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Original Article

Education Section

Effect of Stress due to COVID-19 Pandemic on Time Management Skills among University Professionals

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ABSTRACT

Introduction: Time management skills are necessary for professionals to accomplish their goals and succeed in their career. The recent changes in the educational environment that were caused by the Coronavirus Disease 2019 (COVID-19) could be stressful and might affect the structure of faculty work.

Aim: To evaluate the stress level among university personnel during the COVID-19 outbreak and its relation to their time management skills.

Materials and Methods: A cross-sectional web-based survey was conducted on a sample of 56 university professionals. Each participant filled a google form questionnaire consisting of Perceived Stress Scale (PSS) and Time Management Scale (TMS). The results were analysed using the Statistical Package for the Social Sciences (SPSS) version 20.0.

Results: A total of 56 responses were received from full-time faculty and staff with 60% response rate. The overall PSS (mean±SD) was 15.29±7.13, indicating a low level of stress among the professionals. The mean TMS of 37.98±7.63 indicates an average time management skills. Significant negative correlation was found between PSS and TMS (r=-0.371, p=0.005). A positive correlation was found between TMS and years of experience (r=0.278, p=0.038). Both PSS and TMS had insignificant association with age, gender and years of experience.

Conclusion: The stress level during the COVID-19 outbreak is relatively low among the University professionals. The TMS has a negative correlation with the PSS; however, it improves with the increase in years of job experience.

Keywords: Coronavirus disease-2019, Higher education, Job experience, Outbreak, Questionnaire survey

INTRODUCTION

Stress is a wide spread phenomenon occurring at different situations during human life. A mild degree of acute stress has been shown to bring out a positive effect in terms of performance, motivation and adaptation to various factors [1]. In a higher educational institution, even under normal circumstances, the faculty and staff might face various levels of expectations, requirements and competition that lead to anxiety and stress [2].

The emergence of the COVID-19 pandemic in December 2019 has led to sudden unexpected worldwide changes in the working environments. All countries have taken strict measures to prevent the spread of infection in their communities. These measures include household isolation, physical distancing, and closure of schools/universities and cancellation of all public gathering events like sports, conferences and seminars. The higher education institutions continued teaching and conducted all assessments through online platforms. This sudden shift in the pattern of education, the increased workload in preparation of new online materials and the financial implications of the pandemic that included salary cuts were definitive sources of stress to university employee and probably could affect the efficiency of their work. Articles describing the adverse effects on education and the economic impact and the social disruptions caused by the pandemic have been published since the early months of the disease [3,4]. Moreover, the present situation created a requirement of special Information Technology (IT) skills, which many faculty and staff lacked. This additional source of stress adds to the occupational stress and develops when the occupation requirements do not match workers' capabilities, needs and resources [5].

In his article about stress and burnout in teachers, Harden RM described a number of interacting factors that contribute to stress in medical teachers, including clinical and administrative workload, burden of teaching, number of students, participation in scientific research and access to support [6]. However, there is paucity of data regarding the impact of the present COVID-19 pandemic on the university professionals. The pandemic could be stressful and may cause anxiety and fear, as it is fatal and highly infectious. The preventive measures like physical and social distancing can make people feel isolated. Complaining of any symptom related to the disease creates apprehension, frustration and anxiety. The impact of all these factors on the University faculty is unknown. The faculty need to take care of themselves and their families while performing their work and maintain their income, which is only possible with proper time management. Time management is a skill that influences university faculty and staff performance. It aims to increase the output and ensures faster and better completion of the necessary work. This is very aptly suited to the present situation of the COVID-19 pandemic. The aim of the present study was to evaluate the stress level among university faculty and staff during the COVID-19 outbreak using standardised stress scale and to investigate the association between the perceived stress level and their time management skills.

MATERIALS AND METHODS

A cross-sectional web-based survey was conducted among University faculty and staff of Ras Al-Khaimah Medical and Health Sciences University (RAKMHSU), United Arab Emirates (UAE) from June 2020 to July 2020. Approval for this study was obtained from the Institutional Research Ethics Committee (RAKMHSU-REC-40-M). All the participants gave their consent before taking part in the study. All the fulltime faculty and staff were approached through the official e-mail addresses and google forms were mailed. The response rate was about 60%. A total of 56 participants completed the survey.

Inclusion criteria: Full-time faculty and staff working at RAKMHSU, UAE, who are interested to participate were included in the study.

Exclusion criteria: Subjects under specific treatment for stress or depression and those who had positive COVID-19 results were excluded from the study. Four participants who submitted incomplete forms were also excluded.

Tools for Assessment

An online survey using the free software google forms was prepared. The survey consisted of three components, general characteristics questions, a PSS of 10 questions [7] and TMS of 25 questions [8]. The PSS questions were valued based on the Likert scale of five options, from never (0) to very often (4). The scores of the TMS questions were 2.0 for always, 1.0 for sometimes and 0 for never. The results of PSS were graded as low perceived stress and high-perceived stress at a cut-off value of 28. The results of TMS were classified at a cut-off point of 45 into excellent and low time management score.

STATISTICAL ANALYSIS

Data was analysed using the SPSS version 20.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics were used to summarise the study variables. The Chi-square test was used to analyse categorical variables and student's t-test for continuous variables. Bivariate correlation was used to find relationships between different variables. Statistical significance was accepted for p<0.05.

RESULTS

As shown in [Table/Fig-1], the majority of the participants (62.5%) were males, 80.4% were younger than 50-year-old and 78.6% were from South East Asia. The overall mean PSS and TMS were 15.29±7.13 and 37.98±7.63, respectively. Comparisons of means showed insignificant association between PSS or TMS with the participants' ages, gender and years of experience. The South East Asian participants had significantly lower mean PSS (p=0.003) and higher TMS (p=0.045) compared to participants from other countries.

Variable	N (%)	Perceived stress scale		Time management score	
		Mean±SD	p (independent t-test)	Mean±SD	p (independent t-test)
Age					
<50 years	45 (80.4)	15.98±7.41	0.143	37.11±7.68	0.084
≥50 years	11 (19.6)	12.45±5.20		41.55±6.59	
Gender					
Female	21 (37.5)	14.71±7.81	0.646	37.81±7.95	0.897
Male	35 (62.5)	15.63±6.78		38.09±7.55	
Experience					
≤10 years	37 (66.1)	15.16±7.32	0.858	37.14±8.49	0.250
>10 years	19 (33.9)	15.53±6.93		39.63±5.43	
Country					
South East Asia	44 (78.6)	13.84±6.15	0.003*	39.05±6.13	0.045*
Other countries	12 (21.4)	20.58±8.21		34.08±11.11	

[Table/Fig-1]: Perceived stress scale and time management scores in the study participants.
*p<0.05 was considered as statistically significant

[Table/Fig-2] shows the association between the PSS and the TMS using cross tabulation with the Chi-square test. The percentage of participants with high perceived stress score (above a cut-off value of 28) was 7.1%. The percentage of excellent time management skills (at a cut-off point of 45) was 17.9%. Among those who showed high PSS, the percentage of excellent TMS was lower than the percentage of low TMS (25% Vs 75%, respectively); however, the relation was statistically insignificant (p=0.556).

Variable	PSS	Time management score		
		Excellent (n, %)	Low (n, %)	Total (n, %)
Perceived stress scale	Low (<28.0)	9 (17.3%)	43 (82.7%)	52 (92.9%)
	High (≥28.0)	1 (25%)	3 (75%)	4 (7.1%)
	Total (n, %)	10 (17.9%)	46 (82.1%)	56 (100%)

[Table/Fig-2]: Association between high and low Perceived Stress Scale (PSS) and time management score among the participants.
Chi-square p-value=0.556

[Table/Fig-3] shows results of bivariate correlation between PSS, TMS, age and years of job experience. Significant negative correlation was found between PSS and TMS (r=-0.371, p=0.005). A positive correlation was found between TMS and years of experience (r=0.278, p=0.038). The correlations of PSS with age and years of experience were statistically insignificant.

Variable	Bivariate correlation	Age	Job experience	PSS	TMS
Age	Pearson's correlation	1	0.291	-0.095	0.179
	p-value (2-tailed)		0.030*	0.484	0.186
Job experience	Pearson's correlation	0.291	1	0.045	0.278
	p-value (2-tailed)	0.030*		0.741	0.038*
PSS	Pearson's correlation	-0.095	0.045	1	-0.371
	p-value (2-tailed)	0.484	0.741		0.005*
TMS	Pearson's correlation	0.179	0.278	-0.371	1
	p-value (2-tailed)	0.186	0.038*	0.005*	

[Table/Fig-3]: Bivariate correlation between Perceived Stress Scale (PSS), Time Management Score (TMS), age and years of job experience of the participants.
*p<0.05 was considered as statistically significant

DISCUSSION

The COVID-19 pandemic has abruptly changed the entire scenario in higher education institutions. Many workplace and non workplace factors have affected the day-to-day activities of University faculty and staff and have increased the possibility of occupational stress. Reported factors include fear of infection, inadequate information about the disease, inadequate supplies, reduced financial income due to salary cuts, fear of job loss and sense of stigma during and after the period of isolation [9]. Recent studies that evaluated the level of stress among undergraduate students reported high level of stress due to the coronavirus outbreak [10-12]. Among the stressors reported by the students, fear of infection was the principal source of stress [12]. Other factors like academic difficulties, poor social interactions due to physical distancing and separation from the college were also reported. On the contrary, the university teachers and staff showed a relatively lower stress level during the COVID-19 outbreak, with a mean PSS of 15.29±7.13. The finding that the PSS has insignificant association with the faculty gender was not matching with many previous studies that reported higher levels of both work and family related stress among women employed in higher educational institutions compared to men [13,14].

Watts J and Robertson N reviewed burnout amongst university professionals in comparison with 'at risk' groups such as healthcare workers [15]. They found that academics engaged in research in addition to teaching tended to report the highest levels of stress. In this study, the Asian participants had lower mean PSS compared to those from other countries. It is worth noting that the majority of faculty, as the majority of UAE population, were from South East Asia. Therefore, this finding could be explained by availability of social support; however, the responses to stressful conditions might vary according to many other factors that might include the social class of the individual [16].

Stress and anxiety may prevent the optimal use of time and restrict the skills of time management. This study showed a negative correlation between PSS and TMS during the COVID-19 outbreak. Based on this finding, effective time management is less likely with a

high level of perceived stress. The lack of time handling skills during times of work overload could be by itself a source of anxiety and depression [17]. A recent meta-analysis described the effectiveness of stress management at work on the employee motivation and success of the organisation [18]. According to researchers, planning the effective use of time reduces errors and insufficiencies and helps to control stress and improve concentration on work, even during the tough situations [19].

Limitation(s)

The major limitation of this study was the small convenient sample that was approached through the online platform. Other limitations were recall and reporting bias. These limitations should be considered for appropriate interpretation of the results.

CONCLUSION(S)

The overall level of perceived stress during the COVID-19 outbreak is relatively low among University faculty and staff. Time management skills improve with years of job experience. About 7% of the participants showed a high level of stress that is negatively correlating with time management skills. Both perceived stress and time management scores are not related to age, or gender. The universities should be proactive in addressing the pandemic contribution to stress. Professional help in mental health should be sought early to prevent serious future outcomes.

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