, Stress,

أكثر في مجموعة كليةالعلوم الطبية التطبيقية في حين الضغط النفسي كان أكبر بكثير في مجموعة كلية الطب. الاستنتاجات: وجدت مستويات خفيفة الى معتدلة من الإجهاد، والقلق، والاكتئاب والإرهاق في هذه الدراسة. وهو اكتشاف مهم على الجميع من أفراد والجامعة العمل على خلق الوعي بشأن التعرف على أعراض هذه الاضطرابات والعمل على معالجتها.

Introduction:

Health professionals such as doctors (Medical/ Dental), physiotherapists, Nurses, auxiliary personnel are more prone to mental & behavioral disorders (MBD), because Health services involve taking care of other people, making decisions which affect their life, in which mistakes or errors could be costly, and sometimes irreversible.[1,2]

Stress, Burnout, Depression and Anxiety are the most common work related mental and behavioral disorders. Recent studies have shown that professions that have direct interaction with humans such as medical and health care fields are most predisposed to stress, burnout and related disorders.[3,4] Stress can be defined as the biological reaction to any adverse internal or external stimulus, acute stress is a natural and useful reaction to threat or encountered problems which are inevitable. On the other hand, humans are unfortunately more affected by chronic stress, because humans are no longer allowed to choose between "fight or flight" so, as a consequence, we become continuously exposed to stress factors which we react to by anticipating, repressing, rationalizing and becoming worried or choose compromise in order to overcome different situations.[5]

The burnout syndrome is considered a public health problem due to its increasing frequency and the negative consequences it has on the healthcare system. This hampers the medical system, either directly, by affecting the health of the professionally exhausted medical employees or indirectly, through the consequences it has on the quality of medical care. According to expert studies, the burnout syndrome has been identified as a risk factor for future heart disease incidence. According to Maslach, the burnout syndrome has the following three dimensions:

Emotional exhaustion – it highlights lack of energy, perception of the inadequacy between one's own emotions and the context and the fact that significant resources have been consumed at work. It is the basic dimension, manifested by a decreased emotional tone, emotional indifference or oversaturation.

Depersonalization – it refers to the disruption of interpersonal relationships as the affected person becomes dependent on others, or negativistic, indifferent, cynical.

Personal accomplishment– it can manifest either through the tendency of negative self-assessment of one's capabilities, achievements, professional success, or by limiting one's opportunities and obligations to others. Consequently, the affected person is perceived as incompetent and incapable to achieve goals.[6]

Although burnout and depression have many similar manifestations and are closely related, studies on health professionals have concluded that they are different. Burnout differs from depression in that burnout only involves a person's relationship to his or her work, whereas depression globally affects a person's life. Anxiety disorders are severe medical illness seen frequently in health professionals due to the nature of the job; they are often seen in association with other behavioral disorders.[7]

Many studies have documented the presence of behavioral disorders like burnout and stress among health professionals.[3,4,8,9,10] Health professionals employed in the university play a dual role of clinician as well as an academician, but very few studies have been conducted on health professionals working in universities. This study which is first of its kind in this region was designed to identify the presence of stress, anxiety, depression

and burnout among the health professionals in Majmaah University and to also explore if any differences exist between different medical professions in terms of these disorders.

Material and Methods:

The study was conducted among the health specialties colleges of Majmaah University, Kingdom of Saudi Arabia. An observational cross-sectional study design was adopted for this study. The inclusion criteria for the study was all faculty members of the university working in a health specialty college (Medical, Dental or Applied Medical sciences) who agreed to participate in the study, were involved in active teaching and qualified to work in the clinical section. Faculty members involved only in clerical work or who did not agree were excluded from the study. This study was conducted only in the male sections of the college as some of the specialties had a disproportionate male female ratio which could confound the results. University ethical clearance was obtained and a convenience sample of 90 subjects with 30 subjects each from medicine, dentistry and applied sciences were randomly selected. Each questionnaire was personally given to the participants after ensuring that they satisfied the inclusion criteria and collected back by researcher after checking for its completion. Thus invalid or incomplete questionnaires were avoided and a final sample size of 90 was obtained.

The Depression, Anxiety and Stress Scale - DASS 21 is a 21 item self-report questionnaire designed to measure the severity of a range of symptoms. The essential function of the DASS is to assess the severity of the core symptoms of Depression, Anxiety and Stress.[5]The Maslach Burnout Inventory (MBI) is by far the most widely used, accepted, valid, and reliable measurement tool of burnout.[11] The 22 total items are broken up into the three themes with nine items relating to emotional exhaustion, five to depersonalization, and eight to accomplishment.

All the results were tabulated and analyzed for statistical difference among different health professionals using software SPSS version 23.

Results:

Table 1 shows the mean age and experience of the subjects in all the specialties, the mean

Tables:

Table 1: Age distribution

Specialty	Age	Experience in years
Dental	**39.5**	**11.18**
Medical	**41.21**	**10.46**
Applied sciences	**42.24**	**14.0**

Table 2: DASS 21 Score

Specialty	Depression	Anxiety	Stress
Dental	**4.94±1.03**	**9.12±2.76**	**7.51±1.11**
Medical	**6.43±3.87**	**10.14±4.21**	**10±4.87**
Applied sciences	**9.38±2.88**	**13.79±1.87**	**8.76±3.64**
	P= 0.0376	**P=<0.001**	**P=<0.001**

Table 3: Maslach burnout inventory [MBI] score

Specialty	Emotional exhaustion	Depersonalization	Personal Accomplishment
Dental	**19.13±2.43**	**6.11±3.19**	**39.93±3.65**
Medical	**23.21±5.98**	**6.78±5.43**	**40.12±2.77**
Applied sciences	**25.67±6.21**	**5.96±8.76**	**32.13±1.61**
	P=<0.001	**P= 0.594**	**P=<0.001**

overall age of the sample was 40.98 and the mean age of applied sciences group was the highest at 42.24.

The results of DASS 21 showed that the scores for depression for Dental (4.94±1.03) and Medical (6.43±3.87) faculties were well within the normal range of 0-9, applied sciences had a score of 9.38±2.88 which was just above the normal range. All three groups showed slightly higher anxiety scores, score for dental group was 9.12±2.76 which was just above mild range of 8-9, medical group had an anxiety score of 10.14±4.21 and applied sciences had a score of 13.79±1.87 which was in the moderate range of 10-14. Stress scores were more in the medical group at 10±4.87 when compared to dental (7.51±1.11) and Applied sciences (8.76±3.64), all three groups were in the normal range of 0-14 for stress.

The mean values for depression and anxiety was more in the faculty of applied sciences with a score of 9.38±2.88 and 13.79±1.87 respectively, the difference was statistically significant with P value for depression was P= 0.0376 and for anxiety was P= <0.001. Stress was seen to be more in the medical section with a score of 10±4.87 as compared to applied sciences 8.76±3.64 and dental 7.51±1.11. The difference was statistically significant P= <0.001.(Table 2)

Maslach burnout inventory scores are seen in table 3; the three components of burnout were scored separately. The Scores for emotional exhaustion for all three groups were in the moderate range of 17-26 with Dental at 19.13±2.43, medical at 23.21±5.98 and applied sciences at 25.67±6.21. Emotional exhaustion was significantly more in the applied sciences group with P=<0.001. The scores for depersonalization were at 6.11±3.19, 6.78±5.43 and 5.96±8.76 for dental, medical and applied sciences respectively, these scores were just above the low range of 0-6. No significant difference was seen among the three groups in depersonalization scores with P=0.594.Personal accomplishment scores were in the low range of 39+ for dental and medical group at 39.93±3.65 and 40.12±2.77, however the score for applied sciences (32.13±1.61) was in the moderate range and this difference was statistically significant (P=<0.001). Overall all three groups reported presence of moderate amount of burnout, with

higher scores seen in applied sciences group and least among the dental group.

Discussion

Health care professionals are exposed to high stressful situations and are involved in dealing with illness and suffering, hence have been found to be predisposed to stress, burnout, depression and other such disorders in many previous studies.[11,12,13] Health professionals working in the university are a unique set of individuals who perform the duties of a clinician and in addition they also have to manage the demanding duties of an academician like preparing and conducting lectures, practicals, assessment etc. Moreover such people are highly qualified and have certain desirable personality traits like high emotional intelligence, desire for high achievement and perfectionism.[14] Such traits are beneficial in their work place but on the other hand will not allow them to perceive themselves as incompetent or incapable to achieve goals, which in turn leads to more stress, anxiety, depression and burnout.

This study investigated the presence of burnout and other mental behavioral disorders in the health professionals working in Majmaah University, and to compare different medical professionals in the same university. Such studies are very rare[15] and to our knowledge this is the first such report in any university of Saudi Arabia. Our results showed that anxiety scores in all our groups were in moderate range, which was consistent with many recent studies which have reported that anxiety disorders are seen frequently in health professionals.[16]Depression and stress among the health professionals in our study were in normal range which is in contrast with many other studies which have reported high scores of stress,[5] however the applied science group had relatively high scores of depression which is consistent with other studies conducted on nurses,[17] who are part of the applied sciences group. Stress was highest among the medical group as compared to others. The faculty of the medical college has to attend night duties and also perform all the academic duties in the university which is not the case in case of other two groups of dental and applied sciences.

Burnout has been identified to be a serious

problem among health care workers; it is not only a problem for the individual health care provider but also for the patients, the institution and is associated with higher medical errors.[12,14,18] Burnout can be a result of monotony of the working area, high fatigue or due to dealing with illness and human suffering.

Maslach burnout inventory has three components to measure burnout, emotional exhaustion refers to the depletion or draining of emotional resources. Depersonalization refers to an impersonal and dehumanized perception of ones recipients and lack of personal accomplishment is the tendency to evaluate ones work negatively. High scores for emotional exhaustion and depersonalization indicate burnout whereas low scores of personal accomplishment indicate burnout. Prevalence of burnout in our study was in the moderate range which is consistent with many similar studies conducted on various health professionals.[1,6,8,11] In this study we have compared three different groups of health professionals in which we found that the applied science group had high rate of emotional exhaustion and low rate of personal accomplishment which are both an indication of burnout. In our study the medical group had higher depersonalization scores as compared to other groups which was consistent with other studies which state that doctors have a higher depersonalization as compared to the applied sciences.

Burnout and various other mental behavior disorders like stress, anxiety and depression in work place are a serious concern to the individual, the institution and incase of health professionals working in a university it also affects their patients and students.[19,20] Hence it is imperative that such disorders are recognized at the earliest and both the individual as well as the institution work together towards reducing the factors which may cause such disorders. Our study was the first to be done on health professionals working in a university and it could provide a basis for further in depth studies with large sample size and help in preventing mental disorders in this unique group of professionals who are working with both patients and students.

Conclusion: Our study investigated the presence of stress, burnout, anxiety and depression among the health professionals in Majmaah

University. Although the levels of the mental behavior disorders are mild to moderate in our sample, it is still a significant finding and both the individuals and the University should create awareness regarding identification and management of signs and symptoms of these disorders.

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