

## A study of the effects of job-related stress on mental well-being, with a particular focus on workers in the diagnostic industry of Ahmedabad

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**Abstract:** The purpose of this research is to comprehend the stressors and their influence on the mental health of personnel working in pathology laboratories in Ahmedabad. We are all watching the devastation caused by the current pandemic and the impact it has had on our available healthcare resources. It has resulted in unfathomable labor demands on employees in the healthcare and diagnostic sectors. The laboratory industry is under continual pressure to achieve work performance due to the ever-increasing need for testing and continuing research. It has, in some ways, presented an unprecedented challenge to people working in this industry in terms of managing with work-related stress. A cross-sectional study was conducted to examine the correlation between job stress and mental health, using a questionnaire that assessed demographics, perceived job stress, and mental health status. The questionnaire was distributed amongst a sample size of 400 respondents. "We used multiple logistic regression analysis to evaluate the link between perceived job stress and mental health, taking into consideration factors such as gender, age, marital status, and physical health status."

**Keywords:** Mental health, Perceived job stress, Laboratory technicians, Cross-sectional study

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## I. INTRODUCTION

A job that is considered healthy is one where the expectations and demands placed on employees are reasonable and align with their abilities and resources. Additionally, the job should provide employees with a sense of control over their work and support from those around them. On the other hand, the stress in the workplace occurs when an employee is faced with demands or pressures that are not in line with their skills and abilities, and they feel unable to cope. This stress can manifest in various situations and is often exacerbated by a lack of support from supervisors and colleagues, as well as limited control over work processes. In India, the correlation between job stress and mental health is a topic of growing interest among researchers. The examination of job stress is crucial in order to create strategies for preventing stress-related illnesses and promoting overall well-being. However, the link between job stress and negative mental health has not been firmly established in India. The hypothesis is that the impact of subjective job stress on mental health is significant, and it is believed that certain prevalence odds ratios between job stress and mental health will be higher than two. The aim of this study is to determine the relationship between job stress and negative mental health.

Research by Lee in 2009 has shown that psychiatric illness in the workplace is prevalent and that the intensity of psychological distress is inversely related to job satisfaction. Law's study in 2020 also found that work-related stressors have a negative impact on the mental health of young workers. This indicates

that work stress can have an effect on the mental health of laboratory employees. However, Narainsamy's study in 2013 found that job satisfaction is the most important factor in determining work-related well-being and that work engagement is less relevant, which does not directly relate to mental health. Therefore, further research is needed to establish the connection between work stress and the mental health of laboratory employees.

## II. LITERATURE REVIEW

**M.P. et al. (2021)** attempted to understand the impact of work pressure on the health of healthcare workers during the current pandemic, as they have experienced high levels of stress due to overtime, workload, and a distressing work environment, leading to low job morale and absenteeism. **Javed et al. (2021)** focused on the direct and indirect implications of the COVID-19 pandemic on adults with autism in India.

**Pattayat et al. (2021)** aimed to investigate the impact of Covid-19 on female health workers (FHWs) in Odisha, India. Music therapy can play a role in this situation (**Mao, 2022**) by helping to relieve the psychological pressure on relevant staff. **Platts et al. (2022)** investigated the impact of enforced home-working under lockdown on employee well-being by measuring markers of stress, burnout, depressive symptoms, and sleep. Other notable studies include (**Gupta et al., 2020**).

**Sidhu et al. (2020)** aimed to identify the sources of job stress and their impact on the health of employees. A total of 650 employees in the power sector in Punjab, India, responded to the survey. According to past research, workplace bullying in India is less prevalent than in other countries and there is a lack of data on the subject (**Kumar, 2020**). Therefore, it is important to focus on the mental health of employees, and their attitude toward stress and absenteeism, especially during crises.

**Dwyer et al. (1991)** looked at how stressful job demands impact employee attitudes and attendance. **Donald et al. (2001)** aimed to explore the connection between environmental factors and employee health in Chinese white and blue-collar samples and to examine the role of organizational commitment as a stress moderator. The findings of these studies vary greatly. Narrative summaries of this relationship have been published, but no comprehensive meta-analysis review has been done yet (**Faragher et al., 2005**). Objective informal social support and distancing can mitigate the negative effects of job stressors on depression.

The theoretical and practical implications of these findings are discussed (**Chen et al., 2009**). **Grebner et al. (2010)** discuss research evidence, the measurement of subjective occupational success, the value of the model for job stress interventions, future research requirements, and methodological concerns. **Rashid et al. (2013)** empirically examined the relationship between the perception of organizational politics and job stress in the context of Pakistan.

A conceptual model is proposed toward the end to study the impact of stress on employee job performance (**Ratnawat et al., 2014**). Research in applied psychology has found that job demands affect employee health outcomes (**Gonzalez-Mulé et al., 2020**). Other notable studies include (**Felton, 1998**) and (**Herbert et al., 2020**).

**Karimi et al. (2019)** studied the effects of meditation on mindfulness, emotional intelligence, job satisfaction, and job stress-related presentism in an Australian workplace. **Saini et al. (2020)** aimed to investigate the process of emotional labor and its impact on the mental health of hotel industry workers.

Based on the literature that is available, the current paper aims to further explore the effect of job stress on the mental health of laboratory technicians,

### **III. RESEARCH METHODOLOGY**

A survey was conducted among employees at large pathology laboratories in Ahmedabad, Gujarat using a self-administered questionnaire. The participants were all staff involved in the collection, testing, and research of pathology specimens. Ahmedabad was chosen as the location for the study because it is a major center for the diagnostic industry and is home to several large laboratory companies, i.e. Scientific, Sterling Accuris, Unipath, Green cross, North Star, and Pan genomics to name a few.

The sample was divided into three groups: sample pick-up executives, phlebotomists, and technicians. A questionnaire was used to gather primary data for the study, which included six sections to collect information on demographic information, stress related to the organization, stress related to work, stress specific to technicians, coping strategies, and the impact on mental health.

#### **OBJECTIVES OF THE STUDY**

1. To assess whether organizational stress impacts mental health due to age
2. To examine the impact of organizational stress on mental health due to gender
3. To assess whether organizational stress impacts mental health due to marital status
4. To assess whether organizational stress impacts mental health based on years of work experience
5. To make appropriate recommendations for the management and prevention of stress

#### **HYPOTHESIS**

**H.1** There is no significant variability between the factors that affect mental health amongst various age groups.

**H.2** There is no significant variability between the factors that affect mental health based on gender

**H.3** There is no significant variability between the factors that affect mental health based on marital status

**H.4** There is no significant variability between the factors that affect mental health based on total work experience

#### **SAMPLE SELECTION**

The goal of this study was to examine the impact of stress on laboratory technicians in Ahmedabad. To achieve this, all major and well-known laboratories in the city were selected, as they represent 95% of all tests done by the diagnostic sector in Ahmedabad. A total of 400 randomly selected respondents were given a structured questionnaire. Normality tests indicated that the data was not normal, so the Kruskal-Wallis

Test was used to evaluate variability and the Mann-Whitney test was applied to study the effect of job stress on mental health based on gender & marital status. While the chi-square was used to examine the relationship between stress factors and demographic characteristics.

#### IV. RESULT AND DISCUSSION

##### ❖ Demographic details

Table 1

Sr. No	Measure	Item	Frequency	Percentage
1	Age	<25 Years	115	28.8
		25-30 Years	172	43.0
		>30 Years	113	28.3
2	Gender	Male	250	62.5
		Female	150	37.5
3	Marital Status	Unmarried	203	50.8
		Married	197	49.3
4	Educational Qualification	Undergraduate	93	23.3
		DMLT	194	48.5
		Postgraduate	78	19.5
		Graduate	35	8.8
5	Years of Working experience	<2 Years	114	28.5
		2-5 Years	234	58.5
		>5 Years	52	13.0
6	Designation	Technician	200	50.0
		Phlebotomist	200	50.0

Table 1 provides information about the demographic characteristics of the respondents in the study. According to the data, 62.5% of the participants were men and 37.5% were women. The age distribution of the participants was 28.8% under 25, 43% between 25 and 30, and 28.3% over 30.

Additionally, 49.3% of the participants were married and 50.8% were unmarried. In terms of education, 48.5% had completed a Diploma in Medical Laboratory Technology, 19.5% had a graduation degree, 8.8% had postgraduate degrees and 23.3% were undergraduates. T

The work experience of the participants was diverse, with 28.5% having less than two years, 58.5% had between two and five years, and 13% having more than five years of experience. The job roles of the

participants were split equally with 50% working as a phlebotomist and 50% as department-level technicians.

The data was found to be not normally distributed by running a test of normality with a p-value of  $<0.05$ , thus the Kruskal –Wallis and Mann- Whitney tests were adopted to analyze the data.

### ❖ Hypothesis Testing

**H.1** There is no significant variability between the factors that affect mental health amongst various age groups.

Table-2

Sr No	Stressors	Asymp.. Sig
1	I feel tired and exhausted after my shift ends.	.290
2	I experience anxiety and tension while working.	.746
3	I lack energy once I return home after the office.	.676
4	I face inadequacy in making judgments and decisions related to work.	.654
5	I am sleep-deprived or I feel I have developed insomnia.	.411
6	I feel I am becoming irritated and angry about small things in daily life.	.626
7	I often get the urge to take a day off from work.	.203
8	I feel demotivated and discouraged to go to the work	.126
9	I am losing my confidence day by day.	.009
10	I feel I am unworthy of any task and progressing in my career.	.033

The data in the table shows that the way people perceive mental well-being issues caused by job-related stress changes with age. For instance, older individuals may have a different perspective on stress related to losing self-confidence or feeling unqualified for a task compared to younger age groups.

Conversely, the way people perceive job-related stress leading to problems such as fatigue, anxiety, poor sleep, insomnia, and demotivation is consistent across all age groups. This implies that regardless of age, people tend to have a similar negative impact on their mental health due to job-related stress.

**H.2** There is no significant variability between the factors that affect mental health based on gender

Table-3

Sr No	Stressors	Asymp.. Sig
1	I feel tired and exhausted after my shift ends.	.240
2	I experience anxiety and tension while working.	..314
3	I lack energy once I return home after the office.	.827
4	I face inadequacy in making judgments and decisions related to work.	.694
5	I am sleep-deprived or I feel I have developed insomnia.	.035
6	I feel I am becoming irritated and angry about small things in daily life.	.271
7	I often get the urge to take a day off from work.	.743
8	I feel demotivated and discouraged to go to the work	.218
9	I am losing my confidence day by day.	.511
10	I feel I am unworthy of any task and progressing in my career.	.552

The data in the table supports the hypothesis that the mental health issues resulting from job-related stress vary between males and females. The data specifically shows that sleep deprivation, a common issue caused by job-related stress, is perceived differently by men and women.

The data also indicates that other factors of mental well-being such as feeling unqualified, exhausted, having trouble with decision-making, becoming irritated and angry, and experiencing a sense of demotivation are perceived similarly by both genders. This means that regardless of gender, people tend to experience similar negative effects on their mental well-being due to job-related stress except for sleep deprivation which is differently perceived by men and women.

### **H.3** There is no significant variability between the factors that affect mental health based on marital status

Table-4

Sr No	Stressors	Asymp.. Sig
1	I feel tired and exhausted after my shift ends.	.066
2	I experience anxiety and tension while working.	.814
3	I lack energy once I return home after the office.	.218
4	I face inadequacy in making judgments and decisions related to work.	.726
5	I am sleep-deprived or I feel I have developed insomnia.	.001
6	I feel I am becoming irritated and angry about small things in daily life.	.487
7	I often get the urge to take a day off from work.	.024
8	I feel demotivated and discouraged to go to the work	.059
9	I am losing my confidence day by day.	.459
10	I feel I am unworthy of any task and progressing in my career.	.001

The data in the table demonstrates that the perception of mental well-being issues, like insomnia, desiring time off from work, and feeling unworthy of tasks, varies depending on one's marital status.

However, other mental well-being issues like feeling fatigued, inadequate in decision-making, losing self-assurance, and feeling demotivated and anxious, are experienced similarly by both married and unmarried individuals.

### **H.4** There is no significant variability between the factors that affect mental health based on total work experience

Table-5

Sr No	Stressors	Asymp.. Sig
1	I feel tired and exhausted after my shift ends.	.785
2	I experience anxiety and tension while working.	.189
3	I lack energy once I return home after the office.	..023
4	I face inadequacy in making judgments and decisions related to work.	.660



5	I am sleep-deprived or I feel I have developed insomnia.	.001
6	I feel I am becoming irritated and angry about small things in daily life.	.056
7	I often get the urge to take a day off from work.	.550
8	I feel demotivated and discouraged to go to the work	.760
9	I am losing my confidence day by day.	.018
10	I feel I am unworthy of any task and progressing in my career.	.231

The analysis of the data reveals that the perception of mental health concerns caused by job-related stress is contingent upon the number of years of work experience.

Specifically, the data suggest that the experience of fatigue post-work, sleep deprivation, the desire for time off, a decrease in self-confidence, and feeling unqualified for tasks vary based on the number of years of work experience.

In contrast, the data indicates that the perception of concerns such as difficulty in decision-making, irritation and anger, anxiety, and exhaustion do not vary based on the number of years of work experience.

### ❖ **RECOMMENDATION AND CONCLUSION**

Management should take action to improve the relationships among departmental employees through regular departmental meetings and team-building activities. Additionally, recognition of exceptional performance can be achieved through verbal praise, gifts, certificates, and awards.

These incentives can help boost employee morale and productivity. It is important to reward employees based on their performance, skills, knowledge, experience, and service. Management should also prioritize the career development of employees by providing ongoing training to enhance their skills and knowledge.

### ❖ **LIMITATIONS OF THE STUDY**

1. The present study would be limited to 400 laboratory employees
2. The present study would be restricted to laboratory employees working in Ahmedabad
3. The present study would be solely based on responses being received from the aforementioned sample size and does not depict a global view.



### ❖ **FUTURE SCOPE**

1. This study has established a model that identifies four distinct but interrelated factors that impact work-related well-being: burnout, engagement, job satisfaction, and occupational stress. Future studies could explore whether this model and the relative importance of these factors in relation to work-related well-being can be replicated in other settings. This would allow researchers to understand whether the findings of this study are generalizable to other industries.
2. This study provides an opportunity for future scholars to expand their research to other cities/states, and to conduct comparative studies, such as comparing the stress levels of medical laboratory technicians with other paramedical and non-medical employees.

### **V. References**

- Leila Karimi; Stephen Kent; Sandra G. Leggat; Jiri Rada; Alison Angleton; “Positive Effects of Workplace Meditation Training and Practice”, INTERNATIONAL JOURNAL OF PSYCHOLOGICAL STUDIES, 2019.
- D.M. Pestonjee (2009), ‘Stress and Coping: The Indian Experience’, SAGE Publications India Pvt Ltd, 2nd Edition, pp. 15,25-34, 36-86, 134,251-287.
- Dipneet Saini; Manjit Singh; "EMOTIONAL LABOUR AND ITS PSYCHOMETRIC OUTCOMES ON THE SERVICE PROVIDERS OF HOTEL INDUSTRY", INTERNATIONAL JOURNAL OF LEISURE AND TOURISM MARKETING, 2020.
- Amanpreet Kaur Sidhu; Harwinder Singh; Sandeep Singh Viridi; Raman Kumar; “Job Stress and Its Impact on Health of Employees: A Study Among Officers and Supervisors”, JOURNAL OF MANAGEMENT DEVELOPMENT, 2020.
- Sushil Kumar; “Reducing Workplace Bullying Through Workplace Spirituality and Job Satisfaction (Preprint)”, 2020.
- Snehil Gupta; Swapnajeet Sahoo; “Pandemic and Mental Health of the Front-line Healthcare Workers: A Review and Implications in The Indian Context Amidst COVID-19”, GENERAL PSYCHIATRY, 2020. (IF: 3)
- Ashika M.P.; Nitu Ghosh; Fazeelath Tabassum; “Employees attitude towards stress and absenteeism during the covid-19 crisis in the Indian healthcare industry”, international journal of advanced research, 2021.

- Amaan Javed; Ritwika Roy; “Impact of COVID-19 on Mental Health of Adults with Autism in India”, SUSHRUTA JOURNAL OF HEALTH POLICY & OPINION, 2021.
- Shiba Shankar Pattayat; Prasanta Patri; Silan Das; Rajesh Barik; “Impact of Covid-19 Pandemic on Female Health Care Workers in Odisha (India)”, MENTAL HEALTH AND SOCIAL INCLUSION, 2021.
- Nan Mao; “The Role of Music Therapy in The Emotional Regulation and Psychological Stress Relief of Employees in The Workplace”, JOURNAL OF HEALTHCARE ENGINEERING, 2022.
- Katharine Platts; Jeff Breckon; Ellen Marshall; “Enforced Home-working Under Lockdown and Its Impact on Employee Wellbeing: A Cross-sectional Study”, BMC PUBLIC HEALTH, 2022.