

**Relationship of Biometric Attendance System with Work Stress, Anxiety and Job
Satisfaction in Teachers**

Submitted By

Vigashini. V

(21PCP020)

Under the Guidance of

Dr. R. Govarthini

A Thesis submitted to



Avinashilingam Institute for Home Science and Higher Education for Women

In Partial Fulfillment of the Requirements for the Degree of

Master of Science in Clinical Psychology

(2021-2023)

May 2023

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Signature of the Head of the Department

Signature of the Guide

CERTIFICATE

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This is to certify that the project work entitled **Relationship of Biometric Attendance System with Work Stress, Anxiety and Job Satisfaction in Teachers**, submitted to Department of Clinical Psychology, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, in partial fulfilment of Master of Clinical Psychology, is the record of the original project work done by **Vigashini. V (21PCP020)** during the period of her study, under my supervision and guidance

Signature of the Guide

Signature of the Head of the Department

Submitted for the viva voice examination held on _____

Internal Examiner

External Examiner

DECLARATION

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I hereby declare that this project work entitled **Relationship of Biometric Attendance System with Work Stress, Anxiety and Job Satisfaction in Teachers**, submitted to Department of Clinical psychology, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore, in partial fulfilment of the requirement for the award of the **Degree of Master of Clinical Psychology** is the bonafide record of original project work done by **Vigashini. V (21PCP020)** during the period of her study under the supervision and guidance of **Dr. R. Govarthini.**, Department of Clinical psychology.

Place: Coimbatore

Signature of the Candidate

Date:

Vigashini. V

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ABSTRACT

Abstract

A study on Relationship of Biometric Attendance System with Work Stress, Anxiety and Job Satisfaction in Teachers was conducted among 100 teachers working in Panchayath Union Middle school at Theni. This study is done to find the relationship and comparison between work stress, anxiety and job satisfaction, and examine the level of work stress, anxiety and job satisfaction among teachers due to implementation of biometric attendance system. The following tools used for data collection were Work Stress Scale (L.J. Cornbach, 1951), Generalized Anxiety Disorder scale (GAD – 7, Spitzer, 2006) and Job Satisfaction Scale (Dr. B.C. Muthayya, 1973). The data was systematically analysed using SPSS 22.0.0. The results of the study shows that there is a significant difference in work stress, anxiety and job satisfaction among teachers. Whereas a significant difference was observed with the age of the teacher with respect to their level of anxiety. Pearson Correlation has been inferred between work stress and job satisfaction among teachers. However, there is no significant relationship between work stress and anxiety among teachers. Hence, it is important for school administration to consider and be aware of the potential stressors associated with biometric attendance systems and to take steps to mitigate them.

Keywords: Work Stress, Anxiety, Job Satisfaction

INTRODUCTION

Chapter - 1

Introduction

“Teaching is a noble profession that shapes the character, calibre and future of an individual. If people remember me as a good teacher, that will be the biggest honour to me”

Dr. A.P.J. Abdul Kalam, (Rajan, 2023)

Teachers

Teachers are individuals who facilitate learning and development in others by providing knowledge, guidance and support to achieve academic goals. They can work in a variety of educational settings, such as Schools, Universities, Vocational Training Centres and other learning institutions. They can specialize in different subjects or areas of expertise, and they work with students of different ages and backgrounds. The role of teacher is crucial.

Wati (2018) defined teacher as a professional education with the primary task of educating, teaching, guiding, directing, train, assess and evaluate learners from education, in primary and secondary education.

Characteristics of Teachers

To be an effective teacher, there are few common traits that teachers share though they convey their knowledge in a unique style in order to make the students understand the concepts clearly. There are various creative strategies in which the educators use to reach out to the children.

Expert communication skills. For instructors to successfully express knowledge, develop connections among students and foster a pleasant learning environment, communication skills are important. It also helps in better understanding of concepts and work given by, coordinating, building positive relationship with students and at the same time

enhance the student's communication skills too as they learn more through their observational skills.

Superior listening skills. The teachers have to accurately identify and assist the students in overcoming their own difficulties and issues. For this to happen, active listening is essential. The educator should ask for feedback, promote openness, make it simple for students to get in touch with students, and be alert anytime they listen and always strive to interpret nonverbal cues and interpret body language when you're speaking.

Extensive understanding of and passion for their subject. Along with being adaptable and flexible, it's critical to be ready for a variety of challenges and situations in the classroom. By knowing the students' strengths and weaknesses, teachers must make sure that they take into account how each of them can be impacted by the material they teach. It will help them become a more equipped instructor ultimately. So, the teacher should have an in-depth knowledge and understanding about the concept to deliver it to the students in a better way.

The ability to build caring relationships with students and friendly approachability. The teachers should make good relationship with the students to make them comfortable and ease their communication with teachers. This helps to share the children's level of understanding, difficulties they face and other issues to the teachers so that they could be helped by the teacher. When the teachers get along in a friendly way, the students will become more comfortable

Free of bias. Teacher will be in the role of instructing a very diverse spectrum of students as an educator. They have to analyse your students' necessities without bias in order to prevent prejudice and inequality and maintain fairness, which mandates that teachers

constantly reflect on their own opinions and presumptions about other individuals as well (Meer, 2022)

Roles and Responsibilities

Teachers have a variety of roles and responsibilities that plays a crucial role in enhancing the individual's knowledge, behaviour, values, skills, attitudes, respect, subject knowledge and other important life lessons that are necessary to succeed in life. Apart from this, teachers help in shaping the intellectual, emotional, and social development of students, and they have a significant impact on their students' lives. To make this happen, the teachers put in a lot of effort to navigate the challenges of academic and personal growth. They are:

- Planning and delivering lessons
- Assessing student learning
- Providing feedback and support
- Managing classroom behaviour
- Collaborating with colleagues and parents
- Guiding in choosing the career for the children

Famous Personalities in Teaching Field

There are various personalities in the field who have also contributed a lot for the education throughout the history. They have brought in significant changes that helped in the enhancement and better understanding of the concepts. Some individuals have formulated many teaching aids for conceptual learning.

Socrates. Socrates was a philosopher and teacher in ancient Greece who is credited with laying the groundwork for Western philosophy. His method of teaching, known as the Socratic method, involved asking questions to encourage critical thinking and reasoning.

Confucius. Confucius was a Chinese philosopher and teacher who lived over 2,000 years ago. His teachings emphasized the importance of moral values, education, and respect for authority.

Maria Montessori. An Italian physician and educator who created the Montessori educational approach, which places an emphasis on interactive learning, self-directed play, and teamwork.

Paulo Freire. Paulo Freire was a Brazilian educator and philosopher who is known for his work on critical pedagogy, a teaching approach that emphasizes the importance of social justice, equity, and the empowerment of marginalized communities.

John Dewey. John Dewey was an American philosopher, psychologist, and educational reformer who is known for his progressive ideas about education. He believed that education should be focused on the needs and interests of the individual student, and that learning should be an active, hands-on process.

Dr. Sarvepalli Radhakrishnan. An Indian philosopher. He was the country's first vice president (1952–1962) and second president (1966–1977). Major contributions were made by Dr. Radhakrishnan to Indian philosophy and education. He contributed to the development of an increased awareness of Indian thinking and culture in the West by writing extensively on Hinduism, Vedanta, and other intellectual systems. He was also important in the growth of the Indian educational system.

Teacher's Associations

There are many teacher's associations that run based on central and state government where teachers are members of the committee. This helps teachers to put forth their requirements, discuss the updates, changes, difficulties and other issues that can be helped to overcome for the betterment of the teachers and students. If there arises any problem, then the association legally takes steps to deal with the problem and at the same time, when the members of the committee are not cooperative or create any unpleasant scenario, then the action will be taken on them.

The authorized Teacher's Associations are:

Indian Association of Teachers Educators (IATE). Indian Association of Teacher Educators (IATE) was initiated on 25th Nov, 1950 at MS University of Baroda. IATE has plays a vital role in giving teacher educators in India and its adjacent nations a forum for fruitful discussions on a range of problems pertaining to the educational system and teacher education. It has made attempts to shape the nation's teacher education programme through influencing governmental decisions. Among IATE's regular characteristics are the organisation of yearly conferences, national and international seminars and workshops, as well as the production of its journal. Currently, the association has more than 2,000 members covering different regions of the country who contribute and keep the association active.

Tamil Nadu Higher Education Teachers Association (THETA). The motto of the Tamil Nadu Higher Education Teachers Association (THETA) is to look into the well-being of students, members of the public, and educators. Teachers in Tamil Nadu who share similar views and are employed by various public and private colleges and universities took the initiative to establish the Association. Teachers' needs, grievances, and inquiries will be addressed democratically and with the utmost honesty and integrity.

THETA's fundamental objective is to establish a flourishing Tamil Nadu and a powerful India, preserving the nation's democratic principles through Association Activities. This organisation stands for democratic principles that transcend every kind of diversity and differences. ALL faculty members appointed by Government Universities, Government Arts and Science Colleges, and Government Aided Colleges in Tamil Nadu are encouraged to apply for membership in THETA.

Indian International Teachers Association (IITA). It is a really supportive atmosphere that contributes to the complete growth of the nation builders—teachers, principals, and other stakeholders—was set up in 2007. It was established with a distinct vision under the capable direction of Mr. Nikhesh Sharma. IITA is the only institute in India that trains school administrators, and it collaborates with numerous businesses to organise conferences at both the national and international levels, train teachers, develop educational policies, stimulate the economy, and bolster society.

The teaching profession has seen significant transformation in recent years. Therefore, it is imperative to adapt to new developments, conditions, and scenarios. The biggest issue for educators has been adjusting to these changes, particularly the use of technology to engage youngsters.

Stress

Meaning and Definition of Stress

In the field of psychology, stress is defined as the psychological and physiological response to a perceived threat, challenge, or demand that exceeds a person's resources to cope (Scott, 2022). This response can trigger the release of hormones such as cortisol and adrenaline, leading to a range of physical and emotional symptoms, including increased heart rate, sweating, anxiety, and irritability. Any shift that creates strain on the body, mind, or emotions

is referred to be stress. Our body's reaction to anything that demands focus or action is stress. Everyone goes through periods of stress. However, how we handle stress has a significant impact on your general wellbeing.

Stress can be caused by various factors, including work, finances, relationships, health, and major life changes. While some stress is normal and can be helpful in motivating us to take action, chronic or excessive stress can have negative effects on our physical and mental health, including fatigue, insomnia, depression, and even heart disease. Managing stress through various coping strategies such as exercise, relaxation techniques, and social support can help reduce its impact on our lives.

American Psychiatric Association (APA, 2021), states that the feeling of psychological strain and uneasiness produced by situations of danger, threat, and loss of personal security or by internal conflicts, frustrations, loss of self-esteem, and grief.

According to World Health Organization (2022), stress can be defined as a state of worry or mental tension caused by a difficult situation. Stress is a natural human response that prompts us to address challenges and threats in our lives. Everyone experiences stress to some degree. The way we respond to stress, however, makes a big difference to our overall well-being.

Theories of Stress

The Fight or Flight Response Theory. This theory suggests that stress is a biological response to perceived threats, activating the sympathetic nervous system and preparing the body to either fight or flee the threat. (Cherry, 2022)

Fight-or-flight has three stages, they are:

The Warning Stage. The central nervous system is heightened during this phase as your body gets ready to either fight or run.

The Resistance Stage. It is when the body makes an effort to return to normal and recover from the first exaggerated fight-or-flight reaction.

The Exhaustion Stage. If the initial two stages take place frequently over time, as when under prolonged stress, the body may feel worn out and start to deteriorate.

Cognitive Appraisal Theory. According to Richard Lazarus, stress is a two-way process; it involves the production of stressors by the environment, and the response of an individual subjected to these stressors. His conception regarding stress led to the theory of cognitive appraisal (Lazarus, 1991).

Cognitive appraisal happens when a person weighs two important aspects that significantly influence how he responds to stress. These two elements consist of:

- The threat that stress poses to an individual.
- The evaluation of the resources needed to reduce, endure, or get rid of the stressful event and the stress it causes.

Primary appraisal. Typical inquiries are based on the level of stress and the situation that made them experience stress, the after effects of stress and the importance of making the situation stressful.

The second step in primary cognitive appraisal is to determine if the scenario or stressor is a threat, a challenge, or a loss-harm. This is done after addressing the first two issues. You perceive a stressful event as a danger when you perceive it as a factor that will hurt you in the future.

Secondary appraisal. The secondary evaluation actually takes place concurrently with the first appraisal, in contrast with various concepts where the phases often occur one after the other. In some cases, a primary appraisal is actually the result of a secondary appraisal. Although being exposed to a stressor frequently leads to a primary or secondary assessment, this is not necessarily the case with cognitive appraisal. One instance is when someone experiences a quick calamity, like an earthquake, and even though he doesn't have further time to consider it, he still feels distressed about the circumstance. (Sincero, 2012)

Work

Meaning and Definition of Work

Work is a purposeful activity that an individual engages in, whether it is paid or unpaid, such as volunteering, caregiving, or pursuing personal hobbies or interests. It can involve a range of activities such as employment, profession, business, trade, labour, or occupation that an individual engages in to earn a livelihood. Work is often associated with industries or businesses that involve manufacturing, construction, agriculture, or any other form of production.

Work is a fundamental aspect of human life that plays a significant role in shaping our identities, providing us with financial security, and contributing to the development and progress of society as a whole.

Work, from a sociological perspective, is anything that a person undertakes with a goal of being productive in a way that meets human needs. Work includes mental and/or physical exertion but does not always have to include an exchange of money. An occupation is a type of work that is performed for the express purpose of monetary reward and/or a wage (Sociological Definition & Analysis, 2017).

Work Stress

A relatively recent development in today's lifestyles is stress at work. The physical well-being of an individual is threatened by work or professional stress. Stress at work has a negative impact on organisations' health since it impacts the lives of organised workers.

Job stress is a chronic illness brought on by factors at work that impair an individual's performance and/or general mental and physical health. Depending on the specific situation, how long the person has been exposed to the stressors, and the level of stress itself, different people will exhibit different indicators of job stress. Insomnia, loss of focus, anxiety, absenteeism, low mood, drug or alcohol dependence, extreme rage, frustration, and family conflict are some of common job stress consequences. Diseases of the body include heart disease, migraines, headaches, stomach issues, and back pain issues.

According to organisational behaviour research, a person who is under a lot of stress for an extended period of time may experience serious health problems such as backaches, headaches, gastrointestinal problems, anxiety, and depression. Stress is also linked to behavioural changes such as excessive alcohol and tobacco use, nervous system illnesses, heart conditions, diabetes, and obesity, among others. Job stress is a direct result of job unhappiness that lowers performance and productivity (Velumani, 2018).

Definition

Work stress can be defined as a challenging combination of emotional and physical responses to job demands and work-related pressures (White, 2022).

Theories

Job Demand-Control Model. This model proposes that work stress is a function of the interaction between job demands and job control. High job demands and low job control can lead to high levels of work stress. It has grown to be one of the most well-known models for workload and stress at work and focuses two crucial elements:

Height of strain (demands). These standards, together with work rate, availability, deadline pressure, effort, and difficulty, are established at work. These requirements stand in for the psychological pressures at work.

Decision latitude (control). This relates to an employee's freedom to manage and plan his own work. This flexibility relates to the discretion that workers have over their responsibilities and how they wish to carry them out. It includes both decision-making power and competence.

It is possible to have low or high management competencies as well as work needs. According to the Job Requirement Management Model, the workload itself does not end up in significant psychological stress. It has to do with how demanding the job is while still giving the employee freedom to make choices. When you don't have much freedom to plan your work how you see fit, stress symptoms may result. An employee can frequently handle the burden with greater proficiency and retain more motivation if he can control the work himself (Mulder, 2022).

Effort-reward Imbalance Model (ERI). This model proposes that work stress arises when employees feel that their efforts are not adequately rewarded, either in terms of pay or recognition. It makes the argument that a lack of reciprocity between the high levels of effort put in at work and the meagre benefits received leads to significant negative emotions and

stress responses that have a negative long-term impact on health. Salary, opportunities for advancement, employment security, respect, and recognition are examples of rewards. The model's sociological and social psychological foundations which have their roots in human stress theory. This theory shows that individuals who are exposed to chronic stressor at work have heightened risks of developing depression, ischemic heart disease, and other health effects. The application of this theoretical model to expensive social interactions other than paid employment, such as volunteering, caring, or family work, as well as the policy implications of the current findings are examined (Siegrist, 2017).

Person-Environment Fit Model (PE). This model proposes that work stress arises when there is a mismatch between the individual's personal characteristics (such as personality, values, and skills) and the demands of the work environment.

Work environment is highly compatible, according to the person-environment fit theory. Kurt Lewin's dictum, "The behaviour is a function of person and environment," serves as the foundation for the PE concept. The person's interests, preferences, KSAs (knowledge, skills, and abilities), personality traits, values, and ambitions are among the traits that make up their individuality. The environmental influences may include things like professional expectations, work requirements, job requirements, employment features, organisational culture, and organisational values. The theory's fundamental premise is straightforward: if an employee work in an atmosphere that is most compatible, nice things like an improved attitude towards one's job, better performance, and less stress happen (Holmbeck et al., 2008).

Teachers and Stress

The implementation of biometric attendance systems for teacher attendance can be a source of stress for teachers. While the intention of such systems is to ensure accountability and attendance tracking, they can also have unintended consequences for teacher well-being.

One potential source of stress is the pressure to always be punctual and present, even if the teachers are dealing with their personal or professional issues that make it difficult for them to arrive on time. Even if the teachers have any valid reason for their absence or late arrival to school, it is not accepted, causing distress in the teachers.

There may also be concerns around privacy and data security with the use of biometric systems, which can add to teachers' stress levels. Teachers may worry that their biometric data could be compromised or misused, which could have negative consequences for their personal and professional lives (Ali et al., 2018).

Anxiety

Meaning and Definition of Anxiety

Anxiety refers to a feeling of worry, unease, or nervousness that arises in response to a perceived threat or danger, whether real or imagined. Anxiety can manifest in different ways, such as physical symptoms like sweating, trembling, and a rapid heartbeat, as well as cognitive symptoms like excessive worry, fear, and difficulty concentrating. It is a natural response to stress and can be helpful in certain situations, but when it becomes chronic or severe, it can interfere with daily activities and negatively impact mental and physical health. Anxiety disorders are a group of mental health conditions that are characterized by excessive and

persistent anxiety and can include generalized anxiety disorder, social anxiety disorder, panic disorder, and others (Jovanovic, 2018)

The American Psychological Association (APA, 2021) defines anxiety as “an emotion characterized by feelings of tension, worried thoughts and physical changes like increased blood pressure.”

Knowing the difference between normal feelings of anxiety and an anxiety disorder requiring medical attention can help a person identify and treat the condition. Anxiety is an emotion characterized by feelings of tension, worried thoughts, and physical changes like increased blood pressure.

People with anxiety disorders usually have recurring intrusive thoughts or concerns. They may avoid certain situations out of worry. They may also have physical symptoms such as sweating, trembling, dizziness, or a rapid heartbeat.

According to World Health Organization (WHO, 2022), Anxiety disorder is characterised by excessive fear and worry and related behavioural disturbances. Symptoms are severe enough to result in significant distress or significant impairment in functioning.

Theories

The cognitive theory of anxiety. This theory suggests that anxiety is a result of distorted, negative, or irrational thoughts and beliefs about oneself, the world, and the future. According to this theory, anxious individuals tend to overestimate the likelihood and severity of potential threats, while underestimating their ability to cope with them. These distorted cognitions can trigger and maintain feelings of anxiety. For example, someone with social anxiety might have the distorted belief that they will embarrass themselves in social situations, leading to fear and avoidance of social interactions. Someone with generalized anxiety disorder

may have a pervasive worry that something bad will happen and catastrophize minor events, leading to constant anxiety and tension (Themes, 2016).

Biological theory of anxiety. The theory suggests that anxiety is a complex disorder that arises from a combination of genetic, neurological, and environmental factors.

Anxiety is partly caused by genetic factors and biological processes in the body. Several studies have shown that anxiety disorders often run in families, indicating a possible genetic component.

Anxiety is also linked to the levels of certain neurotransmitters in the brain, particularly serotonin, which is involved in regulating mood and anxiety. Low levels of serotonin have been associated with an increased risk of anxiety disorders. Other neurotransmitters such as norepinephrine and GABA may also play a role in anxiety.

The body's stress response system, which involves the hypothalamus, pituitary gland, and adrenal glands, can also contribute to anxiety. When we perceive a threat or danger, the body releases stress hormones like cortisol and adrenaline, which prepare us to respond to the threat. However, if this system is overactive or if we are exposed to chronic stress, it can lead to excessive anxiety (Ankrom, 2021)

The Evolutionary Theory of Anxiety. Anxiety is a natural and adaptive response to potential threats and dangers in the environment. According to this theory, anxiety developed as a survival mechanism to help our ancestors avoid danger and increase their chances of survival. Anxiety triggers the "fight or flight" response, which prepares the body to either confront a threat or flee from it. This response includes increased heart rate, rapid breathing, and the release of stress hormones such as cortisol and adrenaline. The theory suggests that individuals who were more anxious in dangerous situations were more likely to survive and

pass on their genes to future generations. Over time, this trait became more prevalent in the population, leading to the development of anxiety as a common human trait (Meek, 2020).

Job Satisfaction

Meaning and Definition of Job Satisfaction

Job satisfaction refers to an individual's overall feelings of fulfilment and contentment with their job or work. It is the extent to which an employee feels positively about their work, colleagues, and organization. Job satisfaction is influenced by various factors such as the nature of the work, work-life balance, compensation and benefits, career growth opportunities, workplace relationships, and organizational culture. An employee with high job satisfaction tends to be more engaged, productive, and committed to their job, while an employee with low job satisfaction may experience stress, burnout, and decreased motivation at work (Spiceworks, 2021).

American Psychiatric Association (APA, 2022), states that job satisfaction is the attitude of a worker toward his or her job, often expressed as a hedonic response of liking or disliking the work itself, the rewards (pay, promotions, recognition), or the context (working conditions, colleagues).

World Health Organization (WHO, 2020) defines job satisfaction as "the pleasurable emotional state resulting from the appraisal of one's job or job experiences." This definition emphasizes the emotional and subjective aspects of job satisfaction, highlighting that it is a personal evaluation of one's work and work experiences. The WHO recognizes that job satisfaction is an important aspect of overall well-being and can impact an individual's physical and mental health. Therefore, promoting job satisfaction is a key component of improving overall health and well-being in the workplace.

Theories

Herzberg's Two-Factor Theory. Two-factor theory suggests that job satisfaction and dissatisfaction are caused by two different sets of factors:

Hygiene factor - hygiene factors, such as salary, working conditions, and company policies, can prevent dissatisfaction but do not necessarily lead to job satisfaction.

Motivators factor - motivators, such as achievement, recognition, and personal growth, are the factors that lead to job satisfaction (Nickerson, 2023).

Maslow's Hierarchy of Needs. Hierarchy theory proposes that job satisfaction is influenced by an individual's level of need satisfaction. Maslow's hierarchy of needs suggests that individuals have basic physiological and safety needs, as well as higher-level needs for social belonging, self-esteem, and self-actualization. Job satisfaction can be achieved when these needs are met through work (McLeod, 2023).

Biometric Attendance System

A biometric attendance system is a technology that uses unique physical or behavioural characteristics of individuals to identify and verify their attendance. Biometric systems are often used in workplaces, schools, and other institutions to automate attendance tracking and improve security. The common biometric technologies used in attendance systems include fingerprint scanning, facial recognition, iris recognition, voice recognition, and hand geometry. These systems typically use sensors to capture biometric data and algorithms to analyse and compare it to pre-stored data to verify the identity of the individual.

Biometric attendance systems offer several advantages over traditional methods such as paper-based attendance sheets or swipe cards. They are more accurate, reliable, and tamper-

proof, as biometric data is unique to each individual and difficult to fake or replicate. They can also save time and reduce administrative workload, as attendance data can be automatically recorded and tracked.

However, biometric attendance systems also raise concerns about privacy and security. Biometric data is sensitive personal information and must be protected against unauthorized access or misuse. Institutions using these systems must ensure they have robust security measures in place and comply with data protection regulations.

Relationship between biometric attendance system and work stress

The relationship between a biometric attendance system and work stress is complex and multifaceted.

On one hand, the implementation of a biometric attendance system can potentially reduce stress for both employees and employers. With a biometric system in place, there is less room for error or manipulation in timekeeping, which can alleviate the stress and anxiety associated with keeping track of attendance manually. Additionally, a biometric system can eliminate the need for employees to physically sign in or log their attendance, which can save time and reduce the stress of rushing to get to work on time.

However, on the other hand, the use of a biometric system can also lead to increased stress if it is implemented poorly or if it is used inappropriately. For example, if the system is unreliable or if there are technical glitches that prevent employees from logging their attendance, this can lead to frustration and stress. Additionally, if the system is used to monitor and track employees excessively, this can lead to feelings of mistrust and anxiety among employees, which can increase stress levels. At the same time, some institutions and companies solely rely on the biometric attendance where the workers are given salary based on their

attendance. They cannot be excused for being late by few minutes or if the machine has any technical glitch. Furthermore, the use of biometric data raises privacy concerns and can contribute to stress and anxiety in employees who are uncomfortable with the collection and use of their biometric information. Overall, the relationship between a biometric attendance system and work stress is complex and depends on various factors such as the implementation of the system, the culture of the workplace, and the attitudes and perceptions of employees towards the technology.

Relationship between biometric attendance system and anxiety

There is a potential relationship between biometric attendance systems and anxiety, although it can vary depending on the individual's experiences and circumstances.

Biometric attendance systems require individuals to provide a unique physical attribute, such as a fingerprint or facial recognition, in order to record their attendance. For some individuals, this process may create anxiety or discomfort because they may feel that their privacy is being invaded or that their personal information is being collected and stored without their consent. Additionally, some individuals may have had negative experiences with similar systems in the past, which may trigger anxiety or a sense of distrust.

However, it is important to note that not all individuals will experience anxiety or discomfort with biometric attendance systems. For some, the systems may be seen as convenient and efficient, and they may appreciate the added security that the systems provide.

Overall, the relationship between biometric attendance systems and anxiety depends on a range of individual factors. Employees become anxious before punching the attendance by thinking that they might not be on time and if they are not on time, their salary is reduced accordingly which might create an impact on their financial issues. These thoughts will be the

factors that increases the anxiety level in the individuals. The organizations should be sensitive to the potential anxiety that these systems may create and should take steps to mitigate any negative impacts on individuals. This may include providing clear information about how the systems work, obtaining consent from employees, and offering alternative attendance recording methods for those who do not wish to use the biometric system.

Relationship between biometric attendance system and job satisfaction

The relationship between a biometric attendance system and job satisfaction may depend on various factors.

On one hand, biometric attendance systems can provide a more accurate and efficient way of tracking employee attendance, which can reduce the workload of staffs and improve overall workplace productivity. This can potentially lead to a positive impact on job satisfaction, as employees may feel that their time is being more effectively managed and that they are being compensated fairly for their work.

On the other hand, some employees may view biometric attendance systems can lead to negative feelings towards the system and potentially impact job satisfaction. Additionally, if the system is not implemented properly or causes issues with accuracy or reliability, this can lead to frustration and dissatisfaction among employees. Overall, the relationship between a biometric attendance system and job satisfaction can be influenced by a variety of factors, including employee perceptions of the system, the effectiveness of its implementation, and how it is used in conjunction with other workplace policies and practices.

Need for the Study

Attendance is a part of all organization's and/or institution's norms to record the presence of a person. Although it is highly essential in maintaining record, the biometric attendance system is the most recent widespread method for making one's presence based on their fingerprint, iris scan or facial traits. The modern technology has increased work stress and anxiety, is being developed among many working men and women.

The use of biometric attendance systems in the workplace has become increasingly popular in recent years. Biometric systems use unique physical characteristics such as fingerprints, facial recognition, or iris scans to verify the identity of employees and record their attendance. While these systems have benefits such as accuracy and efficiency, they may also have unintended consequences on employees' work stress, anxiety, and job satisfaction.

Studying the relationship between biometric attendance systems and work stress, anxiety, and job satisfaction is important for several reasons. Firstly, work stress and anxiety are major concerns in the modern workplace, with significant impacts on employee health and wellbeing, as well as organizational productivity and performance. Secondly, job satisfaction is a crucial factor in employee retention, turnover, and engagement. Understanding how biometric attendance systems affect these outcomes can help organizations to better manage their workforce and improve employee wellbeing and job satisfaction.

The results of this research could inform organizational policies and practices around the use of biometric attendance systems, as well as contribute to the wider literature on work stress, anxiety, and job satisfaction. Henceforth, this study helps us to enlighten the effects of stress and anxiety resulting it' s advance effect on job satisfaction. The current study helps to reduce the stress and anxiety and improving job satisfaction in their work environment.

REVIEW OF LITERATURE

Chapter - 2

Review of Literature

Work Stress

Takepoto and Umrani (2022) conducted a study on biometric attendance management system: A University perspective. The purpose of this study was to examine the advantages and disadvantages of biometric attendance management system in perspective of universities of Pakistan among staffs. Findings displayed that the biometric attendance management system has certain advantages and disadvantages. Advantages encompassed real-time in and out tracking, easy attendance record maintenance, work performance improvement, and controlling employee absenteeism. Conversely, disadvantages comprised job stress, disturbance due to load shedding of electricity, fear of salary deduction, and delay reaching to classes.

Thomas and Zacharias (2022) did a study to identify the relationship between demographic variables of the employees and job stress due to biometric Attendance Punching among 154 IT employees in Info Park, Kerala, India. The study identified that most of the employees working in IT parks are facing stress due to the implementation of biometric attendance system. Female employees are found to be more stressful than male employees. It was also identified that stress level of employees due to biometric attendance is independent of educational qualification, experience, age and department in which employees are working but it is associated with the gender of the employees. Female employees are found to be more stressful than male employees. Biometric attendance and the salary of the employees are linked in almost all the IT firms.

The study was investigated on the relationship between stress and performance among teachers of the private and government high schools located in district Bannu, KP, Pakistan by Khan, Rahman, Zahid and Makki (2018) among 96 teachers were chosen through random sampling. The estimation of the collected data through correlation unveiled that stress is correlated with the performance of the schools' teachers using Cronbach's alpha scale. The findings of the study endorse that increasing stress improve the performance of teachers in schools. That increasing stress on teachers such as (establishing monitoring teams to monitor the teacher attendance, installation of biometric system, monthly performance evaluation, checking lesson plan of the classes, improving the eminence of teaching and give training to the teachers) uplifts the performance of teachers and schools' worth.

An investigation on identifying work stress factors among faculty of higher academic institutions in Oman was studied by Shrivastava, Shukla and Shrivastava (2015) using Cronbach's alpha test was conducted on with the questionnaire containing 23 items where dependent variable work stress is distributed on a 5-point Likert scale among the academic staff of higher education institutions in Oman from different public and private institutions consisting both male and female participants. The results showed that 34% reported that they often have stress, where as 60% reported that they feel stressed sometimes during their work and no one replied that there is no work pressure (0% response). The mean shows that the existence of work pressure is more than 50% of time.

Dolia (2014) did a study to analyse the stress and job satisfaction among school teachers of different subjects of Uttarakhand and to study the differences in stress and job satisfaction among school teachers of different subjects. The sample of 200 teachers were selected randomly each from science, language, social science and physical education from thirteen districts of Uttarakhand. The study revealed that there were significant differences in stress

among school teachers of different. The result of the study further revealed that there was significant mean difference in stress of school teachers of different subjects. The result of the study also revealed that there was insignificant difference obtained in stress of school teachers of science & social science, language & social science.

Aftab (2013) Investigation into the relationship among teacher`s occupational stress job satisfaction work values and pupil control ideology among 608 teachers (281 (46.22%) male and 327 (53.78% female) from 41 schools of eastern and western U.P. of India. Teachers Occupational Stress Scale, Teachers Job Satisfaction Scale and Work Values Scale were used to analyse the data. The results of the study show that the majority of secondary school teachers' experience less stress toward their occupation. Female teachers are facing less occupational stress as compared to their male complements. The study further concludes that 10% of the variance in occupational stress of teachers' can be explained by the combined influence of the demographic variables. It is apparent from the results that teacher stress is actually a multiple-factor construct, and these factors are significantly related with each other.

Mithiya (2013) did a study on Impact of stress on job performance a study among women school teachers in Dindigul district with 627 samples chosen by Stratified random sampling method. Interview schedule is the main tool used to collect the pertinent data from the selected sample respondents. The results showed that the correlation coefficient of social stressors with Teaching experience and teaching methods are negative and significant at 0.01 per cent level and the relationship between personal, work characters and job satisfaction revealed that marital status, Experience, Number of teachers and Teaching methods though negative, but still no significant relationship with job satisfaction is evident.

Anxiety

Peele and Wolf (2021) did a study that investigated how early childhood education teacher's (N = 444) depressive and anxiety symptoms predicted their professional well-being outcomes and absenteeism over the course of one school year in Ghana. Higher anxiety and depressive symptoms predicted lower job motivation and job satisfaction and higher levels of emotional exhaustion at the end of the school year. Increased depressive symptoms were further associated with more days absent over the course of the school year. Findings point to the importance of considering teacher's mental health for early educational quality. Implications for policy and practice are discussed.

Finning, Ukoumunne, Ford, Danielson-Waters, Shaw, Romero De Jager and Moore (2019) did a study on the association between anxiety and poor attendance at school—a systematic review. A total of 4930 articles were screened. Eleven studies from six countries across North America, Europe and Asia, were included. School attendance was categorised into: (a) absenteeism (i.e., total absences), (b) excused/medical absences, (c) unexcused absences/truancy and (d) school refusal. Findings from eight studies suggested associations between truancy and any anxiety disorder, as well as social and generalised anxiety. Results also suggested cross-sectional associations between school refusal and separation, generalised and social anxiety disorders, as well as simple phobia.

A pilot study was conducted to examine organizational cultural values and acceptance of biometric identify. Authentication Systems by Gupta, Dasgupta and Purushothaman (2019) showed that the influence of espoused organizational culture variables on performance expectancy, effort expectancy, social influence, facilitating conditions, attitude, and anxiety were found to be significant. Data for this study was collected from 150 people who used the organization's biometric identity authentication system which had iris scanners and finger print authentication system for identity

authentication of faculty, staff, and students to secure access to their labs and to note the attendance.

Rajamanickam (2019) did a study on anxiety and stress of the student teachers of Theni district in relation to their academic achievement and certain demographic variable using general information questionnaire, student teacher anxiety scale (STAS) and student teacher stress scale (STSS). 900 teachers were chosen from 11 colleges through Stratified Random Sampling. The findings showed that the mean anxiety scores of male and female student teachers do not differ significantly, but the male student teachers are slightly higher than the female student teachers in their level of anxiety. Overall, it indicates that the teachers have above average level of Anxiety and stress

Bohare and Ramnath, B (2018) did a comparative study of adjustment stress and anxiety among public school teachers and private school teachers in Aurangabad district from 400 samples. The samples were chosen through random sampling method. 200 samples were chosen from public school (100 male and 100 female) and 200 samples were chosen from private school (100 male and 100 female). The age was limited from 30 years to 50 years. Two scales were used in this study - Anxiety Depression Stress Scale ADSS develop by Pallavi Bhatnagar and Mangal Teacher Adjustment 97 inventory MATI develop by S. K. Mangal. The results showed that Private teachers had significantly high anxiety and stress than the public teachers. Female teachers had significantly high anxiety and stress than the male teachers and Positive correlation was found between stress and anxiety of school teachers.

Demir (2018) studied the relationship between psychological capital and stress, anxiety, burnout, job satisfaction, and job involvement among 335 teachers from 27 schools using the cluster sampling method. The scales used to for data collection were Psychological Capital Scale, Stress Scale, Anxiety Scale, Burnout Scale, Job Satisfaction Scale, and Job Involvement. The findings showed that when teacher's psychological capitals increase, their stress levels

decrease. Hence, psychological capital has a negative impact on anxiety levels of teachers through the full mediation effect of stress. Psychological capital negatively affects teacher's burnout levels through the partial mediation effects of stress and anxiety. Psychological capital has a positive effect on the job involvement levels of teachers through the partial mediation effects of stress, anxiety, burnout, and job satisfaction.

Kumari (2017) did research on anxiety in women teachers and its impact on adjustment and academic achievement of secondary school children. 212 children (114 girls and 98 boys) studying in grade 8 and 212 women teachers (88 married and 124 unmarried) were chosen based on simple random sampling. Three standardized tools were used in the investigation. They are Sinha's Comprehensive Anxiety Scale (1968) for measuring Anxiety in women teachers, Sinha and Singh's Adjustment Inventory for School Students (AISS) 2013 for studying the adjustment of secondary schools and personal data were collected to understand the personal problems that contributes to anxiety in teachers. The results showed that there is no significant association between anxiety level of women teachers and the adjustment of secondary school children. But there was strong association between the adjustment level of the own children of the working women teachers with their anxiety level.

Seethapathi and Venkata (2005) did a study on stress, anxiety and burnout in relation to performance of primary school teachers. The investigation was carried out in three phases among 400 primary school teachers from Vishakhapatnam. In the first phase the researcher reviewed the related literature and previous research studies. To measure stress, anxiety and burnout, the tools developed by Rao (1994), Sameul E Krug (1976) and Christina Maslach (1981). The findings showed that there is no significant influence of the gender on the stress and stress components. The anxiety among male teachers is higher as compared to female teachers. With regard to anxiety, male teachers are in greater low self-control, emotional instability, and apprehension as compared to their female counterparts.

Job Satisfaction

Manvi (2019) conducted a study among government and private secondary school teacher's level of job satisfaction, to identify the factors affecting job satisfaction, to assess the influence of job satisfaction on work performance in Delhi NCR from 500 school teachers (250 each from private and public secondary schools) through questionnaire regarding to measure the level of job satisfaction of government and private secondary school teachers. The result showed that there is a significant difference of job satisfaction on the work performance of teachers working at government and private secondary schools and there is a significant role of work environment factors towards job satisfaction and work performance of teachers working in government and private secondary schools.

Sheokan and Uma (2019) did a comparative study on job satisfaction among primary school teachers working in government and private schools in Kaithal District Haryana. Job satisfaction of the teachers of the selected schools has been assessed through interview schedules, in-depth discussions, and observation by the researcher. The results showed that Higher the age of private school teachers lower is their satisfaction with the organisation, male private school teachers are more satisfied than female counterparts, higher the educational qualification of the private school teachers lower is their satisfaction and higher the income, higher is the satisfaction of private school teachers.

Ali, Mustafa and Khan (2018) conducted a study on relationship of biometric attendance system with performance, job related stress and satisfaction of university teachers in Pakistan among 150 employees through stratified random sampling. A self-administered structured questionnaire was developed for data collection. 67% were male and 33 were female. 87% respondents agreed that biometric system ensures teachers attendance on time. The study

concludes that biometric system has a higher influence on the teachers' attendance schedule and their performance.

Monis (2017) did a study of the relationship of motivation, job satisfaction and absenteeism among 333 participants in Bangkok chosen through simple random sampling method. Self – administering questionnaire that has questions related to motivation, job satisfaction and absenteeism was given. The results of the study showed that there is significant negative correlation of job satisfaction and absenteeism, the significant negative relationship of motivation and absenteeism and the positive relationship of motivation and job satisfaction.

Yang and Hwang (2014) did a study on personality traits and simultaneous reciprocal influences between job performance and job satisfaction in 392 participants. The relationships among three important variables in the management of Chinese employees: personality trait, job performance and job satisfaction were studied. A causal model is developed to hypothesize how personality trait affects job performance and satisfaction and how job performance and satisfaction simultaneously affect each other. The results showed that job performance and job satisfaction have a bilateral relationship that is simultaneously influential. All Big Five personality traits significantly influence job performance, with agreeableness showing the greatest effect, followed by extraversion. Extraversion is the only personality trait that shows a significant influence over job satisfaction.

Shinde and Jagannath, J (2012) did a comparative study on job satisfaction and occupational stress of municipal corporation primary school and private primary school teachers in Aurangabad city from 400 respondents (200 from each school) with equal proportion of male and female who are between 25 to 45 years of age and 10 to 15 years of experience. Job Satisfaction Scale and Occupational Stress Index were used to collect the data. The results showed that Occupational stress and Job satisfaction are practically uncorrelated.

The examination of the correlations of Age and Experience with Occupational stress and Job satisfaction was not carried out, since the sample had restricted ranges of experience

Dahiya and Neetu (2011) did a study on adjustment of secondary school teachers in relation to their job stress, job involvement and job satisfaction among 500 (male and female equally distributed) teachers from two districts of Haryana chosen by stratified random sampling using Mangal Teacher Adjustment Inventory, Occupational Stress Index, Job Involvement Scale and Job Satisfaction Scale for Primary and Secondary Teachers. The results showed that the adjustment and job stress of secondary school teachers had negative correlation. In case of male and female secondary school teacher's, adjustment and job stress had negative correlation. It was also found that adjustment and job satisfaction of secondary school teachers had positive correlation.

METHOD

Chapter - 3

Method

The procedure pertaining to the present study namely, relationship of biometric attendance system with work stress, anxiety and job satisfaction among teachers was carried out involving the following steps:

- Objectives
- Hypotheses
- Area
- Sample
- Inclusion criteria
- Exclusion criteria
- Tools
- Procedure
- Analysis of data

Objectives

The study used purposive sampling technique to determine the regulatory focus on teachers and the objectives are:

- To examine the relationship between work stress, anxiety and job satisfaction.
- To find out the level of work stress, anxiety and job satisfaction between genders.
- To assess the level of work stress among teachers
- To assess the level of anxiety among teachers
- To assess the level of job satisfaction among teachers.

Hypotheses

The hypotheses are stated as Alternative Hypotheses, so that they can be either accepted or rejected, based on the results.

- H1: There will be significant difference in work stress, anxiety and job satisfaction among teachers.
- H2: There will be significant difference between age of the teachers and anxiety
- H3: There will be significant relationship in work stress and anxiety among teachers
- H4: There will be significant relationship in work stress and job satisfaction among teachers

Area

- Teachers from Theni district who are willing to participate were approached.
- The population for the present research comprised of teachers who are working in schools that have biometric attendance system.
- A sample of teachers comprising of male and female were selected by purposive sampling method.

Sample

The sample for present study included teachers from Theni district. A total of one hundred participants (N= 100) 50% of male teachers and 50% of female teachers in the age range of 35 to 59 were selected by random sampling method.

Inclusion Criteria.

- Both male and female teachers were included in the study.
- Sample from both married and unmarried people.
- Participant who consented and showed willingness to participate in the study.

- Teaching Professionals.

Exclusion criteria

- Participants who are not willing to participate in the study.
- Other than teaching professionals were excluded.
- Teachers who are experiencing other physiological symptoms were excluded.

Tools

The following tools were used for data collection.

Work Stress Scale

Work Stress Scale was developed by Cronbach (1951). The scale consists of 8 items. The reliability of the scale is 0.80. It is rated by choosing the options “Never”, “Rarely”, “Sometimes”, “Often” and “Very often”. The scoring is done by adding the scored response on the questionnaire. The scores are interpreted using the norms provided by the author which ranges between relatively calm, fairly low, moderate levels of work stress, severe levels of work stress and potentially dangerous levels of work stress.

Generalized Anxiety Disorder Scale (GAD – 7)

Generalized Anxiety Disorder Scale (GAD – 7) was developed by Spitzer (2006). The scale consists of 7 items. The reliability of the scale is 0.80. The participants are asked to choose the any one of the options “Not at all”, “Several days”, “More than half the days” and “Nearly every day”. The scoring is done by adding the numbers given in the questionnaire. The scores are interpreted using the norms provided by the author which ranges between low, medium and high.

Job Satisfaction Scale

Job Satisfaction Scale was developed by Muthayya (1973). It consists of 34 items measuring job satisfaction. Each item is presented by four response alternatives namely “Agree”, “Disagree”, “Not Sure” and “Not applicable”. This scale has split-half reliability of 0.84. The scores are interpreted using the norms provided by the author which ranges between lower job dissatisfaction and higher job dissatisfaction.

Procedure

The participants were chosen on the basis of inclusion and exclusion criteria. They were assessed using Work Stress Scale by Cronbach (1951), Generalized Anxiety Disorder Scale (GAD – 7) by Spitzer (2006) and Job Satisfaction Questionnaire by Muthayya (1973). Participants were asked to fill each statement which suits them the best. The scoring is done according to scoring key and interpreted using the norms provided by authors.

Analysis of data

- The data was analysed using Statistical Package for the Social Sciences (SPSS - 22).
- Product moment Correlation was used to find the relationship between Work Stress, Anxiety and Job Satisfaction among teachers, One-Sample Test and Analysis of Variance was computed to identify the significant differences.

Institutional Human Ethics Committee

As the study involves human subjects, all procedures described in the study was reviewed and approved by the Institutional Human Ethics Committee, Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore. The approval number for the research purpose is **AUW/IHEC/CP-22-23/XMT-19**.

RESULTS AND DISCUSSION

Chapter - 4

Results and Discussions

The results of the study “Relationship of Biometric Attendance System with Work Stress, Anxiety and Job Satisfaction in Teachers” is tabulated and discussed below. The study involves 100 participants (male = 49 and female = 51) from Theni district, chosen by purposive sampling technique. The participants were assessed using work stress scale, generalized anxiety disorder scale and job satisfaction scale. The data was analysed using SPSS software version 22. Initially, the distribution analysis was conducted to understand the distribution of the variables in the sample. The results are tabulated below.

For clear understanding, this chapter has been included following tables.

Table 1: The Demographic Details of the teachers

Table 2: Level of Work Stress among teachers

Table 3: Level of Anxiety among teachers

Table 4: Level of Job Satisfaction among teachers

Table 5: T test to find out gender difference among teachers

Table 6: Analysis of Variance between Age and Anxiety

Table 7: Correlation between Work Stress and Anxiety among teachers

Table 8: Correlation between Work Stress and Job Satisfaction among teachers

Table 1:*Demographic details of the teachers*

N = 100

Demographic Details	Options	Frequency	Percentage
Gender	Male	49	49
	Female	51	51
Age	21-30	10	10
	31-40	20	20
	41-50	54	54
	51-60	16	16
Marital Status	Married	87	87
	Unmarried	13	13
No. of Children	No Children	15	15
	Only child	25	25
	Two Children	54	54
	Three Children	5	5
	Four Children	1	1
Native	Theni	100	100
Physical Conditions			
BP	Normal Bp	89	89
	High Bp	11	11
Diabetes	No Diabetes	84	84
	Diabetic	16	16

Table 1 shows the demographic details of the teachers involving various aspects of information gathered. A total of 100 teachers with 49% were male participants, whereas 51% were female participants. Ten percent of the participants belongs to the age of 21-30, 20% of the participants belongs to the age of 31-40, 54% of the participants belongs to the age of 41-50 and 16% of the participants belongs to the age of 51-60. A majority of 87% of the participants were married and only 13% were unmarried. Among 100 participants, 15% had no children, 25% had single child, 54% had 2 children, 5% had 3 children and 1% had 4 children. All 100% participant's native was Theni district. In physical conditions, 89% of the participants have normal blood pressure, 11% have high blood pressure, 84% have no diabetes and 16% have diabetes. From the collected demographic details from the teachers implies that their age, marital status, number of children, physical conditions, area of residence all contribute to some degree of increased level of work stress, and anxiety resulting in poorer the level of job satisfaction among the participants. However, this study tries to understand the existing relationship between these above mentioned demographic details of the participants and its effects over their work efficiency and job satisfaction.

Table: 2*Level of work stress among teachers*

N = 100

Level of Work stress	Gender	Frequency	Percent
Relatively calm	Male	19	19
	Female	21	21
Fairly low level of work stress	Male	23	23
	Female	14	14
Moderate level of work stress	Male	7	7
	Female	16	16

***Percentages are rounded off**

Table 2 shows the level of work stress among teachers. Out of 100 participants, 19% of male and 21% of female are relatively calm which means they do not face work stress. This shows that they have good mental health and are able to deal with stressful situations more effectively. Twenty percent of male participants and 14% of female participants have fairly low level of work stress which shows that teachers have the ability to manage their workload at school and maintain a healthy work-life balance but sometimes they experience frustration or burnout that can be managed easily. Only 7% of male and 16% of female participants have moderate level of work stress. Moderate levels of work stress can be manageable and even beneficial in some cases, but it is important to recognize that prolonged exposure to stress can have negative consequences on an individual's health and well-being which can lead to symptoms of irritability, fatigue, and physical health problems. Teachers experiencing moderate levels of work stress can develop effective coping strategies and to seek support when

needed. This can involve techniques such as time management, prioritization, exercise, mindfulness, and seeking professional help if necessary.

Figure: 1 Level of work stress among male and female participants

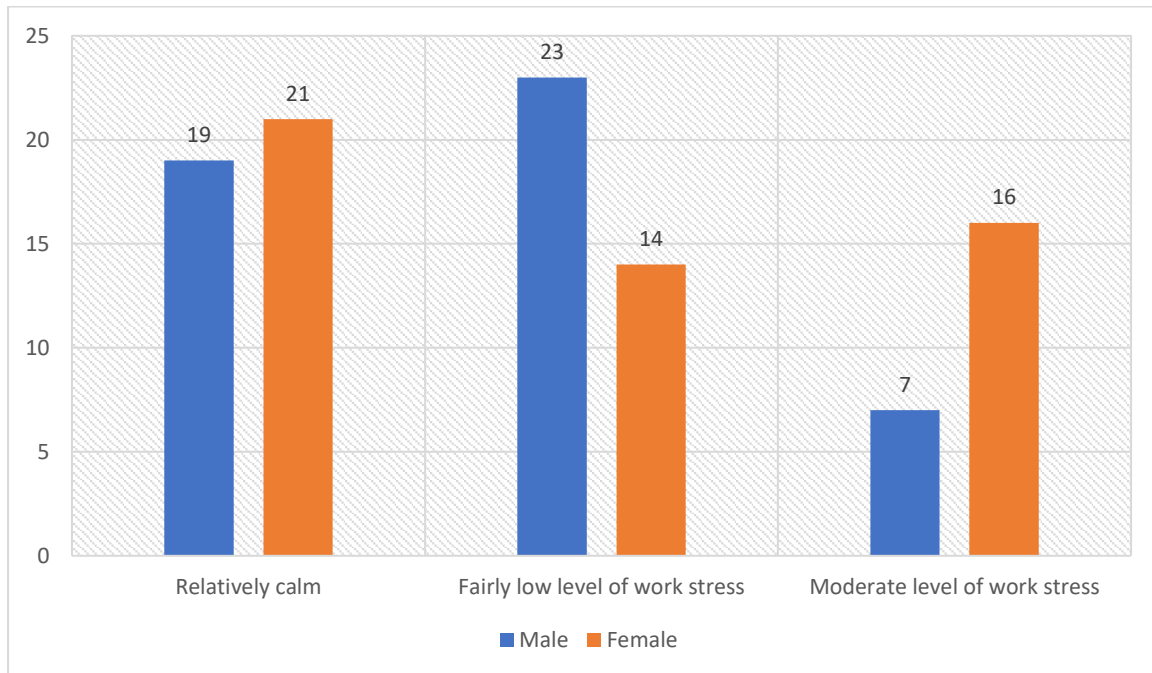


Table: 3*Level of anxiety among teachers*

N = 100

Level of anxiety	Gender	Frequency	Percent
Mild	Male	17	17
	Female	23	23
Moderate	Male	20	20
	Female	23	23
Severe	Male	12	12
	Female	5	5

***Percentages are rounded off**

Table 3 shows the level of anxiety of both male and female participants. Among 100 participants, 17% of male and 23% of female participants have mild level of anxiety. From this it is clear that there is a positive indication of an individual's overall mental and emotional well-being. It suggests that the individual is able to manage their daily stresses and challenges without experiencing significant levels of worry, fear, or panic due to biometric attendance system. A majority of 20% of male and 23% of female participants have moderate level of anxiety. It is a common experience that many people go through in response to various stressors, such as work demands, personal responsibilities, or significant life changes but it helps to motivate individuals to take action, problem-solve, and prepare for potential challenges. Teachers may worry about the consequences of not adhering to the attendance

policies or being penalized for late attendance or absenteeism. Moderate level of anxiety is a common experience that can be managed effectively with appropriate strategies and support. Only 12% of male and 5% of female participants have severe level of anxiety. A severe level of anxiety among teachers can have significant implications for both the individuals and the educational system as a whole. One of the contributing factors - biometric attendance system that is linked to their salary, they might get anxious worry about the salary deduction due to absenteeism. Other factors like workload demands, challenging student behaviours, lack of support or resources, and a sense of isolation or burnout can also contribute to severe anxiety among teachers which can interfere in performing the work.

Figure: 2 Level of anxiety among male and female participants

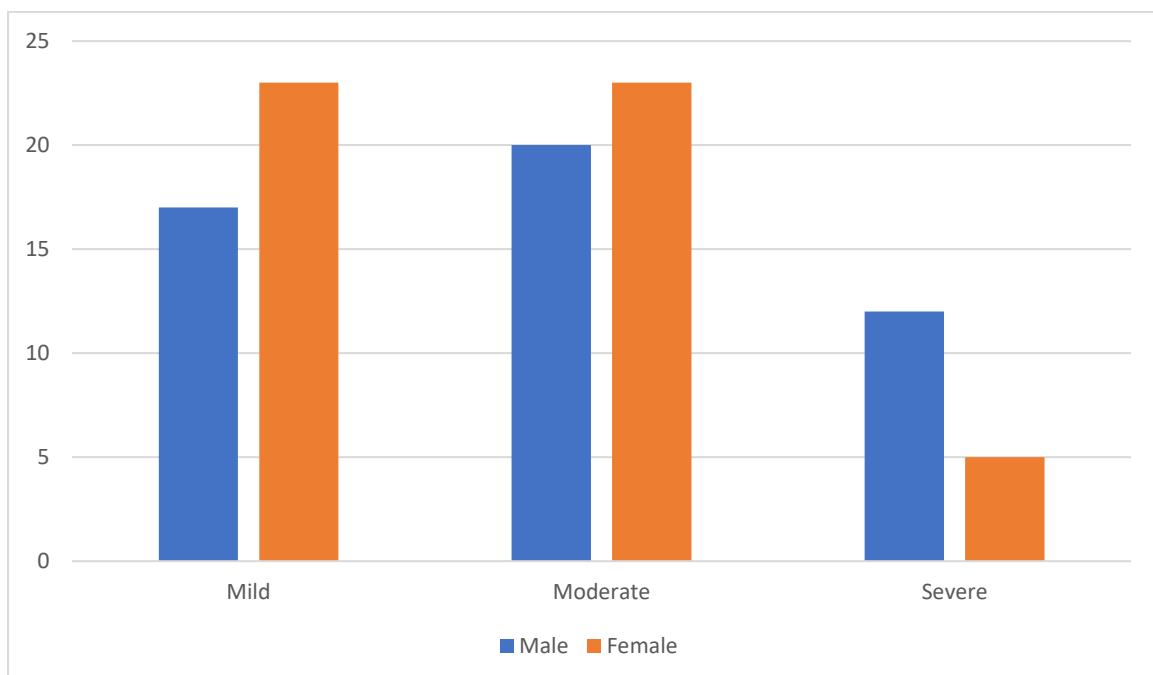


Table: 4*Level of job satisfaction among teachers*

N = 100

Level of job satisfaction	Gender	Frequency	Percent
Lower job dissatisfaction	Female	46	46
	Male	49	49
Higher job dissatisfaction	Female	5	5
	Male	0	0

***Percentages are rounded off**

Table 4 shows the level of job satisfaction of both male and female participants. From a total of 100 participants, a majority of 46% female and 49% male participants have lower level of job dissatisfaction which shows that lower level of job dissatisfaction among teachers is a positive indicator that teachers are gratified with their job and work environment. It suggests that they find their work fulfilling and rewarding and are able to achieve a sense of purpose and satisfaction from their job. To maintain a lower level of job dissatisfaction among teachers, schools and educational institutions can create a positive and supportive work environment, providing opportunities for professional development and growth, offering competitive salaries and benefits, and ensuring that teachers have the resources and support they need to do their job effectively. From the data collected, 0% of male participants and only 5% of female participants have severe level of anxiety. This might be due to their thoughts where they think that they would miss out their attendance or something unexpected might

happen in the future It can be a serious concern for both the individual and the educational system.

Figure: 3 Level of job satisfaction among male and female participants

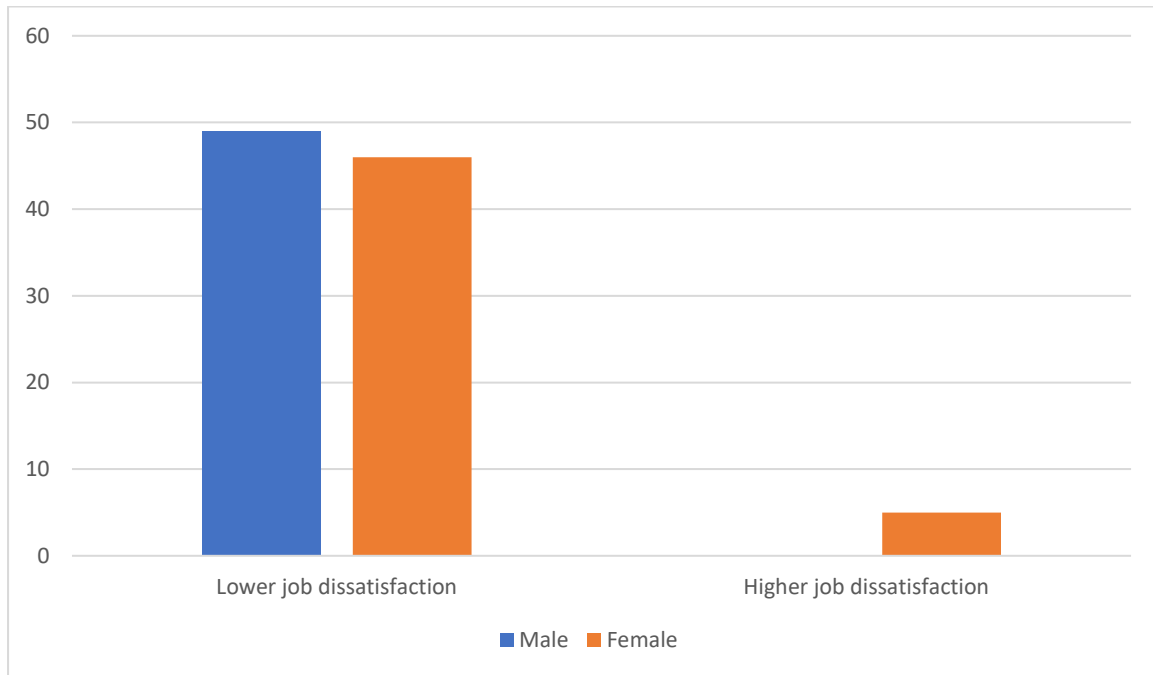


Table: 5

T test to find out gender difference among teachers

N = 100

	t	df	p	Mean Difference
Work stress	40.50	99	.000	16.64
Anxiety	22.44	99	.000	6.97
Job satisfaction	27.86	99	.000	21.61

Table 5 shows the comparison of work stress, anxiety and job satisfaction with gender. It is inferred that there is a significant gender difference at 0.01 level with work stress, anxiety and job satisfaction. This shows that work stress, anxiety, and job satisfaction are all interconnected for teachers. Both male and female participants experience a work stress, anxiety, and job satisfaction which shows that they experience time pressure, work load and challenges from students and the management that in turn affects their job satisfaction. On the other hand, biometric attendance system adds on a burden to the teachers to be on time, if not a particular sum of money will be deducted from their salary. This might also be a reason that provokes anxiety.

Hence, the Hypothesis, “*H1: There will be significant gender differences in work stress, anxiety and job satisfaction among teachers*” is **accepted**

Table: 6*Analysis of Variance between Age and Anxiety*

N = 100

Variable		Sum of Squares	df	Mean Square	F	Sig.
Anxiety	Between Groups	119.101	3	39.70	4.56	.005
	Within Groups	835.809	96	8.71		
	Total	954.910	99			

Table 6 shows the significant difference between age of the teachers and anxiety using Analysis of Variance. From the table it is inferred that there is a significant difference between age and anxiety at 0.005 level. This can be interpreted that the implementation of biometric attendance systems in schools can lead to anxiety in adults, among teachers. It is possible that some teachers, regardless of age, may experience higher levels of anxiety due to the implementation of biometric attendance systems, which could create pressure to arrive on time and to ensure that the biometric system registers their attendance correctly. So, the work load, performance of students and their anxiety to face the new day with all responsibilities make the teachers anxious when they think about it, leading to anxiety issues. It also creates a sense of insecurity developing towards the deduction of salary among teachers marking as absent due to some technical glitches.

Hence, the Hypothesis, “*H2: There will be significant difference between age of the teachers and anxiety*” is **accepted**

Table: 7

Correlation between work stress and anxiety among teachers

Variables	N	Work stress	Anxiety
Work stress	100	1	.112
Anxiety	100	.112	1

** . Correlation is significant at the 0.01 level (2-tailed)

The preceding table 7 displays the correlation between work stress, anxiety, job satisfaction among teachers. The correlation between work stress and anxiety is 0.112. It depicts that anxiety among teachers is independent of work stress and job satisfaction as anxiety is not correlated with work stress and job satisfaction. There is not always a direct correlation between work stress and anxiety. Stress is a response to a particular situation or stimulus, while anxiety is a feeling of apprehension or worry about the future or a potential threat. Some people may experience high levels of work stress without feeling particularly anxious, while others may experience anxiety without feeling particularly stressed at work.

Hence, the Hypothesis, “*H3: There will be significant relationship in work stress and anxiety among teachers*” is **rejected**.

Table: 8

Correlation between work stress and job satisfaction among teachers

Variables	N	Work stress	Job satisfaction
Work stress	100	1	.511**
Job satisfaction	100	.511**	1

** . Correlation is significant at the 0.01 level (2-tailed)

The preceding table 8 displays the correlation between work stress and job satisfaction among teachers. It is interpreted that there is a significant relation at 0.51 level between work stress and job satisfaction. This indicates that work stress is directly proportional to job satisfaction. There is a reciprocal relationship between job satisfaction and work stress. This result concentrates more on the individuals who are satisfied with their jobs were better to cope with work stress.

A study by Nie and Sun (2016) found that high levels of job stress were associated with decreased job satisfaction among Chinese primary school teachers. Research has consistently demonstrated the negative impact of work stress on job satisfaction among teachers as high levels of work stress may develop negative perceptions of their ability to perform their work effectively. This can lead to decreased job satisfaction and further exacerbate feelings of stress and burnout.

Hence, the Hypothesis, “*H4: There will be significant relationship in work stress and job satisfaction among teachers*” is **accepted**.

SUMMARY AND CONCLUSION

Chapter – 5

Summary and Conclusion

The study on “Relationship of Biometric Attendance System with Work Stress, Anxiety and Job Satisfaction in Teachers” was done under the following objectives:

- To examine the relationship between work stress, anxiety and job satisfaction.
- To find out the level of work stress, anxiety and job satisfaction between genders.
- To assess the level of work stress among teachers
- To assess the level of anxiety among teachers
- To assess the level of job satisfaction among teachers.

“Relationship of Biometric Attendance System with Work Stress, Anxiety and Job Satisfaction in Teachers” is a study carried out among teachers, both males and females from Theni. There were 100 participants who answered the Work Stress, Generalized Anxiety Disorder Scale (GAD – 7) and Job Satisfaction Questionnaire. The scoring was done and interpreted according to the norms. The results were tabulated and analysed using the SPSS software package 22.

Conclusion

The following conclusions can be drawn from the study:

- There is a significant difference in work stress, anxiety and job satisfaction among teachers.
- There is a significant relationship in work stress and anxiety among teachers.
- There is no significant relationship in work stress and anxiety among teachers.
- There is a significant relationship in work stress and job satisfaction among teachers.

Limitations of the study

The study had the following limitations:

- The sample size is limited to the adults.
- The study has covered only teachers working in Government school of Theni district
- Misunderstanding of the questions/ statements might have an influence on the results.
- There are many factors such as teaching experience, personal issues, personality traits and other that influence the mental

Recommendations

- A broad sample size with a longitudinal design would lead to a wide scope of generalized results.
- There is a possibility to conduct this study among a wider range of age groups belonging to a different area.
- A wide range of socio-demographic data could be included to study the variables.
- This study can also be done using different combinations of variables such as hopelessness, optimism and family environment scale which are subjective to yield prospective results.

Implications for further Research

There are greater possibilities and necessities for further research on relationship of biometric attendance system with work stress, anxiety and job satisfaction among teachers. The scope of these areas would heighten in upcoming years. This study would serve as a

background data for further researches. The importance of considering the psychological implications of technological innovations should be analysed. The study highlights the need to consider the psychological implications of technological innovations, such as biometric attendance systems. This is especially important in educational settings, where the well-being of teachers can impact student outcomes.

Overall, the study suggests that biometric attendance systems may have negative implications for teacher well-being and job satisfaction. Therefore, it is important for educational institutions to carefully consider the implementation of such systems and to ensure that they are used in a way that is respectful of teacher autonomy and well-being. It is important for schools or institutions to strike a balance between the benefits of using a biometric attendance system and the concerns of their teachers. By working together and addressing these concerns, it is possible to implement a system that benefits everyone involved.

REFERENCES

References

- Adewole, K. S., Abdulsalam, S. O., Babatunde, R. S., Shittu, T. M., & Oloyede, M. O. (2014). Development of fingerprint biometric attendance system for non-academic staff in a tertiary institution. *Development*, 5(2), 62-70. https://www.academia.edu/download/33130670/Development_of_Fingerprint_Staff_Biometric_Attendance.pdf
- Aftab, M. (2013). Investigation into the relationship among teacher`s occupational stress, job satisfaction, work values and pupil control ideology. <http://hdl.handle.net/10603/183832>
- Ali, A., Mustafa, J., & Khan, I. U. (2018). Relationship of biometric attendance system with performance, job related stress and satisfaction of university teachers in Pakistan. *Liberal Arts and Social Sciences International Journal (LASSIJ)*, 2(2), 42-49. <https://doi.org/10.47264/idea.lassij/2.2.5>
- Ankrom, S. (2021). Biological theories of panic disorder: What does research shows about the cause. *Panic Disorder*. <https://www.verywellmind.com/biological-theories-of-panic-disorder-2583924>
- Bochare & Ramnath, B. (2018). A comparative study of adjustment stress and anxiety among public school teachers and private school teachers. <http://hdl.handle.net/10603/246245>
- Cherry, K. (2022). What is the fight-or-flight response? *Verywell Mind*. <https://www.verywellmind.com/what-is-the-fight-or-flight-response-2795194>
- Dahiya & Neetu. (2011). A study of adjustment of secondary school teachers in relation to their job stress, job involvement and job satisfaction. <http://hdl.handle.net/10603/7818>

- Demir, S. (2018). The relationship between psychological capital and stress, anxiety, burnout, job satisfaction, and job involvement. *Eurasian Journal of Educational Research*, 75, 137-153. <https://eric.ed.gov/?id=EJ1181447>
- Dolia, K. S. (2014). Study of stress and job satisfaction among school teachers of Uttarakhand. <http://hdl.handle.net/10603/70751>
- Finning, K., Ukoumunne, O. C., Ford, T., Danielson-Waters, E., Shaw, L., Romero De Jager, I., & Moore, D. A. (2019). The association between anxiety and poor attendance at school—a systematic review. *Child and adolescent mental health*, 24(3), 205-216. DOI: <https://doi.org/10.1111/camh.12322>
- Gupta, B., Dasgupta, S., & Purushothaman, M. (2019). Examining organizational culture values and acceptance of biometric identity authentication systems. *Internet Archive Scholar*. <https://scholar.archive.org/work/p35ctaurffacfcflipspfdg3i/access/wayback/https://aisel.aisnet.org/cgi/viewcontent.cgi?article=1473&context=amcis2019>
- Holmbeck, G. N., Jandasek, B., Sparks, C., Zukerman, J., & Zurenda, L. N. (2008). Theoretical foundations of developmental-behavioral paediatrics. In *Elsevier eBooks* (pp. 13–45). Elsevier BV. <https://doi.org/10.1016/b978-0-323-04025-9.50005-2>
- Jovanovic, T. (2018). What is anxiety? <https://www.anxiety.org/what-is-anxiety>
- Kageyama, I., Hashiguchi, N., Cao, J., Niwa, M., Lim, Y., Tsutsumi, M., & Kodama, K. (2022). Determination of waste management workers' physical and psychological load: a cross-sectional study using biometric data. *International Journal of Environmental Research and Public Health*, 19(23), 15964. <https://www.mdpi.com/article/10.3390/ijerph192315964>

- Kakepoto, I., Butto, N. A., & Umrani, A. I. (2022). Biometric attendance management system: a university perspective. *Global Social Sciences Review*, VII(II), 309–318. [http://dx.doi.org/10.31703/gssr.2022\(VII-II\).31](http://dx.doi.org/10.31703/gssr.2022(VII-II).31)
- Khan, U., Rahman, U., Zahid, H., Iftikhar, M., & Makki, B. (2018). stress and teachers' performance in private and government high schools: a case of district Bannu, Khyber Pakhtunkhwa. *NFC IEFR Journal of Engineering and Scientific Research*, Jaranwala Road, Faisalabad 6, 173-178. <http://173.208.131.244:9060/xmlui/handle/123456789/13328>
- Kumari, P. (2017). Anxiety in women teachers and its impact on adjustment and academic achievement of secondary school children. <http://hdl.handle.net/10603/404097>
- Mallick, C.B. (2021). What is job satisfaction? Definition, factors, importance, statistics, and examples. <https://www.spiceworks.com/hr/engagement-retention/articles/what-is-job-satisfaction/>
- Manvi, P. (2019). A study on job satisfaction affecting the work performance of teachers working in government and private secondary schools Delhi NCR. <http://hdl.handle.net/10603/287060>
- Mcleod, S. (2023). Maslow's hierarchy of needs. *Simply Psychology*. <https://www.simplypsychology.org/maslow.html>
- Meek, W. (2020). The evolutionary psychology of anxiety. *Verywell Mind*. <https://www.verywellmind.com/evolution-anxiety-1392983>
- Meer, S.H. (2022). Characteristics and qualities of a good teacher. <https://owlcation.com/academia/Characteristics-Of-A-Good-Teacher>
- Mir, G. M., Balkhi, A. A., Lala, N. A., Sofi, N. A., Kirmani, M. M., & Mir, I. A. (2018). The benefits of implementation of biometric attendance system. *Oriental Journal of*

Computer Science and Technology, 11(1), 50-54.

DOI: <http://dx.doi.org/10.13005/ojctst11.01.09>

Mishra, S. K., & Yadav, B. (2013). Job anxiety and personality adjustment of secondary school teachers in relation of gender and types of teachers. *Educational Research International*, 1(1), 105-126.

[http://www.erint.savap.org.pk/PDF/Vol.1\(1\)/ERInt.2013\(1.1-07\).pdf](http://www.erint.savap.org.pk/PDF/Vol.1(1)/ERInt.2013(1.1-07).pdf)

Mithiya, R. (2013). Impact of stress on job performance a study among women school teachers in Dindigul district. <http://hdl.handle.net/10603/218933>

Monis, C. P. (2017). The study of the relationship of motivation, job satisfaction and absenteeism. <https://searchlib.utcc.ac.th/library/onlinethesis/306003.pdf>

Mulder, P. (2022). Job demand control model by Robert Karasek. *Toolshero*. <https://www.toolshero.com/human-resources/job-demand-control-model/>

Nickerson, C. (2023). Herzberg's two-factor theory of motivation-hygiene. *Simply Psychology*. <https://www.simplypsychology.org/herzbergs-two-factor-theory.html>

Nie, Y., & Sun, H. (2016). Why do workaholics experience depression? A study with Chinese University teachers. *Journal of Health Psychology*. 2016;21(10):2339-2346. doi:[10.1177/1359105315576350](https://doi.org/10.1177/1359105315576350)

Peele, M., & Wolf, S. (2021). Depressive and anxiety symptoms in early childhood education teachers: Relations to professional well-being and absenteeism. *Early childhood research quarterly*, 55, 275-283. <https://www.sciencedirect.com/science/article/pii/S0885200620301423>

- Rajamanickam, K. (2019). Anxiety and stress of the student teachers of Theni district in relation to their academic achievement and certain demographic variables. <http://hdl.handle.net/10603/466696>
- Rajan, K. (2023). A P J Abdul Kalam quotes on education, teachers and students. <https://www.edsys.in/abdul-kalam-quotes-on-education-teachers-and-students/>
- Scott, E. (2022). What is stress? *Verywell Mind*. <https://www.verywellmind.com/stress-and-health-3145086>
- Seethapathi & Venkata, M. G. (2005). Study of stress, anxiety and burnout in relation to performance of primary school teachers. <http://hdl.handle.net/10603/92629>
- Sheokan & Uma. (2019). A comparative study of job satisfaction among primary school teachers working in government and private schools in Kaithal District Haryana. <http://hdl.handle.net/10603/317268>
- Shinde & Jagannath, J. (2012). A comparative study of job satisfaction and occupational stress of municipal corporation primary school and private primary school teachers. <http://hdl.handle.net/10603/77681>
- Shrivastava, A., Dr. Shukla, N. K., & Dr. Shrivastava, A. P. (2015). Identifying work stress factors among faculty of higher academic institutions in Oman. *Journal of ResearchGate*. Vol.no. 5 (3). <https://www.researchgate.net/publication/341110009>
- Siegrist, J. (2017). The Effort-reward imbalance model. In *John Wiley & Sons, Ltd eBooks* (pp. 24–35). Wiley. <https://doi.org/10.1002/9781118993811.ch2>
- Sincero, S. M. (2012). Stress and cognitive appraisal - Lazarus and Folkman. <https://explorable.com/stress-and-cognitive-appraisal>

Sociological Definition & Analysis. (2017). What is Work?

<https://study.com/academy/lesson/what-is-work-sociological-definition-analysis.html>.

TeachThoughtStaff. (2019). 10 Characteristics of a great teacher.

<https://www.teachthought.com/pedagogy/characteristics-of-a-great-teacher/>

Themes, U. (2016, September 4). Cognitive theory and models of anxiety: an introduction.

Musculoskeletal Key. <https://musculoskeletalkey.com/cognitive-theory-and-models-of-anxiety-an-introduction/>

Thomas, A., & Zacharias, S. (2022). A study on job stress due to biometric attendance punching. *Academy of Entrepreneurship Journal*, 28, 1-10.

<https://www.jcreview.com/admin/Uploads/Files/62539139a098f7.98148719.pdf>

Vinod, V. M., Thokaiandal, S., Sindhuja, C. S., Mekala, V., Manimegalai, M., & Prabhuram,

N. (2020). A comprehensive study on academic and industry authentication and attendance systems. *International Journal of Scientific & Technology Research*, 9(3). [https://www.researchgate.net/profile/Vibin-](https://www.researchgate.net/profile/Vibin-Vinod/publication/340940630_A_Comprehensive_Study_on_Academic_And_Industry_Authentication_And_Attendance_Systems/links/5f435c86a6fdcccc43f4e530/A-Comprehensive-Study-on-Academic-And-Industry-Auth-Attendance-Systems.pdf)

[Vinod/publication/340940630 A Comprehensive Study on Academic And Industry Authentication And Attendance Systems/links/5f435c86a6fdcccc43f4e530/A-Comprehensive-Study-on-Academic-And-Industry-Auth-Attendance-Systems.pdf](https://www.researchgate.net/profile/Vibin-Vinod/publication/340940630_A_Comprehensive_Study_on_Academic_And_Industry_Authentication_And_Attendance_Systems/links/5f435c86a6fdcccc43f4e530/A-Comprehensive-Study-on-Academic-And-Industry-Auth-Attendance-Systems.pdf)

Wati, S. (2018). Definition of teacher. <https://repository.uir.ac.id/4364/5/bab2.pdf>

WHO Definition- Stress. (2022). <https://www.who.int/news-room/questions-and-answers/item/stress>

World Health Organization: WHO. (2022). Mental

disorders. *www.who.int*. <https://www.who.int/news-room/fact-sheets/detail/mental-disorders>

White, M. (2022). The definition of work stress. *LoveToKnow*. <https://www.lovetoknowhealth.com/well-being/definition-of-work-stress#:~:text=By%20Mary%20Gormandy%20White%2C%20M.A.%2C%20SHRM-SCP%2C%20SPHR%20Updated,physical%20responses%20to%20job%20demands%20and%20work-related%20pressures>.

Yang, C. L., & Hwang, M. (2014). Personality traits and simultaneous reciprocal influences between job performance and job satisfaction. *Chinese Management Studies*. <https://www.emerald.com/insight/content/doi/10.1108/CMS-09-2011-0079/full/html>

ANNEXURES

Annexure - 1

Consent

I (Vigashini. V) am pursuing my Master's degree in Clinical Psychology and I would like to have your participation in this academic research. I assure confidentiality with the details provided by you and it will be used only for the academic purpose. Thank you for the same.

Study Procedure

You will be given three tests in form type along with socio demographic profile. You need to respond to all items in the tests. There is no risk in undertaking the study. There will be no direct benefits to you for your participation in this study. Your response to the question will be anonymous and kept confidential. Your participation in this study is voluntary. It is up to decide to whether or not to take part in this study. If you decide to take part in this study, you will be asked to sign this form. You are free to withdraw at any time and without giving a reason. There is no cost to you for your participation in this study.

Consent

“By signing this consent form, I confirm that I have and understood the information and have the opportunity to ask questions. I understand that my participation is voluntary and I am free to withdraw at any time, without giving a reason and without cost. I voluntarily agree to take part in this study.”

Name of the participant:

Signature with date:

Place:

Annexure - 2

Socio-demographic details

Name :

Age :

Gender : M/F

Area : Rural/ Semi Urban/ Urban

Marital status : Number of children if any:

Diabetes :

Blood pressure :

Migraine :

Other physical complaints:

Annexure - 3

Work stress scale by L. J. Cornbach, 1951

Instructions. Thinking about your current job, how often does each of the following statements describe how you feel? (Use “✓” to indicate your answer).

S.No	Statements	Never	Rarely	Sometimes	Often	Very often
1.	Conditions at work are unpleasant or sometimes even unsafe.	1	2	3	4	5
2.	I feel that my job is negatively affecting my physical or emotional wellbeing.	1	2	3	4	5
3.	I have too much work to do and/or too many unreasonable deadlines.	1	2	3	4	5
4.	I find it difficult to express my opinions or feelings about my job conditions to my superiors.	1	2	3	4	5
5.	I feel that job pressures interfere with my family or personal life.	1	2	3	4	5
6.	I have adequate control or input over my work duties.	5	4	3	2	1
7.	I receive appropriate recognition or rewards for good performance.	5	4	3	2	1
8.	I am able to utilize my skills and talents to the fullest extent at work.	5	4	3	2	1

Annexure - 4

Generalized anxiety disorder scale (gad – 7) by Spitzer, 2006

Instructions. Over the last 2 weeks, how often have you been bothered by the following problems? (Use “✓” to indicate your answer)

S.No	Statements	Not at all	Several days	More than half the days	Nearly every day
1.	Feeling nervous, anxious or on edge	0	1	2	3
2.	Not being able to stop or control worrying	0	1	2	3
3.	Worrying too much about different things	0	1	2	3
4.	Trouble relaxing	0	1	2	3
5.	Being so restless that it is hard to sit still	0	1	2	3
6.	Becoming easily annoyed or irritable	0	1	2	3
7.	Feeling afraid as if something awful might happen	0	1	2	3

Annexure - 5

Job satisfaction scale by Dr. B. C. Muthayya, 1973

Instructions. All of us occasionally, maintain certain feelings about our job. Here is a list of items depicting the feeling related to certain aspects of one's job. You are respected to record the extent to which you are affected by those different aspects of your job by making use of scale provided below. To illustrate is what is depicted in a particular item is true in your case, encircle "Agree" (A): or If it is not true in your case, encircle "Disagree" (D). In the event of your not begin able to decide either way (Agree or disagree), encircle "Not Sure" (NS). In case any particular item is not applicable in your case, please encircle "Not Applicable" (NA).

Please do not leave any question unanswered.

S. No	Items	A	D	NS	NA
1.	Satisfied with opportunities for promotion in your department.	A	D	NS	NA
2.	Finding yourself at a disadvantage due to the lack of required technical information to carry out your duties.	A	D	NS	NA
3.	Feeling that you could have worked better in different department.	A	D	NS	NA
4.	Feeling that you have too heavy a workload that you cannot possibly finish during an ordinary working day.	A	D	NS	NA
5.	Feeling that you have to do things on the job that are against your better judgement.	A	D	NS	NA
6.	The fact that you are confused about the role you have to play in carrying out your work.	A	D	NS	NA
7.	Feeling that the village people do not care for your suggestions.	A	D	NS	NA

8.	Feeling that you have security in your occupational position.	A	D	NS	NA
9.	Feeling that more facilities should be provided for working effectively in occupations to like yours.	A	D	NS	NA
10.	Feeling that the pay for the type of job you do is lower compared with the pay for similar Jobs other departments.	A	D	NS	NA
11.	Feeling that you are not liked and accepted by the people or co-workers you work.	A	D	NS	NA
12.	The fact that you have too little work to do that you get bored with the job.	A	D	NS	NA
13.	The fact that superior officer to appreciates the hard work you put in.	A	D	NS	NA
14.	Feeling that you have little opportunity to use your abilities in this department.	A	D	NS	NA
15.	The fact that at you find it difficult to convince people to adopt improved practices in Agriculture	A	D	NS	NA
16.	Feeling that the whole Community Development Programme in your Block is a wasteful expenditure	A	D	NS	NA
17.	Feeling that you are not fully qualified to handle your job.	A	D	NS	NA
18.	The fact that your superior officer encourages you to offer suggestion for improvement in your department.	A	D	NS	NA
19.	The fact that you cannot get required administrative information to carry out your job functions.	A	D	NS	NA
20.	Each day of work appears as though it will never end.	A	D	NS	NA
21.	Feeling that your progress on the job is not what it should be or could be.	A	D	NS	NA

22.	Feeling that your job gives you a chance to do things that you could do best.	A	D	NS	NA
23.	Feeling that you have a clear idea of the expectation of your superior officer regarding your work performance.	A	D	NS	NA
24.	The fact that the pressures (interference) from political parties affect the efficiency of your work.	A	D	NS	NA
25.	The fact that your department is given only a secondary consideration by the Government.	A	D	NS	NA
26.	Feeling that you would be happy to continue in the present job for a longer period.	A	D	NS	NA
27.	Feeling that your present job is suitable for persons like you.	A	D	NS	NA
28.	Feeling that your job counts for very little (or insignificant) in your department.	A	D	NS	NA
29.	Feeling that you should have got a better job for your qualifications.	A	D	NS	NA
30.	Feeling that you have enough opportunity for independent thought and action in your job.	A	D	NS	NA
31.	Feeling that you should change your present job.	A	D	NS	NA
32.	The fact that you have too little authority to carry out the responsibilities assigned to you.	A	D	NS	NA
33.	The fact that you are free to talk to someone superior to you in your department whenever you have a field problem.	A	D	NS	NA
34.	Feeling that you have a good chance to get ahead in life and to become fairly well off (your present job as a point of reference).	A	D	NS	NA

INSTITUTIONAL HUMAN ETHICS COMMITTEE



Avinashilingam

Institute for Home Science and Higher Education for Women
(Deemed to be university under Category 'A' by MHRD, Estd. u/s 3
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Recognised by UGC Under Section 12 B
Coimbatore- 641043, Tamil Nadu, India

06.01.2023

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To
Ms. Vigashini, V.
Department of Clinical Psychology
Avinashilingam Institute for Home Science and
Higher Education for Women
Coimbatore- 641043

Dear Vigashini,

Ref: Your proposal No. IHEC/22-23/CP-19 entitled
"Relationship of Biometric Attendance System with Work Stress,
Anxiety and Job Satisfaction in Teachers" submitted for approval of
IHEC on 19.11.2022.

The Institutional Human Ethics Committee of our
University hereby grants approval to your research proposal
No.IHEC/22-23/CP-19 entitled "Relationship of Biometric
Attendance System with Work Stress, Anxiety and Job Satisfaction
in Teachers" submitted by you. The Approval number for the same
is AUW/IHEC/CP-22-23/XMT-19.

We wish you all the best in your research endeavours.

Regards

Dr. A Thirumani Devi
Member Secretary

