Egyptian Journal of Community Medicine

Assessment of Work-Related Mental Health among Kasr-Alainy Staff Members: A Cross-Sectional Exploratory Study

Hend Aly Sabry, MD; Mennatallah Said Hosney Shehata, MD; Eman Hany Elsebaie, MD

Department of Public Health and Community Medicine, Faculty of Medicine, Cairo University, Egypt

Submission Date: 2023-05-06

Revision Date: 2023-07-01

Acceptance Date: 2023-07-03

Key Words: Mental health, work related, medical staff, stress, Kasr-Alainy

ABSTRACT

Background: The impact of psychological setting at workplaces on employee health is still controversial. Working environments at hospitals may be extremely demanding and stressful. **Objectives:** The aim of this study was to assess the work-related mental well-being of medical staff members. **Methods:** This is a cross-sectional study conducted at Cairo university's teaching hospitals. A convenience sample of 222 medical staff members at Kasr al-Ainy Medical School was included in the study. They were asked to fill a self-administered structured questionnaire on a Google Form. **Results:** A total 222 medical staff members participated; 73% were females and the majority were between 35 and 44 years. The majority (77.5%) were working in clinical departments while 22.5% were working in academic departments. The majority believed that their work environment didn't make them less confident about their achievement (60.8%) and were satisfied discussing novel concepts with their senior/manager (67.1%). On the other hand, 56.3% believed that workplace issues negatively affect their sleep and 29.7% spent their time searching for new positions. The majority (84% academic versus 77.9% clinical staff) suggested training on stress management and personal development as the most important item to relieve workplace stress. This was followed by mental health awareness campaigns (50% academic versus 17.4% clinical staff) and mental health insurance benefits and coverage (40% academic versus 24.4% clinical staff). **Conclusions:** Work environment culture affects peoples' mental health which reflects on both work productivity and job satisfaction. Stress relief strategies are important to improve staff mental health.

INTRODUCTION

The attention of occupational wellness has shifted in the past few years from workplace physical risks to the effects of the psychosocial conditions at work on health.[1] The psychological workplace environment and its impact on health remain to be essential, if controversial, global issues.[2] It's critical to comprehend how psychosocial problems may lead to mental illness given the changing character of the workplace.

Work environments at hospitals may be extremely demanding and stressful. Patients and their partners frequently find themselves in stressful situations, and medical staff must react appropriately and rapidly to meet their medical requirements. Hospital employees are also subjected to a variety of stresses, such as patient fatalities, medical emergency situations, time constraints, high hierarchies, and team disagreements. At the same time, many nations' hospitals have substandard working conditions: wards are understaffed,[3,4] shiftwork is prevalent, and shifts are frequently excessively long,[5] and notably nurses get inadequate recognition for the hard work they do.[6]

Prior studies have demonstrated a relationship between these undesirable and stressful working environments and comparatively high levels of burnout and other mental distress indicators. [7,8] Research was conducted in Egypt at Ain Shams

Corresponding Author: Mennatallah Said Hosney Shehata, Department of Public Health and Community Medicine, Faculty of Medicine, Cairo University, Egypt. Email: mennatallah.said@kasralainy.edu.eg

University, and the results showed that 58% of the population felt stress, with mild stress scoring 28.1% and severe stress scoring 29.9%. The most significant independent predictors of work-related stress using the logistic regression model [9] were gender, challenge taking holidays, unpleasant working conditions, difficulty communicating with supervisors, and perception of doing work of no value. Additionally, Aswan University Hospital conducted a study that found significant levels of burnout among medical staff. Significant predictors of burnout and work dissatisfaction were becoming older, coming from outside the Aswan Governorate, and being single right now.[10]

ICU staff members are particularly affected by stress-related symptoms.[11] For example, a UK survey revealed that 12% of ICU doctors had clinically significant depressed symptoms; in contrast to 5% of the general population [12] and 3% were troubled by thoughts of suicide.[13] Another potential side effect of working in an ICU, in addition to depression, is secondary traumatization: in a university hospital in the United States, 18% of the nursing staff not only fulfill the criteria for burnout syndrome but also go above and beyond the cut-off criteria for post-traumatic stress disorder (PTSD).[14]

In China, researchers Xu and Zhu,[15] studied 4139 members of the medical community in Beijing. The incidence rate among staff with schizophrenia or other neuroses was 4.52%, affecting 188 employees. 66% of the medical staff participants in Tu et al's study,[16] according to their findings, experienced discomfort physically often. For an extended period, 30% of the medical staff experienced mental emergencies. According to Xu and Zhao,[17] 28% of doctors working in general hospitals have psychological issues, and their overall mental health is much poorer than that of the general adult population.

Medical staff's mental health has a direct impact on the standard of care and patient safety. The efficacy of medical care will decline if attention is not paid to the mental health state of healthcare providers; this might even prevent the national medical and health system from being reformed. No comparable investigations were conducted in Kasr Alainy Hospitals, even though earlier studies came to some surprising findings. In order to protect the mental health of individuals working in the medical sector, the aim of this study is to get a thorough knowledge of the work-related mental health status of medical staff members at Kasr Alainy Hospital. The main purpose of this study is to gain comprehensive insight into the work-related mental health status of medical staff members at Kasr Alainy Hospital, with the goal of safeguarding the mental health of individuals working in the medical sector. The results of this study could help inform the development of interventions and policies to promote the mental health and well-being of the staff members at Kasr Al-Ainy and other similar organizations. The objective of the current study was to assess the mental health culture among staff members in different departments in Kasr-alainy Hospital. Additionally, to recommend strategies for coping with work-related mental health stress.

METHODS

This cross-sectional study was performed at Cairo University's teaching hospitals of Kasr al-Ainy School of Medicine.

Medical staff members consisted of 1262 residents, 423 assistant lecturers, 2307 lecturers, assistant professors and professors distributed among the different clinical & academic departments and units. The study targeted all medical staff members at Kasr al-Ainy Medical School during the period from December 2021 to November 2022. In accordance with a prior study,[18] the detected rate of mental health issues is approximately 30% among medical staff members and about 13% in the general population. Therefore, the minimum sample size was determined to be 185 utilizing open-epi online calculator (http://www.openepi.com/SampleSize/SSPropor.htm) with 95 % confidence limit and 80 % power. Regarding non-response rate of 20%, therefore the last sample size was 222 medical staff members. The convenient sample was approached electronically via the investigators through different digital media channels such as Facebook, LinkedIn, WhatsApp, and personal emails.

Data collection: Data was collected using an anonymous self-administered, structured questionnaire (in English). This questionnaire was adopted from a questionnaire developed and tested by Mental health America. Beta website with minor adaptations.[19] It consists of two sections; the first section contains demographics and characteristics of the respondents. The second one explores issues of work-related mental health culture and concerns using the Likert scale for agreement.

Pilot testing: The questionnaire form was piloted on a sample of 20 participants (beyond the sample size) to explain terms and evaluate any possible

Table 1: Characteristics of the included medical staff members at Cairo University school of medicine (N=222)

Characteristics	Total (n=222)
Gender: *n (%)*	
Male	60 (27)
Female	162 (73)
Age group: *n (%)*	
25-34	22 (9.9)
35-44	182 (82)
45-54	14 (6.3)
55-64	4 (1.8)
Work title: *n (%)*	
• Resident/demonstrator/ assistant lecturer/ specialist	82 (36.9)
• Lecturer/assistant professor/ consultant	128 (57.7)
• Professor/ expert	12 (5.4)
Type of department: *n (%)*	
Academic	50 (22.5)
Clinical	172 (77.5)

challenges in questionnaire administration.

Statistical analysis: Data entry and statistical analysis was done utilizing SPSS version 27.0 (IBM, USA). Total number of data collection forms received were 222, null elimination was done due to missing information. Descriptive statistical analysis was used to describe the characteristics of respondents. Chi-Square goodness of fit test was used to determine how well the participants' responses distribution among the Likert scale of answers fits the assumed even responses' distribution. P value is regarded as statistically significant when P <0.05.

RESULTS

A total 222 medical staff members participated, 60 (27%) were males and 162 (73%) were females and the majority were between 35 and 44 years (Table 1). Residents, demonstrators, assistant lecturers & specialists constituted represented 36.9%, lecturers, assistant professors & consultants represented 57.7% whilst professors & experts represented 5.4% of the total participants (Figure 1). Staff of academic departments represented 22.5% while their clinical partners represented 77.5% (Table1). Participating specialties were very variable, with the top specialties were radiology, anesthesiology, pulmonology departments, and public health and community medicine (8.1%, 7.2%, 6.8%, and 6.8%, respectively) as shown in Figure 2.

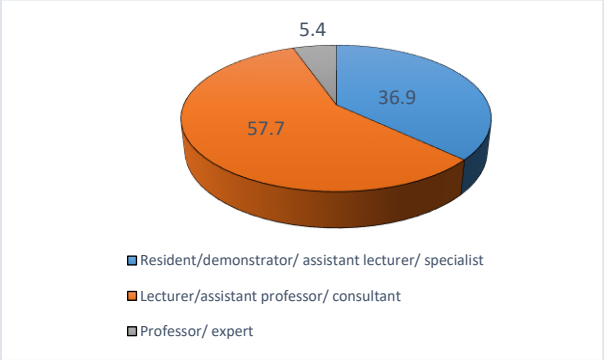

Figure 1: Work title distribution among the total sample

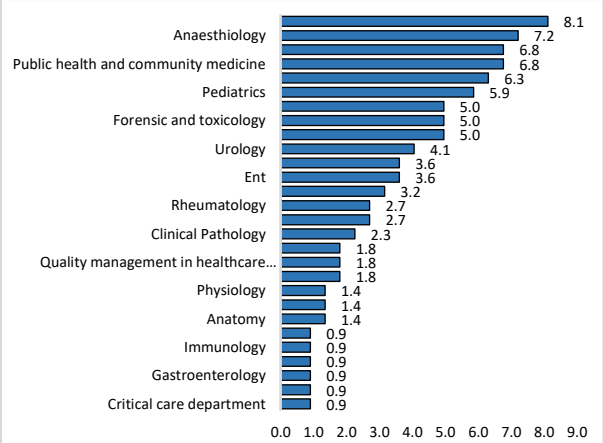

Figure 2: Percent of participating specialties from the total sample

On measuring staff responses on different mental health items, 67.1% of the staff reported being comfortable sharing new ideas with their senior or manager, 50.5 % stated that their seniors frequently check on workplace needs and 44.6 % stated that their supervisors value their feedback. The majority (60.8%) of the staff stated that their work environment didn't lead them to believe less confident about their achievement, while 56.3% didn't feel nervous of being punished for taking a day off to attend to their mental health. Approximately 56.3% of the staff reported that workplace issues negatively affect their sleep and nearly one third (29.7%) spent their time searching for new positions (Table 2).

Upon asking medical staff members on their suggestions which would help with workplace stress relief /mental health; the majority (84% academic versus 77.9% clinical staff) suggested training on stress management and personal development as the most important item to relieve workplace stress. This was followed by mental health awareness campaigns (50% academic versus 17.4% clinical staff) and mental health insurance benefits and coverage (40% academic versus 24.4% clinical staff) as shown in Figure 3. All professional

categories, especially residents, demonstrators, and assistant lecturers, reported that training on stress management and personal development is the most important item to relieve workplace stress. Lecturers and assistant professors believed in mental health insurance benefits and coverage as well as mental health awareness campaigns (30.5% and 28.9%, respectively) more than other professional categories, as shown in Figure 4.

Table 2: Responses regarding mental health items among participating medical staff members (N=222)

Mental health items	Strongly agree		Agree		Neutral		Disagree		Strongly disagree		p-value
	Obs	Res	Obs	Res	Obs	Res	Obs	Res	Obs	Res	
1-I am comfortable sharing new ideas with my senior/manager	12.6	-16.4	54.5	76.6	23.9	8.6	6.3	-30.4	2.7	-38.4	<.001
2- My senior/manager values all feedback on improving workplace culture	4.5	-34.4	40.1	44.6	35.6	34.6	14.9	-11.4	5	-33.4	<.001
3- In my department, it is safer to remain silent about things that need improvement	2.3	-39.4	18.5	-3.4	23.4	7.6	45.9	57.6	9.9	-22.4	<.001
4- My senior/manager remains objective when dealing with workplace conflict (e.g. considers all parties concerns in decision making)	2.7	-38.4	19.8	-0.4	55	77.6	18.9	-2.4-	3.6	-36.4	<.001
5- I am comfortable reporting dishonest or unfair practices to human resources/management	5.4	-32.4	35.6	34.6	23.9	8.6	31.1	24.6	4.1	-35.4	<.001
6- I feel comfortable recommending my workplace to others	9.9	-22.4	35.6	34.6	42.3	49.6	9.9	-22.4	2.3	-39.4	<.001
7- Senior/manager regularly check on my workplace needs	8.2	-26	42.3	49	25.9	13	16.4	-8	7.3	-28	<.001
8- I receive enough guidance to perform my job well	2.3	-39.4	28.4	18.6	49.1	64.6	17.6	-5.4	2.7	-38.4	<.001
9- I feel motivated at work	3.6	-36.4	27.5	16.6	42.3	49.6	20.7	1.6	5.9	-31.4	<.001
10- Workplace issues negatively affect my sleep	17.1	-17.5	39.2	31.5	21.2	-8.5	22.5	-5.5	0	---	<.001
11- In my department, it is safer to remain silent about my workplace stress	5.9	-31.4	17.6	-5.4	26.6	14.6	47.3	60.6	2.7	-38.4	<.001
12- To cope with workplace stress, I do unhealthy things (e.g. smoking, lashing out at others)	3.2	-37.4	18.9	-2.4	10.8	-20.4	49.1	64.6	18	-4.4	<.001
13- I am afraid of getting punished for taking a day off to attend to my mental health	4.1	-35	22.7	6	16.8	-7	49.5	65	6.8	-29	<.001
14- My workplace culture makes me feel less confident about my performance	3.6	-36.4	17.6	-5.4	18	-4.4	53.6	74.6	7.2	-28.4	<.001
15- I spend time looking for a new position while at work or outside of work	4.5	-34.4	25.2	11.6	29.7	21.6	34.7	32.6	5.9	-31.4	<.001

*Obs, Observed %; Res, Residual *P value= Goodness of fit.*

DISCUSSION

Mental health is an important occupational asset. Organizations which prioritize mental health have higher commitment, productivity, and job satisfaction. Positive work culture supports education, teamwork, diversity, and proper communication.[20] A healthy workplace culture permits staff to be heard. This is achieved by continuous feedback with prioritizing addressing any toxic conducts.[21] The current study was cross sectional aimed to assess the mental health culture among Cairo University's' staff members using a self-administered questionnaire exploring different work-related mental health culture items. Staff also was asked to suggest stress relief strategies.

Most respondents were females (73%) and less than 45 years old (91.9%). Lecturer/assistant professor/ consultant represent more than half of the participants (57.7%) and most of the staff was from clinical departments (77.5%) (Table1). A study performed on faculty members in United State (US), reported that female faculty members had more response rate than their male colleagues.[22] In the same study most of the respondents were instructor/lecturer and assistant/associate professors (69%).[22]

Regarding different work-related mental health culture items, staff members in the current study reported the following; More than two thirds (67.1%) reported being comfortable sharing new ideas with their senior or manager, also they stated that their seniors frequently check on workplace needs and values their feedback (50.5% and 44.6% respectively). Further, more than half (60.8%)

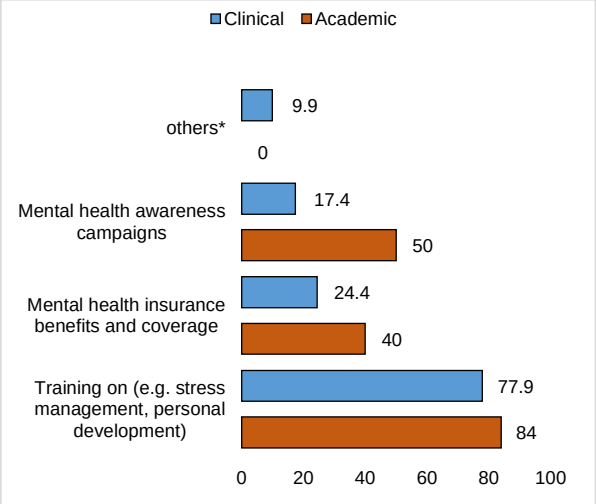

Figure 3: Percent distribution of suggestions helping mental health according to type of department of participating staff members

Note: Others include decreasing working hours and workload, improving work conditions and salaries, and avoiding conflicts between colleagues

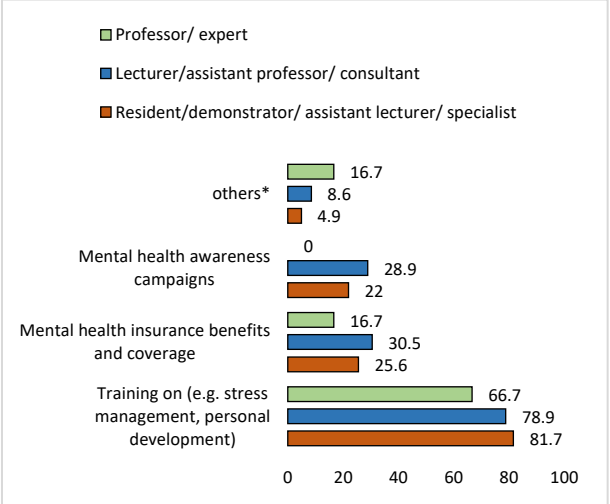

Figure 4: Percent distribution of suggestions helping mental health according to work title of participating staff members

Note: Others include decreasing working hours and workload, improving work conditions and salaries, and avoiding conflicts between colleagues

stated that their work environment didn't lead them to believe less confident about their achievement, while 56.3% didn't feel nervous of being punished for taking a day off to attend to their mental health. On the other hand (56.3%) reported that workplace issues negatively affect their sleep and nearly one third (29.7%) spent their time searching for new positions (Table 2). Similar items were mentioned and measured in "mind the workplace report" where 59% of participants reported that their supervisor didn't provide any emotional support to help them manage their stress, while 47% stated that their supervisors frequently check on them. While in the same report (48%) felt that they can communicate with their supervisors to change stressful things regarding their job and over 56 percent of respondents reported that they spend time looking for a new position.[23] Regarding the effect of work on sleep quality many studies discussed this relation and found that work overload [24] and work intensity [25] could affect sleep. Recommendations have been suggested to have a safe environment for your staff where organizations should train supervisors and encourage them to check on employees frequently also it should encourage staff to communicate stressors with their superiors.[23]

Mechanisms and strategies to overcome stress were discussed and highlighted in many published articles. A systematic review of published articles between April 2020 and May 2021 reported that there are main four categories to decrease mental health problems burden in healthcare workers: "Work environment," "Social/structural support," "Mental health support." "Communication/Information".[26] Other studies discussed the effect of stress management on reducing stress and improving mental health.[27] Stress management could be at individual level or organizational level. [27] Individual stress management approaches include training, counseling, and clinical psychological services.[27] While organizational approach includes improving working condition, providing personal and professional development opportunities to workers. [27]

In the current study medical staff members in both clinical and academic departments suggested the following as stress relief strategy "training on stress management, personal development" (84% academic versus 77.9% clinical department). Academic staff members selected the following strategy as a second suggestion "mental health awareness campaigns" (50%) (Figure3). In a qualitative study about stress causes and interventions almost half of participants reported that training and career development opportunities in the workplace were effective for stress management, because these helped the workers to be sufficiently knowledgeable and appreciated.[28] Also, the following were mentioned as effective stress management strategies; supportive organization, educational and training courses to improve management skills, team work with shared spirit.[28] However, in the same study only small

number of participants suggested training in stress management as an useful intervention.[28]

***Strengths and limitations*:** This study was cross sectional using an online questionnaire which helped accessing the participants in an easy way also it was anonymous which allowed honest participants responses regarding work environment. However, it has its limitations due to the nature of cross-sectional study design which measure participants' responses at a specific time. Also, the impact of work environment on mental health, sleep, mood, and psychological problems such as depression and anxiety was not measured or assessed.

CONCLUSIONS

Work environment culture affects mental health of the medical staff which reflects on both work productivity and job satisfaction. Stress relief strategies are important to improve staff mental health. Organizations should pay more attention to the work environment including supervisor's behavior and training, while encouraging staff communication. Future research should study the relation between the impact of different work culture environments on staff satisfaction and the development of psychological problems.

Ethical considerations: Research proposal along with data collection instrument was submitted to the Research Ethical Committee at Faculty of Medicine, Cairo University for reviewing and approval. The questionnaire was self -administered and participants filled out the questionnaire after giving an electronic consent. By not obtaining any personal identification information, the respondents' confidentiality was preserved. Participation of medical staff members in this study was voluntarily, all participants were informed about their right for withdrawal at any time or for not participating. Written approval for the research was collected from the Research Ethics Committee of Faculty of medicine with a number of (N-45-2020).

***Funding source*:** The authors received no financial support related to this research.

***Conflict of interest*:** All authors have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgement: Authors would like to thank all study participants from different departments who answered and completed the online questionnaire.

REFERENCES

1. McCaig R. Occupational health approaching the millennium: applying Legge's experience. The changing nature of occupational health. HSE Books, Sudbury. 1998..
2. Bonde JP. Psychosocial factors at work and risk of depression: a systematic review of the epidemiological evidence. Occupational and environmental medicine. 2008 Jul 1;65 (7):438-45.
3. Fisher C. Nurses: Overworked and Understaffed on the Front Lines. (2014) Available online at: https://www.healthline.com/health-news/nursesoverworked- understaffed-070714#1.
4. Glette MK, Aase K, Wiig S. The relationship between understaffing of nurses and patient safety in hospitals—a literature review with thematic analysis. Open J Nurs. (2017) 7:1387. doi: 10.4236/ojn.2017.712100
5. Ball J, Day T, Murrells T, Dall'Ora C, Rafferty AM, Griffiths P, et al. Crosssectional examination of the association between shift length and hospital nurses job satisfaction and nurse reported quality measures. BMC Nurs. (2017) 16:26. doi: 10.1186/s12912-017-0221-7
6. Long AF, Kneafsey R, Ryan J, Berry J. The role of the nurse within the multi-professional rehabilitation team. J Adv Nurs. (2002) 37:70–8. doi: 10.1046/j.1365-2648.2002. 02059.x
7. Taylor C, Graham J, Potts HW, Richards MA, Ramirez AJ. Changes in mental health of UK hospital consultants since the mid-1990s. Lancet (2005) 366:742–44. doi: 10.1016/S0140-6736 (05)67178-4
8. Aiken LH, Clarke SP, Sloane DM. International hospital outcomes research consortium. hospital staffing, organization, and quality of care: cross-national findings. Int J Qual Health Care J Int Soc Qual Health Care (2002) 14:5–14. doi: 10.1093/intqhc/14.1.5
9. Prevalence and risk factors of work-related stress among residents at Ain Shams University Hospitals. Abdel Aziz M Kamal, Sahar M Sabbour, Ihab S Habeel and Eman a Ghanem. The Egyptian Journal of Community Medicine Vol. 33 No. 3 July 2015.
10. Burnout and Job Satisfaction among Healthcare Providers in Aswan University Hospital, Upper Egypt Doaa MM Osman, Shaimaa S Abdlrheem. Journal of High Institute of Public Health 2019;49 (1):64-72.
11. Mealer M, Jones J, Newman J, McFann KK, Rothbaum B, Moss M. The presence of resilience is associated with a healthier psychological profile in intensive care unit (ICU) nurses: results of a national survey. Int J Nurs Stud. (2012) 49:292–9. doi: 10.1016/j.ijnurstu.2011.09.015
12. Ohayon MM, Priest RG, Guilleminault C, Caulet M. The prevalence of depressive disorders in the United Kingdom. Biol Psychiatry (1999) 45:300–7.

13. Coomber S, Todd C, Park G, Baxter P, Firth-Cozens J, Shore S. Stress in UK intensive care unit doctors. Br J Anaesth (2002) 89:873–81. doi: 10.1093/bja/aef273

14. Mealer M, Burnham EL, Goode CJ, Rothbaum B, Moss M. The prevalence and impact of post-traumatic stress disorder and burnout syndrome in nurses. Depress Anxiety (2009) 26:1118–26. doi: 10.1002/da.2063.

15. Xu J, Zhu Z. The psychological health survey of medical staff. Chinese Mental Health J 1993; 7:73–4.

16. Tu L, Zhang XQ, Ren N, et al. Current situation, and analysis of the medical staff's psychological health in China. Med Philos 2009; 30:44–6.

17. Xu X, Zhao T. The psychological health survey of medical staff in general hospital. J China Clin Psychol 2006; 14:324–5.

18. Zhou C, Shi L, Gao L, Liu W, Chen Z, Tong X, Xu W, Peng B, Zhao Y, Fan L. Determinate factors of mental health status in Chinese medical staff: A cross-sectional study. Medicine. 2018 Mar;97 (10).

19. Mental Health America. Mental health innovation network. Available at: https://www.mhinnovation.net/organisations/mental-health-america. Accessed on November 2021

20. Mental Health Foundation of New Zealand. Work place culture. Available at: https://mentalhealth.org.nz/workplaces-v2/workplace-culture. Accessed on June 2023

21. Mental Health America. Types of Toxic Work Environments and How to Address Them. Available at: https://www.mhanational.org/types-toxic-work-environments-and-how-address-them. Accessed on June 2023

22. Smith WG. Does gender influence online survey participation? A record-linkage analysis of university faculty online survey response behavior. Online submission. 2008 Jun.

23. Adams T, Reinert M, Fritze D, Nguyen T. Mind the Workplace: Work Health Survey 2021. Mind the Workplace: Work Health Survey 2021 (umaryland.edu)

24. Knudsen HK, Ducharme LJ, Roman PM. Job stress and poor sleep quality: data from an American sample of full-time workers. Social science & medicine. 2007 May 1;64 (10):1997-2007.

25. Lyons, S., Strazdins, L. & Doan, T. Work intensity and workers' sleep: A case of working Australians. Humanit Soc Sci Commun 9, 381 (2022). https://doi.org/10.1057/s41599-022-01410-2

26. Halms T, Strasser M, Kunz M and Hasan A (2022) How to Reduce Mental Health Burden in Health Care Workers During COVID-19?–A Scoping Review of Guideline Recommendations. Front. Psychiatry 12:770193. doi: 10.3389/fpsyt.2021.770193

27. Michie S. Causes and management of stress at work. Occupational and environmental medicine. 2002 Jan 1;59 (1):67-72.

28. Bhui K, Dinos S, Galant-Miecznikowska M, de Jongh B, Stansfeld S. Perceptions of work stress causes and effective interventions in employees working in public, private and non-governmental organisations: a qualitative study. BJPsych bulletin. 2016 Dec;40 (6):318-25.

Cite this article as: Sabry**,** H. A. et al. Assessment of Work-Related Mental Health among Kasr-Alainy Staff Members: A Cross-Sectional Exploratory Study. *Egyptian Journal of Community Medicine*, 2023;41(4):263-269. **DOI**: 10.21608/ejcm.2023.209272.1256