

CHAPTER-3

RESEARCH

METHODOLOGY

3.1 Overview:

The research methodology section provides an overview of how the study was conducted to explore the impact of work stress on employee productivity in the IT sector. The study uses both the sources of primary and secondary research methods to ensure a complete and balanced understanding of the study. Primary research involves gathering new data directly from sources, such as through surveys, interviews, or even questionnaires, to identify what causes work stress, how it affects productivity, and what role job satisfaction plays. Secondary research involves reviewing existing studies that have already been conducted, reports, and published articles to place the findings in a broader context.

Investigating the impact of work stress on employees within the IT sector is imperative due to its pervasive influence on various aspects of organizational functioning. Among all the other resources of a company, human resources stands out as pivotal, with their well-being directly influencing productivity, job satisfaction, and overall organizational performance. Detailed research is required to understand work stress and its related implications to productivity levels for devising effective strategies to mitigate its adverse effects and optimize productivity levels within IT firms. As a result, the study focuses on understanding the impact of work stress on employees within the IT sector, given its significant influence on organizational functioning, productivity, job satisfaction, and overall performance. The research also delves into the factors contributing to the development of work stress and those that can exacerbate or alleviate it.

Additionally, it examines how work stress negatively impacts productivity levels, aiming to provide insights for devising effective strategies to mitigate these adverse effects and optimize productivity within IT firms. The methodology then employs statistical tools to analyze the data, ensuring accurate and reliable results. Combining these methods and the data, the research aims to fully understand the issue and provide a solid basis for developing strategies to improve employee well-being and overall company performance.

3.2 Research Objective:

3.2.1 Primary Objectives:

- This research aims to determine the significant factors that influence the decision to evaluate the effectiveness of work stress on employees' productivity in IT companies in selected cities in Gujarat.

3.2.2 Secondary objectives:

- To explore the factors that cause work-stress among IT employees.
- To measure the influence of the quality of work on the productivity of IT employees.
- To analyze the impact of work stress on the productivity of employees.
- To examine the impact of employees' productivity and job satisfaction.
- To study the inter-relationship between the work-stress and job-satisfaction.
- To analyze the relationship among selective demographic variables on work stress.
- To provide coping strategies suitable for reducing stress at personal and organizational levels.

3.3 Scope and Significance of the study:

3.3.1 Scope of the study:

This study, "The Impact of Work Stress on Employees' Productivity in IT Companies in 4 Major Cities in the State of Gujarat," is restricted to Ahmedabad, Vadodara, Surat, and Rajkot only.

3.3.2 Significance of the study:

The results revealed the primary sources and stress levels experienced by most IT employees in the selected cities of Gujarat. Recognizing these facts would enable the appropriate authorities to take the necessary intervention steps to reduce the job stressors and level of stress and the negative consequences associated with them, particularly among those who said they were under extreme stress. This would help the IT sector adopt appropriate coping mechanisms and control stressors so that they would find and operate at the most comfortable level. This will enable them to be more productive, effective and efficient in the productivity of their duties. Work stress is not given the attention it deserves, so very little has been done to assess the cause of stress on workplace employee productivity within the

IT sector. It is in light of this that this study is deemed necessary, as it will:

There have been several adequate research studies on the impact of Work Stress on Employees' Productivity. Furthermore, this research will also emphasize growth and challenges and how to overcome those challenges. The impact of Work Stress employee productivity in IT companies in 4 major cities in Gujarat. (Ahmedabad, Vadodara, Surat & Rajkot).

3.4 Research Design:

A research design outlines the methodical approach to conducting a study and tackling its research questions or objectives. It involves decisions about the methodology, how data will be collected, the techniques for sampling, and the procedures for analyzing data. It is a roadmap for researchers to gather, analyze, and systematically interpret data to achieve their goals. A well-planned research design aims to minimize bias, enhance validity and reliability, and ensure that the study yields credible and valuable findings. Research design is an investigation to obtain specific ideas or solutions from our given questions or queries.

Since the present research aims to study the impact of work stress on employees within the IT sector and its effects on productivity levels, an exploratory design followed by a descriptive research design emerges as the most suitable approach. Exploratory research aims to explore a topic or phenomenon when little is known about it or when there is a need to gain a deeper understanding of the subject. As a result, interviews were conducted with employees to explore their experiences of work stress in the IT sector and to identify the stressors and coping mechanisms through qualitative data obtained from participants. Following this, a quantitative approach was used, such as descriptive statistics, e.g., mean median, measures of variability, and inferential statistics. In conclusion, the researcher will use quantitative and qualitative data collection and analysis methods. The researcher wants to justify the characteristics of the respondents like Age, Residence, Gender, Occupation, Income, Work experience, etc.

3.5 Sampling Plan:

3.5.1 Universe and sample of the study:

For this study, "The Impact of Work Stress on Employees' Productivity in IT Companies in Selected Cities of Gujarat." the Universe out of which selected IT employees would be taken as a sample by using a convenience sampling method:

- Ahmedabad
- Vadodara
- Rajkot
- Surat

3.5.2 The Sample Size:

Formula for determining Sample Size's = $p(1 - p) z^2 / e^2$

n= required sample size

p = the estimated population proportion (based on the researcher's judgment and estimate that 30 per cent (0.30) of the target population, including IT employees and employers. The questionnaire will include both closed-ended and open-ended questions.

z = suppose the level of confidence is 95 per cent (associated z value is 1.96)

e= Margin of error (5%) = + or - 0.05.

Calculation of Sample Size:

$$n = \frac{0.30(1 - 0.30)(1.96)^2}{(0.05)^2}$$

$$n = \frac{0.3(0.7)(3.8416)}{0.0025}$$

$$n = \frac{0.8067}{0.0025}$$

n = 322.69, so the sample size is **330 (Rounded off)**

Based on a sample size of 330, considering four selected cities as four strata, the total sample size can be determined as (i.e., $330 \times 4 = 1320$).

The total sample size for four cities is given in the following table. As the population size is different in all four cities, the Stratified Random Sampling method (Proportional Allocation) is used, and the city-wise allocation of the sample is calculated as follows.

Stratified Random Sampling (Proportional Allocation): $n_i = n \frac{N_i}{N}$

N

Where i = 1,2,3,4

n = Total sample size (1320)

n_1, n_2, n_3 and n_4 = required total sample size for each group (Ahmedabad, Surat, Vadodara, Rajkot)

N_1, N_2, N_3 and N_4 = Size of population for each group (Ahmedabad, Surat, Vadodara, Rajkot)

N = total population of all four groups

By applying the formula, the sample size is calculated as follows: (Figures rounded off)

$$n_1 \text{ (Ahmedabad)} = (1320 \times 420) / 570$$

n_1 = Sample size for Ahmedabad

City Wise Distribution of Sample Size for calculating Total Sample Size

Sr. No.	City	IT Employees *Population	**IT Companies	Sample size	(Round Off)
1	Ahmedabad	81,03,314	420	972	980
2	Surat	72,57,535	60	139	140
3	Vadodara	21,99,562	53	123	130
4	Rajkot	18,91,061	37	86	90
	Total	1,94,51,472	570	1320	1340

Sources:

*<https://populationstat.com/india/> Accessed on 24/09/2020

**[https://www.fundoodata.com/citiesindustry/19/140/list-of-information-technology-\(it\)-companies-in-Ahmedabad,Surat,Vadodara&Rajkot](https://www.fundoodata.com/citiesindustry/19/140/list-of-information-technology-(it)-companies-in-Ahmedabad,Surat,Vadodara&Rajkot)

3.5.3 Sampling Procedure:

The sampling procedure will be **Non-Probability** – Convenient Sampling.

3.5.4 Research Approach: Survey Approach

3.5.5 Research Instrument: Structured Questionnaire

3.6 Questionnaire Design:

The structure of the questionnaire will be finalized based on the objective of individual research and the characteristics of the sample segment. Specific objectives will be identified for individual field research, and based on this objective, the questionnaire structure will be

finalized. The scale selection will depend upon the objective of that individual question, the level of response required, and the type of response from the group and individuals.

SL. No.	Statements	References	Tests Applied
1	Do you feel stressed by the demands of the work? (Mark '√' only one square)	Chandrashekara. K, 2020 (pg. 464, que. Part-II-C)	Frequency Analysis, Chi-square
2	How would you rate the level of your work stress? (Mark '√' only one square)	Chandrashekara. K, 2020 (pg. 464, que. Part-II-D)	Frequency Analysis, Chi-square
3	Does your organization conduct any stress reduction programmes for the employees?	Chandrashekara. K, 2020 (pg. 478, que. 56(iii))	Frequency Analysis, Chi-square
4	Should your organization adopt some more Stress Management strategies?	Chandrashekara. K, 2020 (pg. 478, que. 56)	Frequency Analysis, Chi-square
5	During COVID-19, working from home has increased the stress level. Do you agree with the statement?	Developed by the Researcher	Frequency Analysis, Chi-square
6	Do you feel work stress impacts your level of productivity? (Mark '√' all that applies)	Developed by the Researcher	Frequency Analysis, Chi-square
7	How would you rate the overall level of your productivity at this organization?	Chandrashekara. K, 2020 (pg. 474, que. Part-III-N)	Frequency Analysis, Chi-square
8	What does the employees' quality of work life depend on?	Chandrashekara. K, 2020 (pg. 478, Que. 56(iv))	Frequency Analysis, Chi-square
9	What are the factors that drive you to choose IT as a career?	Chandrashekara. K, 2020 (pg. 469, que. Part-III-H)	Frequency Analysis, Chi-square

10	Is there tough competition for getting a Job in the IT Sector in India?	Chandrashekara. K, 2020 (pg. 474, que. Part-IV-Q)	Frequency Analysis, Chi-square
11	How do you perceive your organization as a place of work? (Mark '√' all that applies)	Chandrashekara. K, 2020 (pg. 474, que. Part-III-L)	Frequency Analysis, Chi-square
12	How committed are you to a long-term career at your organization? (Mark '√' all that applies)	Chandrashekara. K, 2020 (pg. 474, que. Part-III-M)	Frequency Analysis, Chi-square
13	Are you satisfied with your job?	Chandrashekara. K, 2020 (pg. 469, que. Part-III-G)	Frequency Analysis, Chi-square
14	Do you face any difficulty while working in the IT Sector?	Developed by the Researcher	Frequency Analysis, Chi-square

Q-15 Factors That Cause Stress at the Workplace:

Factors Causing Stress	SL. No.	Statements	References	Tests Applied
WRF	1	Tight working schedules	Chandrashekara. K, 2020 (pg. 465, que. Part-II-E (1))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	2	Strict rules to be followed	Chandrashekara. K, 2020 (pg. 465, que. Part-II-E (6))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	3	Long hours/overtime work	Chandrashekara. K, 2020 (pg. 465, que. Part-II-E (5))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test

	4	Attending more than one customer/Project at a time	Chandrashekara. K, 2020 (pg. 465, que. Part-II-E (11))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	5	Workplace bullying (Unreasonable behaviour from employer)	Chandrashekara. K, 2020 (pg. 465, que. Part-II-E (14))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
RRF	6	Clear target/Fix targets for achievement	Chandrashekara. K, 2020 (pg. 465, que. Part-II-E (15))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	7	Sudden change in the role and responsibilities	BHARATHI T, 2019 (pg 205, Que. 28)	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	8	Role demands (Pressure to perform the role assigned)	Chandrashekara. K, 2020 (pg. 465, que. Part-II-E (21))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	9	Monotonous or repetitive work	Chandrashekara. K, 2020 (pg. 465, que. Part-II-E (16))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	10	Attending frequent meetings	Chandrashekara. K, 2020 (pg. 465, que. Part-II-E (17))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	11	The high degree of accountability	Chandrashekara. K, 2020 (pg. 465, que. Part-II-E (19))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test

PIF	12	High level of expectations from the Superior	Chandrashekara. K, 2020 (pg. 465, que. Part-II-E (24))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	13	Demands for work interfere with family life	Chandrashekara. K, 2020 (pg. 466, que. Part-II-E (26))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	14	Family conflict	Chandrashekara. K, 2020 (pg. 466, que. Part-II-E (33))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	15	Lack of communication with higher authority	Chandrashekara. K, 2020 (pg. 466, que. Part-II-E (39))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	16	Criticisms in the office	Chandrashekara. K, 2020 (pg. 466, que. Part-II-E (34))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	17	Competition among colleagues	Chandrashekara. K, 2020 (pg. 466, que. Part-II-E (30))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
FCF	18	Inadequate pay/Payment of salary	Chandrashekara. K, 2020 (pg. 466, que. Part-II-E (47))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	19	There is no chance of getting a promotion/Increment	Chandrashekara. K, 2020 (pg. 466, que. Part-II-E (51))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test

	20	Inadequate financial incentives/bonuses	Chandrashekara. K, 2020 (pg. 466, que. Part-II-E (48))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	21	No recognition for the work done	Chandrashekara. K, 2020 (pg. 466, que. Part-II-E (55))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	22	No opportunities for intellectual growth	Chandrashekara. K, 2020 (pg. 466, que. Part-II-E (56))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
HI	23	Illness of the self/family member	Chandrashekara. K, 2020 (pg. 466, que. Part-II-E (27,28))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	24	Frequent anxiety attacks	Chandrashekara. K, 2020 (pg. 475, que. Part-IV-O (14))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	25	Sleep disturbances/Insomnia	Chandrashekara. K, 2020 (pg. 475, que. Part-IV-O (13))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	26	Frequent hospitalization/medical emergency	Chandrashekara. K, 2020 (pg. 475, que. Part-IV-O (18))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	27	Medical Conditions Caused by COVID-19	Developed by the Researcher	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test

OF	28	Inadequate staff	Chandrashekara. K, 2020 (pg. 467, que. Part-II-E (58))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	29	Poor workplace ambience/unclean working areas	Chandrashekara. K, 2020 (pg. 467, que. Part-II-E (64))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	30	Over-harsh discipline	Chandrashekara. K, 2020 (pg. 467, que. Part-II-E (66))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	31	Poorly designed, unsuitable or uncomfortable furniture	Chandrashekara. K, 2020 (pg. 467, que. Part-II-E (59))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	32	Problems in coping with new technology, techniques, ideas and challenges	Chandrashekara. K, 2020 (pg. 467, que. Part-II-E (65))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
GD	33	Prejudice from colleagues or superiors based on caste, religion, language, etc.	Chandrashekara. K, 2020 (pg. 466, que. Part-II-E (37))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	34	Gender is considered a constraint in performing complex tasks	BHARATHI T, 2019 (pg 205, Que. 17)	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	35	The company provides gender-neutral flexible work hours	BHARATHI T, 2019 (pg 205, Que. 15)	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test

	36	Unsympathetic management	Chandrashekara. K, 2020 (pg. 466, que. Part-II-E (35))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	37	Partiality or discrimination shown by the superiors	Chandrashekara. K, 2020 (pg. 465, que. Part-II-E (23))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
WE	38	Poor Organization policy and procedures	Chandrashekara. K, 2020 (pg. 467, que. Part-II-F (1))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	39	Poor Human Resource planning	Chandrashekara. K, 2020 (pg. 467, que. Part-II-F (2))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	40	Lack of Grievance Redressal System	Chandrashekara. K, 2020 (pg. 468, que. Part-II-F (24))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	41	Organization discipline	Chandrashekara. K, 2020 (pg. 468, que. Part-II-F (18))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test

Q-16 Employee's Productivity Factors:

Factors Causing Employee's Productivity	SL. No.	Statements	References	Tests Applied
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QW	1	Stress at work influences one's quality of working life.	Chandrashekar. K, 2020 (pg. 466, que. Part-II-E (45))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	2	The quality of my work is reduced by heavy work pressure.	Developed by the Researcher	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	3	The intense job demands lower the quality of work.	Developed by the Researcher	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	4	My quality of work has improved over time.	Chandrashekar. K, 2020 (pg. 470, que. Part-III-J (1))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
AB	5	I believe that a high absence rate results from my stressful job.	Developed by the Researcher	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	6	I see an increase in absences from work owing to my discontent with my employment.	Developed by the Researcher	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	7	Absence has an impact on my work and potential career.	Developed by the Researcher	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	8	I am aware that the health of a workforce is linked to productivity.	Developed by the Researcher	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test

PP	9	Stress at work reduces performance overall.	Developed by the Researcher	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	10	Detrimental influence on rewards and recognition.	Developed by the Researcher	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	11	Fear of losing one's job results from poor performance.	Developed by the Researcher	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	12	Work productivity depends on the quality of tasks I complete.	Chandrashekar. K, 2020 (pg. 472, que. Part-III-J (31))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
GE	13	Group involvement is significantly impacted by work stress.	Developed by the Researcher	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	14	Due to work stress, I sense improper communication with other teams.	Developed by the Researcher	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	15	My performance is impacted by low group engagement.	Developed by the Researcher	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	16	As an employee, I work with the employer to enhance my ability to cope with work stress.	Chandrashekar. K, 2020 (pg. 471, que. Part-III-J (11))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test

MSL	17	Stress at work prevented me from finishing my assignment before the deadline.	Developed by the Researcher	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	18	I put in additional time to do my task.	BHARATHI T, (2019). (pg 207. Que.76)	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	19	I miss deadlines, negatively affecting the company's commitment to its clients.	Developed by the Researcher	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	20	I feel stressed out trying to finish my task by the deadline.	Developed by the Researcher	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
	21	Moonlighting can reduce productivity and fatigue by balancing extra work with the main job.	Developed by the Researcher	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test

Q-17 The Impact of Work Stress on the Perceived Level of Employee Productivity:

SL. No.	Statements	References	Tests Applied
1	No satisfaction in the IT sector job due to stressful working conditions.	Chandrashekara. K, 2020 (pg. 473, que. Part-III-K (1))	Frequency distribution

2	The ability to reach the target for the present work has been increased.	Chandrashekara. K, 2020 (pg. 473, que. Part-III-K (4))	Frequency distribution
3	I have taken proactive steps to improve the organization's quality of services.	Chandrashekara. K, 2020 (pg. 473, que. Part-III-K (6))	Frequency distribution
4	The pressures of my IT job have been manageable so far.	Developed by the Researcher	Frequency distribution
5	I have developed the skill of making accurate judgments in times of crisis at the workplace to manage stress.	Chandrashekara. K, 2020 (pg. 473, que. Part-III-K (14))	Frequency distribution
6	I am satisfied with the overall quality of my working life.	Chandrashekara. K, 2020 (pg. 474, que. Part-III-K (29))	Frequency distribution
7	I feel stagnant in my job.	Chandrashekara. K, 2020 (pg. 474, que. Part-III-K (25))	Frequency distribution
8	I am eager to learn new ways of making work more productive under stress.	Chandrashekara. K, 2020 (pg. 471, que. Part-III-J (7))	Frequency distribution
9	I have enough authority and support to make the decisions necessary to accomplish assigned work under stressful situations.	Chandrashekara. K, 2020 (pg. 472, que. Part-III-J (34))	Frequency distribution

Q-18 Measurement of Employee's Job Satisfaction:

SL. No.	Statements	References	Tests Applied
1	Implementation of the changes and innovations	Chandrashekara. K, 2020 (pg. 470, que. Part-III-I (6))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
2	The working conditions of my organization (drinking water, washrooms, lighting, cleaning, ventilation, etc.)	Chandrashekara. K, 2020 (pg. 469, que. Part-III-I (2))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
3	I am satisfied with health and safety practices	BHARATHI T, 2019 (pg 206, Que.43)	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
4	The salary I get for my work experience	Chandrashekara. K, 2020 (pg. 470, que. Part-III-I (13))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
5	I need the provision of tools and technologies to do my job well.	Chandrashekara. K, 2020 (pg. 470, que. Part-III-I (14))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test
6	The level of salary offered by the organization commensurate with employee skill and experience	Chandrashekara. K, 2020 (pg. 470, que. Part-III-I (28))	Regression Analysis, Pearson's Correlation analysis, Kruskal-Wallis test

Q-19 To Consider Suitable to Reduce Stress at the Personal Level & Organisational Level:

SL. No.	Statements	References	Tests Applied
1	Engage in hobbies like reading, painting, writing, watching TV, etc.	Chandrashekara. K, 2020 (pg. 476, que. Part-IV-P (2))	Frequency distribution
2	Spend time on social media like WhatsApp, Facebook, Twitter etc.	Chandrashekara. K, 2020 (pg. 476, que. Part-IV-P (19))	Frequency distribution
3	Discussing situations with like-minded persons/Friends.	Chandrashekara. K, 2020 (pg. 476, que. Part-IV-P (13))	Frequency distribution
4	Learn to say 'No'.	Chandrashekara. K, 2020 (pg. 476, que. Part-IV-P (16))	Frequency distribution
5	Long sleep	Chandrashekara. K, 2020 (pg. 476, que. Part-IV-P (10))	Frequency distribution
6	Taking professional help	Chandrashekara. K, 2020 (pg. 477, que. Part-IV-P (28))	Frequency distribution
7	Career planning program	Chandrashekara. K, 2020 (pg. 477, que. Part-IV-P (42))	Frequency distribution
8	Encouraging to attend conference/seminar	Chandrashekara. K, 2020 (pg. 478, que. Part-IV-P (43))	Frequency distribution
9	Counselling/Psychiatric help	Chandrashekara. K, 2020 (pg. 478, que. Part-IV-P (51))	Frequency distribution

10	Recognition of work/ Encouragement	Chandrashekara. K, 2020 (pg. 477, que. Part-IV-P (39))	Frequency distribution
11	Off-site picnics / Sports events / Family tours organized by the company	Chandrashekara. K, 2020 (pg. 478, que. Part-IV-P (46))	Frequency distribution
12	Incentives and rewards	Chandrashekara. K, 2020 (pg. 478, que. Part-IV-P (52))	Frequency distribution

3.7 Explanation of the scale used:

The survey questions formed for the study were based on a meticulous examination of prior research on work stress and how it affects personnel in any field. Responses were considered using a standardized five-point Likert scale, encompassing responses ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) and vice versa, according to the questions asked.

Scale Origin: Although previous work had been done on the scale (Rook & Gardner, 1993; Rook and Hoch (1985), the most extensive testing was conducted by Rook and Fisher (1995). In that study, 35 items were generated based on a literature review and pretested on 281 undergraduate business students. The purification process across the pretext and study 1 sample resulted in a final nine-item scale. As described further below, evidence in support of the measure's convergent and discriminates validity was found (Rook, 1997). Reliability: Alphas of .88 and .82 were reported for the scale in studies 1 and 2, respectively (Rook & Fisher, 1995).

3.8 Data collection:

Data is information that will be collected from various sources. It is concerned with gathering accurate information about the problem. Both primary and secondary sources will be used for data collection.

3.8.1 Primary Data: Primary data is collected through a Non-Disguised Closed-Ended Questionnaire from employees working in companies in the IT sector in selected cities of Gujarat state, India. Data will be collected to obtain desired information through personal interviews and a structured questionnaire described further. Appropriate five-point Likert

scales ranging from 1 (strongly agree) to 5 (strongly disagree) are used to obtain responses on various study parameters. Appropriate Likert scales are used depending on the parameters/variables under study.

3.8.2 Secondary Data: Secondary data is collected from authentic and reliable sources, such as published research papers, articles, research reports, newspapers, and other reference material from various sources. The other data used for the study is taken from books, e-books, internet literature, magazines, journals, and electronic media, both online and offline.

3.9 Plan of Data Analysis:

The collected data from both primary and secondary sources will be tabulated in the form of tables. The data collected through the questionnaire will be analyzed in detail and divided into various categories of preferences by giving input to software like Statistical Package for Social Science (SPSS). This method will be used because it is the best instrument to identify, compare, describe and reach a conclusion. Data analysis involves converting a series of recorded observations and open-ended questions into descriptive statements and inferences about relationships. The researcher can observe the impact of work stress on employees' productivity in IT companies in selected cities in Gujarat. Data analysis using SPSS will give a meaningful conclusion for the research.

3.10 Data analysis techniques used:

The data analysis techniques employed in this study encompassed various statistical techniques aimed at comprehensively describing the relationships and patterns within the collected data. These techniques included reliability analysis, Pearson's correlation technique, Anova analysis, Kruskal-Wallis test, and Pearson's chi-square.

Reliability Analysis using Cronbach-Alpha: Reliability analysis is a fundamental statistical method employed to evaluate the consistency and stability of measurement scales. By assessing the extent to which a scale produces consistent results upon repeated measurements, researchers can determine the reliability of the instrument used to collect data.

The chi-square test determines whether a significant association exists between the two variables. It assesses whether the observed frequencies in cross-tabulation differ significantly from the frequencies that would be expected if they were not dependent. By testing the null

hypothesis, researchers could determine whether significant associations exist and draw interpretations about the study.

ANOVA (Analysis of Variance): ANOVA is a statistical method for examining how a dataset's group means differ. It evaluates whether the means of three or more groups differ statistically significantly. The variance among and between groups are two components into which the ANOVA divides the overall variation in the data. ANOVA compares these variances to ascertain whether the group mean differences are more significant than would be predicted by chance alone.

Regression analysis is a statistical method for determining the relationship between a dependent variable and one or more independent variables. By modelling the linear relationship between variables, researchers can use the independent variables' values as a guide to forecast the dependent variable's value. This study may use regression analysis to evaluate how different variables or predictors (such as workload, job insecurity, and organizational support) affect IT workers' work stress and productivity.

A normality test: The normality test is one statistical method for determining if a dataset has a normal distribution. Since many parametric statistical approaches require the data to be normally distributed, this test is essential for selecting which statistical techniques to use. The normality test was utilized to ascertain whether the data gathered from IT experts in this study showed a normal distribution. By looking at the data distribution, researchers could decide whether to use parametric or non-parametric statistical approaches for further analysis.

Kruskal-Wallis: A non-parametric statistical test called the Kruskal-Wallis test compares the medians of two or more independent samples. It is used when the one-way ANOVA assumptions are not satisfied, especially when the sample sizes are unequal, or the data are not regularly distributed. The Kruskal-Wallis test was used in this study to assess the effects of work stress on productivity across a range of demographic factors, including age, place of residence, level of education, and job title among IT workers. Researchers were able to determine the impact of work stress on productivity within each subgroup by evaluating whether there are any statistically significant differences in productivity levels among various demographic groups.