

## 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 15<sup>th</sup> April 2023-24<sup>th</sup> 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: 15<sup>th</sup> April 2023-24<sup>th</sup> 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.

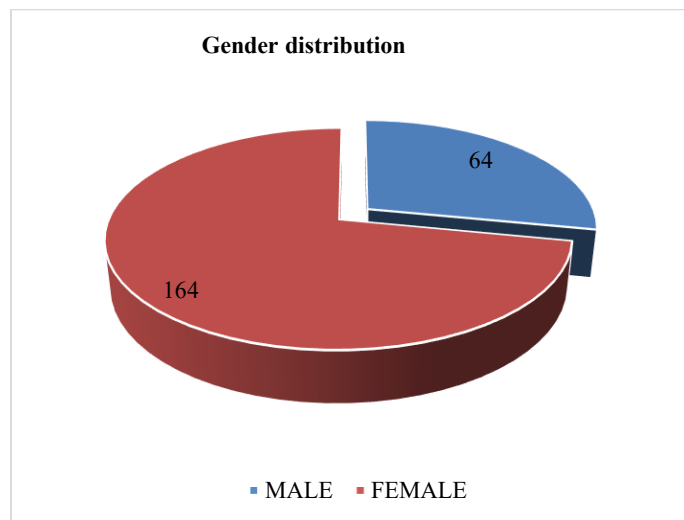


Figure: 1. Gender-wise distribution

### 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            |

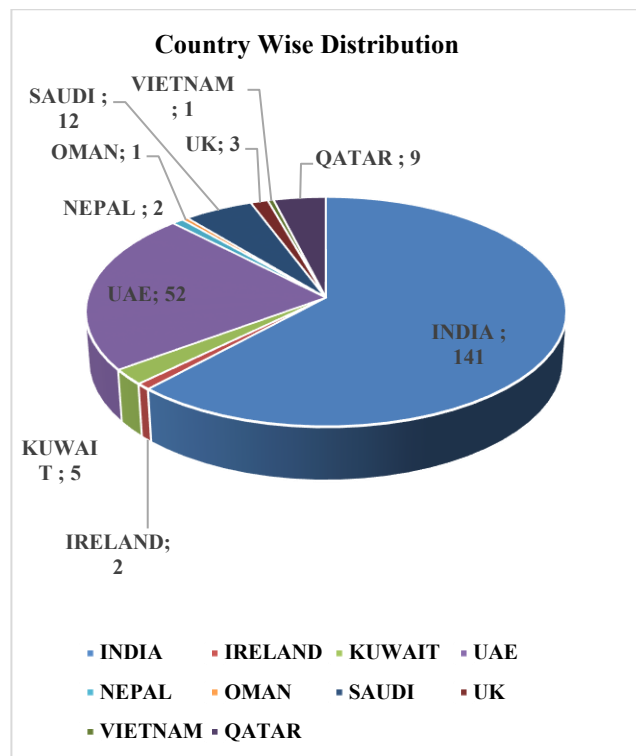


Figure. 2. Country wise distribution

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           |
| <b>TOTAL</b> |                                    | <b>228</b>          | <b>100</b>     |

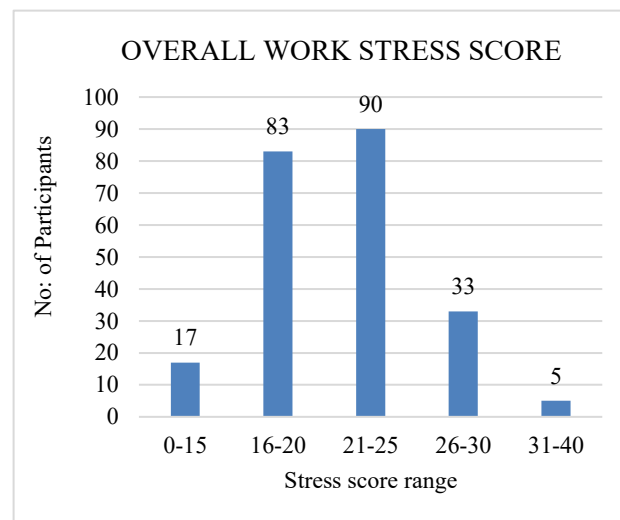


Figure. 3. Overall stress score

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           |
| <b>TOTAL</b> |                                    | <b>64</b>           | <b>100</b>     |

Table. 7. Stress score Gender wise: Females

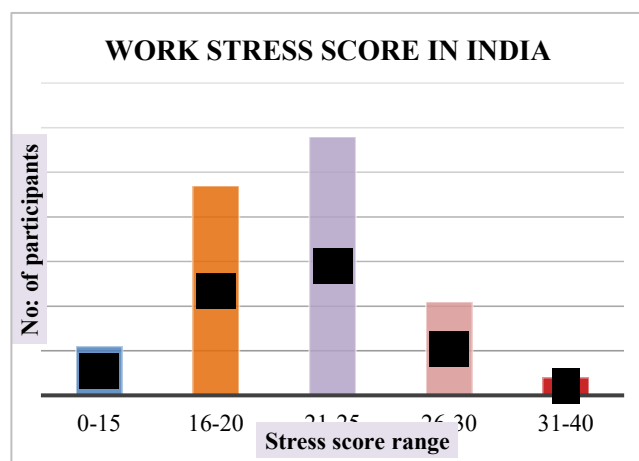
| Score Range  | Interpretation                     | No: of Participants | Percentage (%) |
|--------------|------------------------------------|---------------------|----------------|
| 0-15         | Chilled out and relatively calm    | 11                  | 6.71           |
| 16-20        | Fairly 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           |
| <b>TOTAL</b> |                                    | <b>164</b>          | <b>100</b>     |

## 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.

**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           |
| <b>TOTAL</b> |                                    | <b>141</b>          | <b>100</b>     |

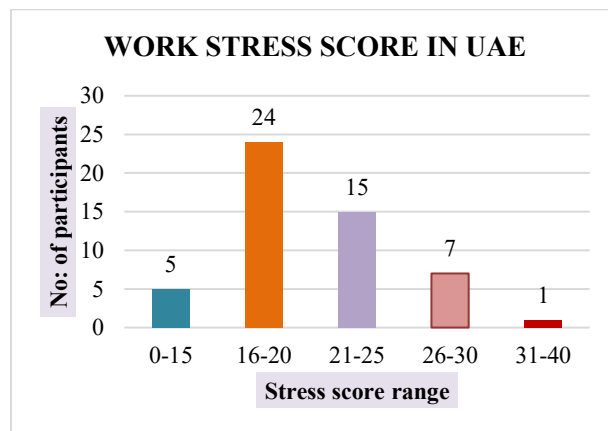


**Figure. 4. India**

**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          |

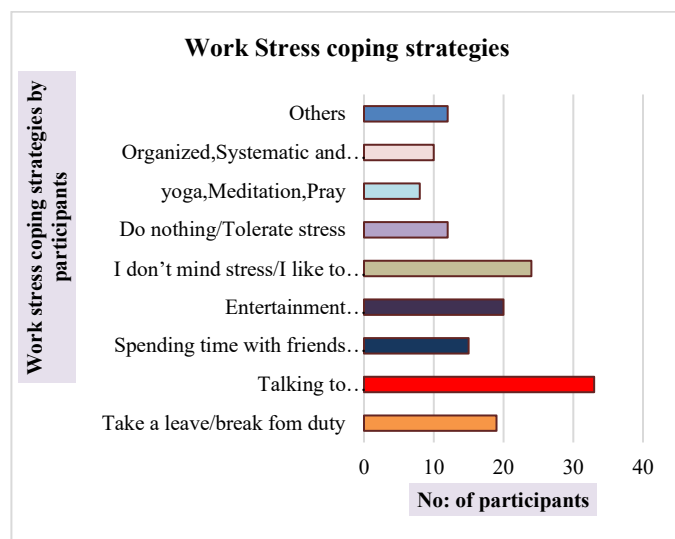
|              |                                    |           |            |
|--------------|------------------------------------|-----------|------------|
| 26-30        | Severe                             | 7         | 13.46      |
| 31-40        | Stress level potentially dangerous | 1         | 1.92       |
| <b>TOTAL</b> |                                    | <b>52</b> | <b>100</b> |



**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           |
| <b>Total</b>                                     | <b>153</b>      | <b>100</b>     |



**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 <sup>[13]</sup>. 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 <sup>[14]</sup>. 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<sup>[15-16]</sup> .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 <sup>[17-19]</sup>

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.

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