

RESEARCH ARTICLE

STUDY ON IMPORTANCE OF WORK STRESS MANAGEMENT WORKSHOPS AND COPING STRATEGIES AMONG CLINICAL LABORATORY PROFESSIONALS

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Abstract: Clinical laboratory professionals form the backbone of modern health care system. Work stress affects the overall physical and mental wellbeing of clinical laboratory professionals and their productivity. Long term untreated stress can lead to complications including cardiovascular diseases, mental illness, and musculoskeletal disorders. The objective of the study was to assess the work stress among clinical laboratory professionals, evaluate the work stress coping strategies, and to assess how effectively they get support in dealing with stress with the help of stress management programmes. **Methods:** A total of 228 clinical laboratory professionals have taken part in the study. The study period was from 15th April 2023-24th April 2023. Snowball sampling technique was used where online survey questionnaire developed using The Workplace Stress Scale™ Copyright © The Marlin Company, North Haven, CT, and the American Institute of Stress, Fort Worth, TX was shared and the data were analyzed. Two more questions were included in the study to know the coping strategies used by clinical laboratory professionals to manage work stress and how effectively work stress management workshops/programmes are used to monitor and resolve work stress and reduce or eliminate stress at the workplace. **Results:** Out of 228 participants, 43.85 % experienced fairly low stress to no stress whereas 39.47 % percentage of participants reported moderate stress and 16.66 % of the participant experienced severe stress out of which 2.19% had stress level which is potentially dangerous and should seek professional assistance which suggests that workplace stress is present among clinical laboratory professionals. Most of the participants in the study were females 164 (71.93%) 42.69% experienced fairly low to no stress, 40.24% reported moderate stress, 17.07% experienced severe stress including 1.22% having potentially dangerous stress. Out of 64 (28.07%) males, 46.88 % had fairly low to no stress, 37.5% had moderate stress, 15.63% had severe stress out of which 4.69% had potentially dangerous stress levels. **Interpretation and Conclusion:** Employees need to develop coping mechanisms to reduce stress at work. Work stress coping strategies should be employed at management and individual levels to reduce the work-related stress. Organizations must conduct workshops on stress management, motivation, and education to assist clinical laboratory professionals in handling their work-related stress professionally.

KEYWORDS: Work stress, Clinical laboratory professionals

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INTRODUCTION:

Work-related stress is "the reaction, people may have when presented with work requirements and pressures that are not compatible with their skills and capabilities and which challenge their ability to cope [1-4]. There are more evidences that long-term work stress can lead to complications including cardiovascular disease, mental illness, and musculoskeletal disorders [5-7]. stressed employees are more likely to be unhealthy, unmotivated, underproductive, and unsafe at work. Additionally, such organizations have a lower chance of succeeding in an extremely competitive sector [8]. Moreover untreated stress may have negative effects on a person's health, wellbeing, and socioeconomic standings [9]. Work stress is now well acknowledged to decrease employees work satisfaction and productivity, raises absenteeism and turnover [10-11]. Management in many organizations struggle with the decision of what actions to use to minimize the costs related to occupational stress. Understanding the causes, symptoms, and effects of occupational stress on organizational performance is important [12]. Very limited studies have been done on work stress among clinical laboratory professionals. The objective of the study was to assess the work stress among clinical laboratory professionals, evaluate the work stress coping strategies, and to assess how effectively they get support in dealing stress with the help of stress management programmes.

METHODOLOGY:

Sample Size: 228 clinical laboratory professionals participated in the study working across various countries

Study period: 15th April 2023-24th April 2023

Sampling Technique: Snowball sampling technique where the online survey link was shared by the principal investigator to other three investigators and instructed to distribute among other clinical laboratory professionals and their colleagues. LinkedIn platform and social media were also used to share the online survey link.

Sampling Instrument: The online survey questionnaire was developed using The Workplace Stress Scale™ Copyright © The Marlin Company, North Haven, CT, and the American Institute of Stress, Fort Worth, TX. The survey consists questionnaire with options from “Never to Very often”, graded from 1 to 5.

Table.1

Never	1
Rarely	2
Sometimes	3
Often	4
Very Often	5

Table. 2. The questionnaire.

1	Conditions at work are unpleasant or sometimes even unsafe
2	I feel that my job is negatively affecting my physical or emotional well-being
3	I have too much work to do an/or too many unreasonable deadlines
4	I find it difficult to express my opinions or feelings about my job conditions to my superiors.
5	I feel that job pressures interfere with my family or personal life.
6	I have adequate control or input over my work duties.
7	I receive appropriate recognition or rewards for good performance.
8	I am able to utilize my skills and talents to the fullest extent at work.

Add the numbers provided in response to each of the eight questions to obtain the final score. The total score ranges from 15 to 40

Interpretation of Results:

Table. 3

Score Range	Interpretation	Action required
0-15	Chilled out and relatively calm	Stress isn't really a problem.
16-20	Fairly Low	You shouldn't have any trouble coping, but occasionally you probably do.
21-25	Moderate Stress	May involve some stressful situations, but not much more than most people encounter. Focus on seeing what to do to minimize stress
26-30	Severe	Could be in the wrong job or right job at the wrong time. Counselling might be helpful
31-40	Stress level potentially dangerous	Should seek professional assistance. If health is affected consider for a job change.

In addition to the eight questions two more questions were added to know the coping strategies used by clinical laboratory professionals to manage work stress and how effectively strategies used in professional ways including stress management programmes at individual and organizational levels.

RESULTS:

228 participants were involved in the study across various countries.

Gender-wise distribution:

Out of 228 participants, 64 (28.07%) were males and 164(71.93%) were females.

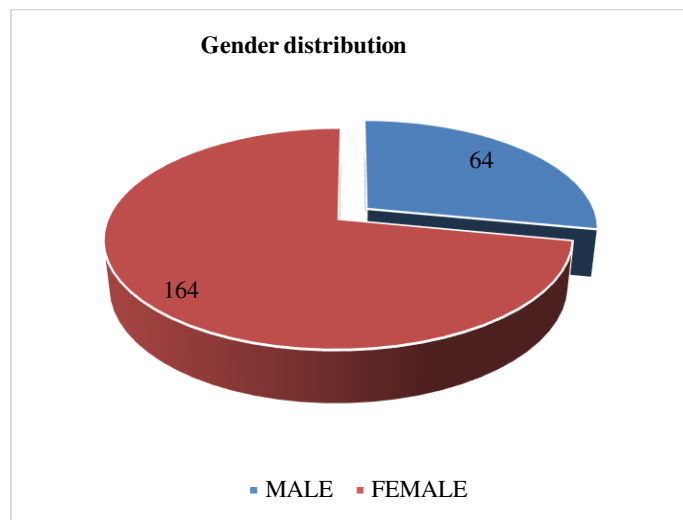


Figure: 1. Gender-wise distribution

Age-wise distribution:

The age of participants ranged from 21 to 55 years, with a mean of 33.28 years.

Country wise distribution

The study participants took part in the survey represented different parts of the world, and the results are as follows:

Table. 4. Country wise distribution

Name of the county	No of participants	Percentage (%)
INDIA	141	61.84
IRELAND	2	0.88
KUWAIT	5	2.19
UAE	52	22.81
NEPAL	2	0.88
OMAN	1	0.44
SAUDI	12	5.26
UK	3	1.32
VIETNAM	1	0.44
QATAR	9	3.95
TOTAL	228	100

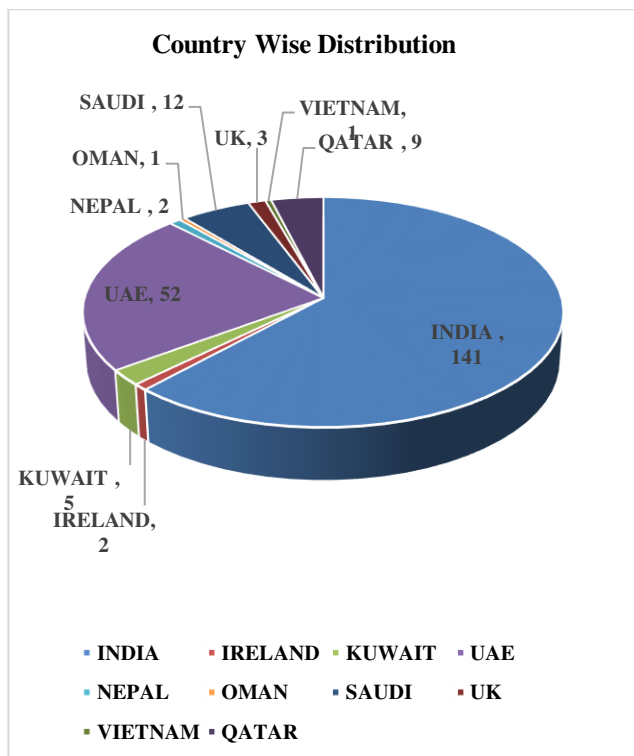


Figure. 2. Country wise distribution

India (141 participants, 61.8%) and the United Arab Emirates (52 participants, 22.8%) made up the largest percentage of the participants.

The workplace stress scale responses from the participants:

Table. 5. Overall stress score:

Score Range	Interpretation	No: of Participants	Percentage (%)
15-20	Chilled out and relatively calm	17	7.46
16-20	Fairly Low	83	36.4
21-25	Moderate Stress	90	39.47
26-30	Severe	33	14.47
31-40	Stress level potentially dangerous	5	2.19
TOTAL		228	100

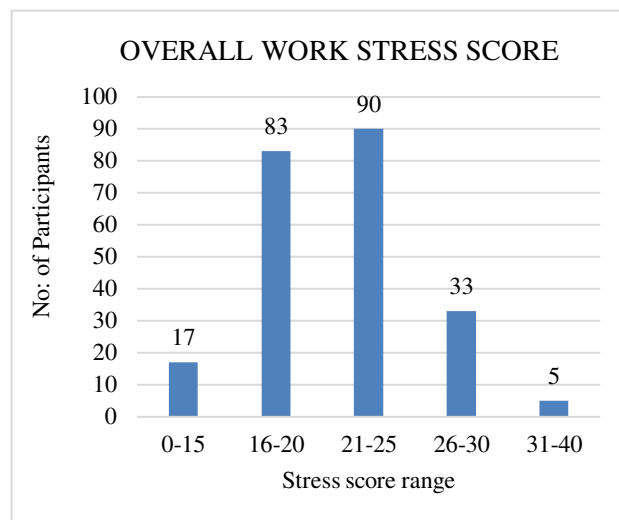


Figure. 3. Overall stress score

Stress score Gender wise:

Table. 6. Stress score Gender wise: Males

Score Range	Interpretation	No: of Participants	Percentage (%)
0-15	Chilled out and relatively calm	6	9.38
16-20	Fairly Low	24	37.5
21-25	Moderate Stress	24	37.5
26-30	Severe	7	10.94
31-40	Stress level potentially dangerous	3	4.69
TOTAL		64	100

Table. 7. Stress score Gender wise: Females

Score Range	Interpretation	No: of Participants	Percentage (%)
0-15	Chilled out and relatively calm	11	6.71
16-20	Fairly Low	59	35.98
21-25	Moderate Stress	66	40.24
26-30	Severe	26	15.85
31-40	Stress level potentially dangerous	2	1.22
TOTAL		164	100

Stress score Country wise

The work stress score was only calculated on participants from the United Arab Emirates and India because they represented a statistically significant number compared to participants from other countries.

26-30	Severe	7	13.46
31-40	Stress level potentially dangerous	1	1.92
TOTAL		52	100

Table. 8. India

Score Range	Interpretation	No: of Participants	Percentage (%)
0-15	Chilled out and relatively calm	11	7.8
16-20	Fairly Low	47	33.3
21-25	Moderate Stress	58	41.3
26-30	Severe	21	14.89
31-40	Stress level potentially dangerous	4	2.84
TOTAL		141	100

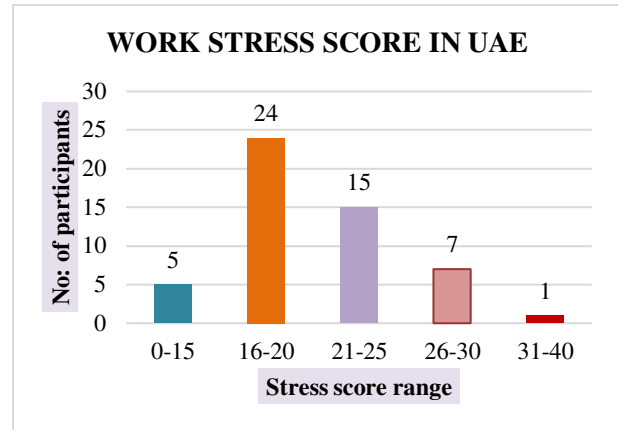


Figure. 5. United Arab Emirates

Table.10. Work stress coping strategies by Clinical laboratory Professionals

How participants manage stress	No participants	Percentage (%)
Take a leave/break from duty	19	12.42
Talking to colleagues, family, friends	33	21.57
Spending time with friends and family	15	9.8
Entertainment programs, social media, Music etc.	20	13.07
I don't mind stress/I like to work in stress	24	15.69
Do nothing/Tolerate stress	12	7.84
yoga, Meditation, Pray	8	5.23
Organized, Systematic and properly planned work	10	6.54
Others	12	7.84
Total	153	100

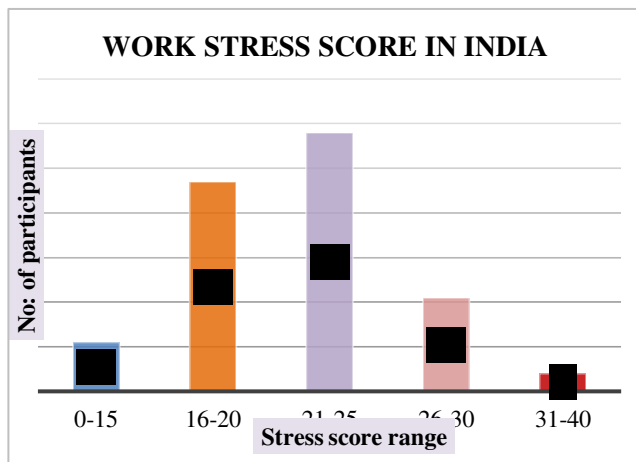


Figure. 4. India

Table. 9. United Arab Emirates

Score Range	Interpretation	No: of Participants	Percentage (%)
0-15	Chilled out and relatively calm	5	9.62
16-20	Fairly Low	24	46.15
21-25	Moderate Stress	15	28.85

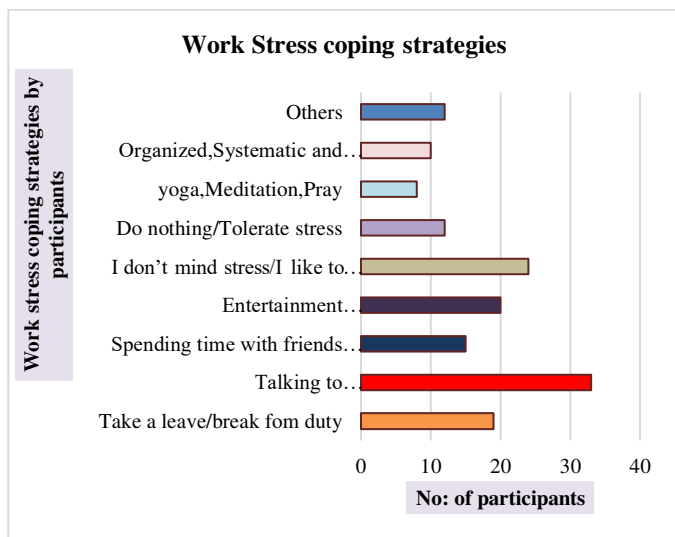


Figure. 6. Work stress coping strategies by Clinical laboratory Professionals

Participation of clinical Laboratory professionals in work stress management workshops in last 5 years

34 participants (14.9%) out of 228 attended work stress management work shop in last 5 years where as remaining 194 (85.1%) didn't participate in any work stress management work shop recently.



Figure. 7. Participation of clinical Laboratory professionals in work stress management workshops in last 5 years

DISCUSSION:

From the study, 43.85 % experienced fairly low stress to no stress whereas 39.47 % percentage of participants reported moderate stress and 16.66 % of the participant experienced severe stress out of which 2.19% had stress level which is potentially dangerous and should seek professional assistance. From the study it is clear that workplace stress is present among clinical laboratory professionals. A similar study done among clinical resident doctors in Odisha showed that 21.2% had low or no stress, 40.4% had moderate stress, and 38.4% had severe stress [13]. The majority of the participants in the study were females 164 (71.93%) out of which 42.69% had fairly low to no stress, 40.24% had moderate stress, 17.07% had severe stress including 1.22% having potentially dangerous stress. Out of 64 (28.07%) males 46.88 % had fairly low to no stress, 37.5% had moderate stress , 15.63% had severe stress out of which 4.69% had potentially dangerous stress levels. A study done by Keyur Parmar et al [2015] to know gender differences in stress at workplace on equal number of gender distribution showed that females had a higher work stress level compared to males [14]. However, in our study the majority of participants were females compared to males.

The strategies for preventing stress adapted by clinical laboratory professionals were analyzed in the study. The majority of the participants used the work stress coping strategy by talking about the issues with colleagues ,friends and family and spending good times with them [15-16]. Study by Saini, R., Kaur, S., & Das, K. (2014) on work stress coping strategies highlighted the way of stress management techniques include healthy eating habits, regular exercise, meditative practices like yoga or biofeedback, relaxation techniques, professional therapy, visualization or hypnosis, enjoyable activities like crafts or hobbies, etc. which can be used to cope with work stress [17-19]

To handle potentially stressful circumstances at health facilities, ongoing administrative support along with

appropriate training programmes are required [20-21]. Support is necessary for healthcare workers to maintain adequate levels of confidence and productivity and to avoid the adverse impacts of stress on their mental and physical health [22]. The most effective method to have a reduced work stress environment are interventions for job stress. Once the cause of the stress has been determined, attempts to reduce workplace stress by altering the physical environment, enhancing interactions with management, or reducing workload. [23-25].

To know how the participants take support on reducing stress using training programmes including stress management workshops 85.1 % of clinical laboratory professionals never attended any of stress management workshops in last 5 years. Munz, D. C., Kohler, J. M., & Greenberg, C. I. (2001) emphasized the importance of worksite stress management programme. The authors explained that strategies for preventing stress can be applied at both the individual and organizational levels. Clinical lab personnel who are dealing with stress-related outcomes might get support from stress management programs that include education and training on ways to deal with stress. Organization-centered techniques reduce or eliminate workplace pressures by properly managing clinical lab staff and providing necessary resources [26]. Management should take steps to identify reasons for work stress and implement policies to reduce and manage stress. [27-28] Soltan, M. R et al [2020] recommended to create programs including stress management workshops for the monitoring of stress and the resolving of challenging situations, such as discussion groups and support/psycho social support groups [29]. A study on medical students on preclinical stress management showed Positive effects of the in knowledge, confidence, perceived skills, and attitude towards employing adaptive stress coping mechanisms[30]. According to a study on the effectiveness of an intensive stress intervention workshop, an intense, comprehensive approach to stress management is a viable option for developing long-lasting behavioral change. [31]

CONCLUSION:

Clinical laboratory professionals offer information and services that maximize the effective execution of treatment in the modern, complicated healthcare system. It enables healthcare professionals to choose the best diagnostic and therapeutic options with the fewest resources. Work stress affects the productivity and overall physical and mental wellbeing of clinical laboratory professionals. To reduce stress at work, employees must learn effective coping strategies. Work stress coping strategies should be employed at management and individual levels to reduce the work-related stress. Our study recommends organizations to conduct educational, motivational and stress management training workshops which will help clinical laboratory professionals to manage work related stress professionally. If working in a potentially dangerous work stress environment laboratory professionals should not hesitate to take professional assistance. Stress management ability varies from person to person. However, meditations, yoga, spending good time with friends and family, taking short breaks from duty, talking your work-related issues to your supervisors may help reducing work related stress and find out whichever works for you. Along with learning work stress coping strategies work stress management programmed or workshops are important for clinical laboratory professionals to manage work stress.

Limitations

A larger number of population sample would have been needed for a significant statistical analysis. The survey questionnaire was given only once and the mood of participants at the time of answering the questionnaire may lead to confounding impacts on the outcomes.

REFERENCES:

- [1] Leka S, Griffiths A, Cox T, World Health Organization. Work organization and stress: systematic problem approaches for employers,

- managers and trade union representatives. World Health Organization; 2003.
- [2] Centers for Disease Control and Prevention. National Institute of Occupational Safety and Health. (1999). Stress at work.:99-101.
- [3] Colligan TW, Higgins EM. Workplace stress: Etiology and consequences. *Journal of workplace behavioral health*. 2006 Jul 25;21,2:89-97.
- [4] Knezevic B, Milosevic M, Golubic R, Belosevic L, Russo A, Mustajbegovic J. Work-related stress and work ability among Croatian university hospital midwives. *Midwifery*. 2011 Apr 1;27,2:146-53.
- [5] Karasek R. Low social control and physiological deregulation--The stress? disequilibrium theory, towards a new demand? control model. *Scandinavian journal of work, environment & health*. 2008 Jan 1;34,6:117.
- [6] Mäntyniemi A, Oksanen T, Salo P, Virtanen M, Sjösten N, Pentti J, Kivimäki M, Vahtera J. Job strain and the risk of disability pension due to musculoskeletal disorders, depression or coronary heart disease: a prospective cohort study of 69 842 employees. *Occupational and environmental medicine*. 2012 Aug 1;69,8:574-81.
- [7] Öhman L, Bergdahl J, Nyberg L, Nilsson LG. Longitudinal analysis of the relation between moderate long-term stress and health. *Stress and health: Journal of the International Society for the Investigation of Stress*. 2007;23,2:131-8.
- [8] Park J. Work stress and job performance. Ottawa, ON, Canada: Statistics Canada; 2007 Dec 7.
- [9] Can YS, Iles-Smith H, Chalabianloo N, Ekiz D, Fernández-Álvarez J, Repetto C, Riva G, Ersoy C. How to relax in stressful situations: a smart stress reduction system. *InHealthcare* 2020 Apr 16 (Vol. 8, No. 2, p. 100). MDPI.
- [10] Gianakos I. Predictors of coping with work stress: The influences of sex, gender role, social desirability, and locus of control. *Sex roles*. 2002; 46:149-58.
- [11] Cooper CL, Cartwright S. Healthy mind; healthy organization—A proactive approach to occupational stress. *Human relations*. 1994 ;47,4:455-71.
- [12] Ongori H, Agolla JE. Occupational stress in organizations and its effects on organizational performance. *Journal of management research*. 2008;8,3:123-35.
- [13] Kshatri JS, Das S, Kar P, Agarwal SK, Tripathy RM. Stress among clinical resident doctors of odisha: a multi-centric mixed methodology study. *Indian Journal of Public Health*. 2017 ;8,4:123.
- [14] Parmar K, Solanki C, Parikh M, Vankar GK. Gender differences in stress at work place among doctors and nurses. *GCSMC Journal of Medical Science*. 2015;4,2:108-13.
- [15] Kalliath P, Kalliath T. Work–family conflict: Coping strategies adopted by social workers. *Journal of Social Work Practice*. 2014 Jan 2;28,1:111-26.
- [16] Deb S, Chakraborty T, Chatterjee P, Srivastava N. Job-related stress, causal factors and coping strategies of traffic constables. *Journal of the Indian Academy of Applied Psychology*. 2008 ;34,1:19-28.
- [17] Saini R, Kaur S, Das K. Occupational stress and coping strategies among nurses working in medical surgical units of a tertiary care hospital. *Indian Journal of Social Psychiatry*. 2014;30,1-2:20-7.
- [18] Carrington P, Collings Jr GH, Benson H, Robinson H, Wood LW, Lehrer PM, Woolfolk RL, Cole JW. The use of meditation–relaxation techniques for the management of stress in a working population. *Journal of Occupational and Environmental Medicine*. 1980;22,4:221-31.
- [19] Kotteeswari M, Sharief ST. Job stress and its impact on employees performance a study with reference to employees working in Bpos. *International Journal of Business and Administration Research Review*. 2014; 2,4:18-25.
- [20] McCue JD, Sachs CL. A stress management workshop improves residents' coping skills. *Archives of internal medicine*. 1991 ;151,11:2273-7.
- [21] AlMuammar SA, Shahadah DM, Shahadah AO. Occupational stress in healthcare workers at a university hospital, Jeddah, Saudi Arabia. *Journal of Family and Community Medicine*. 2022 ;29,3:196-203.
- [22] Van Wyk BE, Pillay-Van Wyk V. Preventive staff-support interventions for health workers. *Cochrane Database of Systematic Reviews*. 2010(3).

- [23] Spurgeon P, Mazelan P, Barwell F. The organizational stress measure: An integrated methodology for assessing job-stress and targeting organizational interventions. Health services management research. 2012;25,1:7-15.
- [24] Glazer S, Liu C. Work, stress, coping, and stress management. In Oxford Research Encyclopedia of Psychology 2017 Apr 26.
- [25] Bond FW, Bunce D. Job control mediates change in a work reorganization intervention for stress reduction. Journal of occupational health psychology. 2001;6,4:290.
- [26] Munz DC, Kohler JM, Greenberg CI. Effectiveness of a comprehensive worksite stress management program: Combining organizational and individual interventions. International Journal of Stress Management. 2001;8:49-62.
- [27] Carr J, Kelley B, Keaton R, Albrecht C. Getting to grips with stress in the workplace: Strategies for promoting a healthier, more productive environment. Human Resource Management International Digest. 2011 Jun 7.
- [28] Chen M, Ran B, Gao X, Yu G, Wang J, Jagannathan J. Evaluation of occupational stress management for improving performance and productivity at workplaces by monitoring the health, well-being of workers. Aggression and Violent Behavior. 2021 Nov 27:101713.
- [29] Soltan MR, Al-Hassanin SA, Soliman SS, Gohar SF. Workplace-related stress among oncologists: Egyptian single-centered observational study. Middle East Current Psychiatry. 2020; 27:1-7.
- [30] Manning-Geist B, Meyer F, Chen J, Pelletier A, Kosman K, Chen X, Johnson NR. Pre-clinical stress management workshops increase medical students' knowledge and self-awareness of coping with stress. Medical Science Educator. 2020;30:235-41.
- [31] Veach TL, Rahe RH, Tolles RL, Newhall LM. Effectiveness of an intensive stress intervention workshop for senior managers. Stress and Health: Journal of the International Society for the Investigation of Stress. 2003;19,5:257-64.

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