"Pattern And Prevalence Of Stress And The Effectiveness Of Relaxation Training On Stress Among School Teachers Of Perambalur Taluk, Tamil Nadu".

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M.D. COMMUNITY MEDICINE - BRANCH - XV



DHANALAKSHMI SRINIVASAN MEDICAL COLLEGE AND HOSPITAL, PERAMBALUR – 621 113.



May - 2020

CERTIFICATE

This is to certify that the dissertation titled "Pattern And Prevalence Of Stress And The Effectiveness Of Relaxation Training On Stress Among School Teachers Of Perambalur Taluk, Tamil Nadu" is a bonafide research work of Dr. DURAISAMY THEVAR RAJENDRAN NAVANEETH for the requirements of M.D Community Medicine Branch-XV Examination of the Tamil Nadu Dr. M.G.R Medical University to be held in MAY - 2020, was carried out by him, under our direct supervision and guidance.

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Perambalur Taluk, Tamil Nadu" was done by me from Department of

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PLAGIARISM CERTIFICATE

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https://www.science.gov/topicpages/p/progressive+muscle+relaxation.html

https://www.researchgate.net/

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INTRODUCTION

Incidence of Non communicable diseases is on the rise worldwide.

India is facing double burden of Non communicable and communicable diseases. Non communicable diseases is showing a upward trend.

It has been found in various studies that stress is a very important pre disposing factor for higher incidence of non-communicable diseases like hypertension, diabetes etc.^{1, 2}

Health is a source for life. Positive health emphasize on social and individuals component, as well as physical capacities. Attaining the best health is every person's right. Health is multi dimension and it is the condition of being healthy in body, mind or spirit especially liberty from physical disease or pain3.

Health is the result of a various different determinants. The list of health determinants is quite long. The factors affecting health may be classified as agent, host and environment. The presence and interaction of these factors initiate the disease process in man⁴.

Stress is a term that is regularly utilized today yet has turned out to be progressively hard to characterize. It shares, somewhat, regular implications in both the natural and mental sciences. Stress commonly portrays a negative idea that can affect one's psychological and physical prosperity.

Stress can take on conceptual implications with profound abstract characteristics, fulfilling meanings of both natural and mental sciences, circumstances and logical results in manners that can be both tangible and intangible.⁷

At once or another, the vast majority experience Stress. The term Stress has been utilized to portray an assortment of negative emotions and responses that go with undermining or testing circumstances. Be that as it may, not all Stress responses are negative. A certain measure of Stress is really essential for endurance⁸.

The Stress response amplifies the consumption of vitality which readies the body to meet a compromising or testing circumstance and the individual will in general assemble a lot of exertion so as to manage the occasion.

The thoughtful framework is a quick acting framework that enables us to react to the prompt requests of the circumstance by actuating and expanding excitement. Pituitary/adrenal system is slower-acting and prolongs the aroused state. However, while a certain amount of Stress is necessary for survival; prolonged Stress can affect health adversely⁹.

Constant Stress is one of the characterizing highlights of present day life, and the source of numerous medical issues. Stress assumes an undeniable job in apprehension, tension, a sleeping disorder and immense number of diseases¹⁰.

When we are rationally Stressed and on edge, we involuntarily tense our muscles. Pressure held in our muscles includes physical distress or pain. It will normally

appeared as cerebral pain, spinal pain, stomachache, and hurt in neck and shoulders - exacerbating the psychological Stress even.

Along these lines relaxation techniques is the best and least expensive technique which encourages a person to battle Stress. The challenges is to recognize the relaxation techniques that give both security and incitement to help refresh the framework¹¹.

Relaxation techniques are those systems used to diminish sentiments of Stress and Uneasiness. They can be valuable during times of high Stress or apprehension and can indeed, even help an individual with traversing a fit of anxiety¹². The most famous relaxation techniques was Progressive muscle unwinding (PMR) that has been found to help and mitigate sentiments of Stress and Anxiety¹³.

As school teachers are very important group of people those who are neglected and not adequately researched. It is of assumptions that school teachers are subjected to higher level of occupational stress¹⁴. Failure to attend to heightened levels of stress and distress may lead to longer term mental health problems, poor performance at work (presenteeism), sickness absence, and health-related retirement in teachers. ¹⁵ This has implications not only for teachers' own health, but for the quality of staff-student relationships and for student health.

Teachers with stress have been reported to find it difficult to manage classes effectively, and to develop supportive relationships with students. ¹⁶Difficult teacher-student relationships in secondary school have been found to predict psychiatric disorder and exclusion from school three years later.

Conversely, supportive teacher-student relationships predict lower student depression, and higher student classroom engagement, leading to higher achievement¹⁷. However the studies on school teachers are scarce. Here forth this study is planned to study the prevalence of stress and to evaluate the impact of Benson's relaxation training on stress among school teachers¹⁸.

Operational Definitions

Effectiveness

It refers to the outcome of Relaxation Therapy given to the teachers, and it can be measured by teachers using perceived stress scale

Relaxation Therapy

It is used to relieve Stress and Anxiety by affecting the synapses and producing a relaxation response. It should be performed by tensing of each muscle groups and then relaxing them in an orderly fashion as forehead, eyes, nose, lips, cheeks, jaws, hand, shoulder, back, stomach, hip, feet, and toes practiced for 20minutes daily about seven days.

Stress

It refers to the outcome of burden experienced by teachers from the demand of caring and seeing the suffering of their loved ones, which is manifested as psychological response such as hopelessness, helplessness and physiological response such as body ache, indigestion, due to Stressors among the Caregivers of mentally ill patient.

Anxiety

It refers to the varying degrees of emotion experienced by teachers stated as unable to relax, difficulty in remembering, worry a lot, less interest in activities.

Teachers

A teacher (also called a school teacher or, in some contexts, an educator) is a person who helps students to acquire knowledge, competence or virtue.

OBJECTIVE

- > To study the socio-demographic profile among the school teachers.
- ➤ To estimate the prevalence of stress among the study subjects by using Perceived Stress Scale.
- > To evaluate the impact of Bensons relaxation training on stress among teachers.

3.0. REVIEW OF LITERATURE

3.1. STRESS

- 3.1.1. Great Stress and Bad Stress
- 3.1.2. Gender differences and Stress Response
- 3.1.3. Occupational Stress Comparisons
- 3.1.4. Occupational Stress
- 3.1.5. Emotional
- 3.1.6. Change in behaviour
- 3.1.7. Health Problems
- 3.1.8. Students
- 3.1.9. Family Stress
- 3.1.10. Colleagues / Management/ Administrative / Principal
- 3.1.11. Physical/ Physiological/ Stress
- 3.1.12. Coping with stress
- 3.1.13. Causes of Stress for Teachers
- 3.1.14. Methods of Identifying Stress

3.2. RELAXATION TECHNIQUES

- 3.2.1. What are relaxation techniques
- 3.2.2. Deep breathing exercises
- 3.2.3. Visualization
- 3.2.4. Progressive muscle relaxation
- 3.2.5. Yoga and medication

3.3. THE PERCEIVED STRESS SCALE (PSS)

3.4. BENSON RELAXATION METHOD

3.5. COMPARISON OF STUDIES

3.1. STRESS:

Stress is a troublesome term to characterize on the grounds that it has various ramifications for every person. Stein F¹⁹characterize worry as an aggregate reaction to one's ecological requests and weights and speculate that pressure is an unavoidable piece of life that everybody needs to manage.

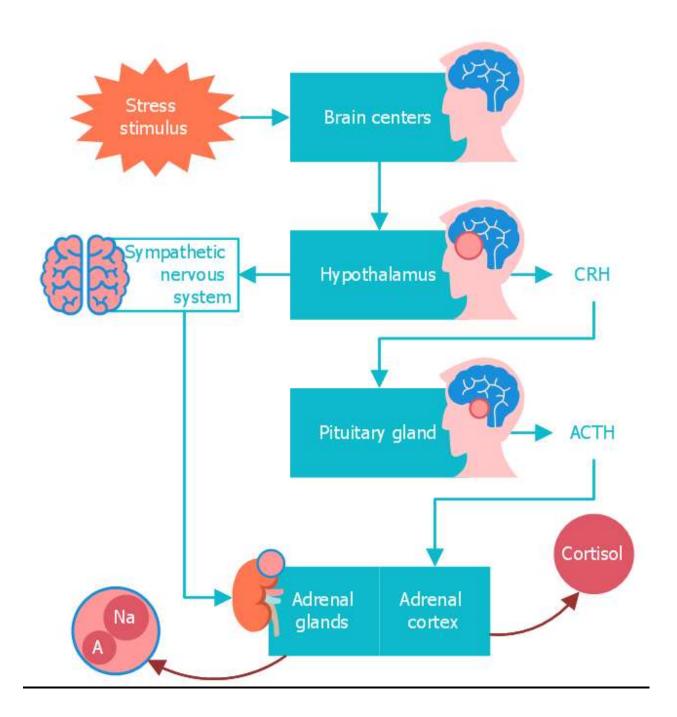
The psychological demands of stress are the tricky results refers to as the reason for emotional misery, known as nervousness, depression, and psychosomatic complaints.

Stress is a multidimensional phenomenon which is impacted by individuals personal factors, auxiliary factors. Stress is perceived as an occupational hazard or word related sickness bringing about significant human disease, both physical and mental.

The word stress was gotten from the Latin word 'stringere', which means to draw tight, and was utilized to depict hardships and suffering in the seventeenth century.

Wilson in the year 1979 in San Diego California conducted an investigation where it was found that where it was discovered that 90% of educators encountered some type of pressure and that 95% of them demonstrated the requirement for stress the executives preparing relaxation techniques.^{21, 22}

Physiology of stress



3.1.1. Great Stress and Bad Stress

Stress is a word that everybody stay away from however it can't be. Everybody has some worry with confirming the degree of it. The words 'Stress' is characterized as the status of mental unwellness or disequilibrium in the individual brought about by dissatisfaction tangled and other inward just as outside strain and weights.

Presently, everybody is discussing about stress. You hear it not just in day by day discussion yet in addition through Television, Radio, the papers and the ever expanding number of gatherings, stress focuses and college courses are dedicated to the theme. Stress is a vague reaction of the body to any request. In certain reactions each request made on the body is novel, that is explicit.

The principal thing one ought to at that point remember about pressure is that an assortment of different circumstances are prepared to do delivering pressure; and henceforth that no single ones can, in itself be pinpointed as the reason for the response thusly.

In all types of life, there are basic pathways which must intercede any endeavor to embrace to conditions and support life. Man is dared to ponder the worry in extraordinary detail since he knows that his endurance may rely upon his capacity to manage it or escape its direction.

On the other hand pressure can cause deadly ailment. Stress has likewise dispatched rather enormous number of individuals to mental organizations, specialists lounge chair, penitentiaries and medical clinics.

3.1.2. Gender differences and Stress Response^{23,24}

Meta-Analytic research on physiological reactivity under pressure, found that type A male displayed more prominent increase of systolic pulse than type B's in light of a difficult cognitive tasks, however not females.

Male were seen as more organically and psychosocially powerless against stressors than female. Also, when various individuals were considered utilizing the Maslach Burnout Inventory (MBI) ²⁵, emotional exhaustion was found to be higher for female than male, those with poor advancement prospects and minimal social support.

Gender differences were additionally found to exist in the subjective evaluation of stress, with females suppressing their anger and indicating lower reactivity in unpleasant circumstances than male because of their thought processes Scientists upheld this clarification with reference to sex and socialization contrasts.

Teachers, Perambalur Taluk ,Tamilnadu"

3.1.3. Occupational Stress Comparisons²⁶, ^{27, 28}

In various studied this has been found that there is a high correlation between stress, mental ill-health and absentism from work. This was also found to be related to the control of an individuals over their work and career development.

Researches also states that the most stressful jobs in Britain at the time were the police services, fire and ambulance service, doctors, social workers, nurses and teachers.

The next group to suffer the most stress was found to be armed forces, acting, builder, journalism, film production, catering and hotel work, professional sport and public transport.

The researchers found stress score for each of the occupation mentioned before on the scale of 10 point. It was found that all of the jobs mentioned before scored higher than 6.5 and even went up to 7.7 which signify stress of very high level.

Further researchers found that nowadays jobs had become more stressful because of technological advances, changes in customer outlook, global changes, changing trends and the political changes affecting the workforce.

Ongoing investigations have likewise discovered a steady relationship between human occupations and the danger of stress related issue. From Occupational Stress Inventories carried out with different professions, the only profession that were found to have scores related to the teachers were general practitioners. It was found that teachers were less satisfied with their job due to multiple reasons.

3.1.4. Occupational Stress: 29, 30, 31

A few examinations had been embraced to analyze the pervasiveness, level and real source of Occupational stress among teachers. The well being of a teacher could be genuinely influenced by pressure. Besides, from teachers themselves, work pressure can likewise negatively influence their students and the learning environment for them.

3.1.5. **Emotional**³¹:

A sincerely capable educator learns and applies abilities to manage pressure, improve self confidence, self worth, basic leadership, decision making, solace and commitment which raises the nature of teaching alongside wellbeing and prosperity. But in many case, sadly numerous educators regularly experience negative feelings than positive ones.

Negative feelings, for example, nervousness interferes with cognitive capacity for processing information, whereas positive emotions boost creative capacity for thinking of new ideas and ability to handle difficulties this is the reason the ability to recognize, understand and direct both positive and negative feelings is important among teachers, so as to utilize and generate emotions to favour well-being by conquering stress.

3.1.6. Change In Behaviour: 31

Teachers have differed reactions to stretch. A few educators create fierce techniques, others experience changes in conduct, emotional reactions, or physical or physiological reactions. Teachers get to confront classroom stress up because of understudy discipline for example, behaviour change, behaviour modification, removing the student from class, scolding the child.

If stimulating strategies does not work, teachers often under personal changes in their behaviour to cope with the stress. Stress leads to behaviour changes that are very unhealthy to the teacher. Changes like excessive alcohol consumption, smoking, sedentary lifestyle, unwanted outbursts of anger and sleeping problems.

3.1.7. Health Problems: ³²

Continuous stress manifestations may likewise happen if stress keeps on being available in the everyday exercises of an educator. These side effects incorporate weakness, expanded sickness, and the failure to think.

A study of 762 instructors and speakers by the ATL and the Teacher Support Network (TSN) found that demands on staff and their time at all levels have expanded in the course of recent years.

In an study conducted by Lipsett A etal, 70% of the educators and instructors studied said their wellbeing has endured in view of their activity, and over half are worried by working in training. The health effect is significantly higher among school pioneers and heads of division with 75% and 73% individually. Female instructors (72%) confess to enduring more than male (66%).

3.1.8.Students: ³³

Educator student connections are the third most highest factor leading to stress. When Educators are under pressure, they can lead to pressure among their students and their colleagues. Educators under pressure can show behaviour changes that can influence and disturb the learning of understudies in their classes.

If many educators in a single school have elevated levels of worry, there is potential for the whole school to be influenced in a negative way.

3.1.9. Family Stress:

Family stress has been found to be the most important impact on health status of the teachers. In a study conducted by one of the teachers shared that "The pressure from the family to meet their financial needs becomes the most challenging issue.

Family members have their increasing expectations and it is so frustrating to struggle to meet their needs with a meager salary. It is very stressful and at times we feel exhausted and tired of our own life".

3.1.10. Colleagues / Management/ Administrative / Principal: 33

Pessimistic interpersonal relations and the nonappearance of help from partners or bosses can be huge stressors for employees. Several global investigations have featured that teachers find that resources available to them are not sufficient and there is lack of control and decision-making powers, which could add up to the stress among the teachers.

3.1.11. Physical/ Physiological/ Stress: 32

Some physical side effects of pressure incorporate weakness, tiredness, exhausted, wear out, migraines, stomach hurts, chest torments, sluggishness, trembling hands, brevity of breath, wooziness, fretfulness, cold sweats, trouble concentrating, loss of memory, loss of hunger, trouble falling asleep, and the ability to have a productive conversations with colleagues.

Some physiological symptoms of stress include an increase in blood pressure, heart rate and or cortisol, irregular heartbeat, and nervousness.

3.1.12. Coping With Stress: 34

Many teachers use positive strategies to alleviate stress like meditation, reading, hobbies and exercises. Teachers who have more support within their personal lives tend to experience less stress in the workplace.

3.1.13. Causes of Stress for Teachers: ³²

- Excessive work load
- Excessive working hours
- Bigger class size
- Inadequate management support
- Misbehavior by the colleagues, parents, students

3.1.14. Methods of Identifying Stress: 35, 36

- Self Analysis
- Mutual Analysis
- Organizational Role
- Remedial Measures
- Individual Measures
- Adopt a Hobby
- Adopting Healthy Habits

3.2. RELAXATION TECHNIQUES 37, 38

Relaxation techniques are methodologies used to lessen pressure and uneasiness. These methods can likewise be utilized to oversee indications of anxiety issue and help an individual get past a fit of anxiety.

Relaxation techniques help to deal with the inter personal conflicts, or stress response, that is much of the time among individuals are spent with tension issue.

Relaxation technique might be useful in dealing with a different type of health conditions, incorporating anxiety related with sicknesses or therapeutic conditions, a sleeping disorder, work related stress.

Psychological treatments, which may incorporate relaxation technique, can help oversee prolonged headaches and various other types of chronic pain in children and adolescents. Relaxation techniques have also been studied for other conditions, but either they haven't been shown to be useful, research results have been inconsistent, or the evidence is limited.

3.2.1. What are relaxation techniques 39, 40

Relaxation techniques are the number of practices like progressive relaxation, self-hypnosis, and deep breathing exercises. The goal of the various relaxation techniques are similar, that is to stimulate the natural relaxation response of the body, leading to slow breathing, reduced blood pressure, and a feeling of calmness and well-being.

Meditation and practices like yoga also promote the relaxation. Various stress management programs commonly consist of relaxation techniques.

Researchers have evaluate relaxation techniques to find whether they have potential in managing a variety of health conditions, which includes the following:

- Depression
- Epilepsy
- Anxiety
- Asthma
- Childbirth
- Fibromyalgia
- Migraine
- Heart Disease

- High Blood Pressure
- Insomnia
- Menopause Symptoms
- Irritable Bowel Syndrome
- Nausea
- Nightmares
- General pain
- Pain among adolescents and children
- Rheumatoid Arthritis
- Tinnitus
- Posttraumatic Stress Disorder
- Smoking Cessation

There are the main 4 relaxation techniques for tension. To take advantage of these relaxation methods, it is must to practice regularly and now and again when you are not feeling exceptionally restless.

3.2.2. Deep breathing exercises: 41,42

Breathing activities are the establishment of numerous other relaxation strategies. These activities work to enable you to inhale gradually and profoundly, which can enable you to feel progressively relaxed. Breathing activities have been known to have a cleansing impact, making you feel empowered and fresh.

Profound breathing likewise points out your concentration and the breathing procedure, in this way clearing your psyche and helping you to control the cadence of your breath.

These activities can help with lessening muscle pressure, alongside improving other basic indications of anxiety, for example rapid heart rate and managing shortness of breath.

3.2.3. Visualization⁴³

Visualization is an amazing method to relieve pressure and tension. Through perception, you utilize your creative mind to imagine yourself in an all the more quieting and peaceful condition, for example, at a sea shore or in a blossom secured knoll.

Visualization attempts to loosen up your body and relieve your thoughts.

By basically observing yourself in an all the more relaxing situation, you can actually allow your mind and body feel as though you are there.

3.2.4. Progressive muscle relaxation⁴⁴

Progressive muscle relaxation techniques takes around 20 minutes. It stretches various muscles thus relaxes them to discharge tension from the body and relax the mind.

In order to practice muscle relaxation exercises locate a warm, calm spot without any interruptions. Get totally comfortable, either sitting or resting. Close your eyes and start by concentrating on your breathing, breathing gradually and profoundly, as depicted previously.

If you have pain in certain muscles, or if there are muscles that you find difficult to focus on, spend more time on relaxing other parts of your body. You might need to play some relieving music to support relaxation.

In each exercise, hold the stretch for a few seconds, then relax. Repeat a couple of times. It's useful to keep to the same order as you work through the muscle groups:

Face — push your eyebrows together, as if grimacing, at that point release.

Neck — delicately tilt your head forwards, driving jaw down towards chest, at that point gradually lift once more.

Shoulders — pull your shoulders up towards the ears (shrug), at that point loosen up them down towards the feet.

Chest — inhale gradually and profoundly into your stomach (underneath your base rib) so you're utilizing the majority of your lungs. At that point inhale gradually out, enabling your gut to empty as all the air is breathed out.

Arms — stretch your arms from your body, reach, at that point and relax.

Legs — push your toes from the body, pull them towards the body, at that point relax.

Wrists and hands — stretch your wrist by pulling your hand up towards you, loosen up the fingers and thumbs, at that point relax.

3.2.5. Yoga and medication⁴⁵

Numerous individuals see yoga and contemplation as helpful approaches to lessen pressure and tension. Yoga can assist you with letting go of pressure all through the body, improve fixation, and unwind.

Contemplation can be utilized alone or as a component of a yoga practice and is additionally an extraordinary method to help you in inclination increasingly adjusted, quiet, and centered.

These relaxation techniques can be practiced upon waking to relieve and reduce morning anxiety and start the day feeling refreshed. They can also be used at the end of the day to let go of any built-up stress and tension

3.3. The Perceived Stress Scale (PSS):

The Perceived Stress Scale is the most extensively used psychological instrument for assessing the perception of stress. It is to quantify the degree of stress in one's life. Items were designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives.

The Perceived Stress Scale scale also included a number of direct queries about existing levels of knowledgeable stress. The Perceived Stress Scale was designed to be used in community participants with at least a junior high school education. The scale is easy to understand, and the response are simple to understand.

Furthermore, the questions are of a general kind and thus are moderately free of content specific to any specific population group. The questions in the PSS ask about feelings and thoughts during the last month. In each case, respondents are asked how often they felt a certain way.

Perceived Stress Scale has two parts

- Socio demographic profile
- 10 Questions for assessing the stress level
- For each question choose from the following alternatives:
 - 0 never 1 almost never 2 sometimes 3 fairly often 4 very often

Questions included are-

- In the last month, how often have you been upset because of something that happened unexpectedly?
- In the last month, how often have you felt that you were unable to control the important things in your life?
- In the last month, how often have you felt nervous and stressed?
- In the last month, how often have you felt confident about your ability to handle your personal problems?
- In the last month, how often have you felt that things were going your way?

- In the last month, how often have you found that you could not cope with all the things that you had to do?
- In the last month, how often have you been able to control irritations in your life?
- In the last month, how often have you felt that you were on top of things?
- In the last month, how often have you been angered because of things that happened that were outside of your control?
- In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

Figuring out PSS Score-

PSS score can be determined as follows:

- Reverse scoring for questions 4, 5, 7, and 8.
- On these 4 questions, change the scores like this: 0 = 4, 1 = 3, 2 = 2, 3 = 1, 4 = 0.
- Now add up your scores for each item to get a total.
- Scores on the PSS can range from 0 to 40 with higher scores indicating higher perceived stress.

Inference of scores

- Scores from 0-13 = low stress.
- Scores from 14-26 = moderate stress.
- Scores from 27-40 = high perceived stress

3.4. Benson Relaxation Method:

Following is a relaxation exercise from Dr Herbert Benson

- 1. Preparing to relax
 - Make sure to get comfortable and warm.
 - Blanket can be used if needed.
 - Sit quietly in a comfortable position.
 - Eyes has to be closed.
 - Imagine about letting go of the anxiety and tension in all the muscles,
 starting at your feet and moving up to your face.
 - Keep the muscles loose.

2. Focus on the breathing

- Breathe through your nose.
- Focus on your breathing.
- Breathe easily and naturally

3. Don't force

Do not be anxious if you are not good at reaching a deep level of relaxation –
 let it happen with its own speed.

4. Dealing with distraction

- Distracting feelings will mostly occur.
- Do not inhabit on these.
- Just return to repeating 'one'
- If one start to feel a minute dizzy or breathless this can be caused by overbreathing because one might feel anxious about doing it right.
- Just breathe out when body naturally gets to and focus on saying your word.
- If you notice a slight tension in your 'favourite spot' your jaws, neck or scalp this will be because you are trying too hard.
- Just let go –do not think about doing it right

5. Bringing the relaxation to an end

- After relaxing for 10-20 minutes, begin to bring your relaxation to an end.
- You may open your eyes to check the time but do not use an alarm, which will
 make you tense up again.
- When you finish, sit quietly for several minutes, at first with your eyes closed and later with your eyes open. Then stand up slowly.

6. Practicing breathing exercise regularly

With practice the Relaxation Response should come with little effort.

Practice once or twice daily but not for two hours after a meal.

Digestion seems to interfere with the relaxation response.

It often helps to decide on a regular practice time and stick to it.

It is easy to miss your practice if you do it at a different time each day.

3.5. COMPARISON OF STUDIES:

♣ Kaspereen D etal⁴⁶ in the present examined how relaxation treatment (RT) can be viable in helping secondary teachers and staff individuals lessen pressure. In particular, researcher inspected the viability of relaxation treatment on in general apparent pressure, work pressure, and life fulfillment.

This quantitative, exploratory examination randomly assigned 54 educators and staff individuals from a chosen secondary school to an intervention relaxation group and a control group.

Relaxation treatment was led once per week for 30–45 min for each session for 4 back to back week for the intervention group, and both the two groups were assessed before and after the intervention. ANOVA demonstrated that the intervention was effective. It was found that overall stress and apparent work stress reduced and life satisfaction scores increased for the intervention group.

♣ Sultana B etal⁴⁷ investigated the nature and effect of teachers stress and anxiety in the non-public schools of Gilgit- Baltistan of Pakistan.

In the course of the most recent decade or so there has been rapid development of the private english-medium schools nearly in all areas of Gilgit-Baltistan and, subsequently, a increment in the quantity of teachers serving in these schools.

Investigation of the stress elements demonstrated that they were inseparably associated with the teacher's personal, financial and economic aspects of life, individual.

Additionally, it is essential that the various elements were interconnected for example a stress in professional life of a teacher has significant impact over their personal life as well, thus affecting their professional life more and increasing the stress component in teachers life.

The data categorically delineated that the stress factors left various marks on teachers, influencing (often negatively) their morale and motivation and, therefore, impacted their sense of professionalism and classroom performance.

♣ Austin V etal⁴⁸ studied coping strategies used to reduce occupational stress among the teachers. This study explored educators' side effects of pressure and their adapting systems.

Estimations of 'feelings of anxiety's and 'adapting systems' utilized were procured by building a poll made up of four individual institutionalized surveys. The information were dissected by a progression of correlational investigations that featured huge connections between methods for adapting and levels of pain.

Contrasts between the stress related zones were estimated utilizing the Friedman test and Wilcoxon test. The discoveries inferred that 'escape shirking', 'tolerating obligation' and 'uncontrolled animosity' were utilized as negative adapting

methodologies and just a single methodology, 'work out', was demonstrated to be a compelling method for adapting.

The educators' procedures were analyzed for likenesses and contrasts with those suggested by word related specialists. This pilot study was constrained to two schools and it is prescribed that it be reached out to more readily sum up the outcomes.

Moreover, methods for adapting, as estimated by mental measures, don't appear to lessen pressure so it is conceivable that the movement based Stress Management Questionnaire, as supported by Stein et al, may be increasingly profitable.

↓ Timmerman et al⁴⁹ inspected the impacts of a stress-management training program on participants without mental health complaints however with an expanded possibility of creating them as an outcome of stress.

Potential subjects were arbitrarily chosen from the network everywhere and, at that point screened for interest in the preparation program if a portion of a few (psychological wellness) chance variables could be credited to them: previous existence occasions, neuroticism, in - assertiveness, avoidant adapting style and absence of social help.

The control group, which didn't partake in the preparation program, comprised of people with a comparable hazard profile as those in the training group.

The intervention comprised of a several stress-management techniques like, relaxation training, problem-solving training, changing unhealthy life-style and social skills-training.

Multivariate investigations demonstrated that the training group, when contrasted with the control group, showed significantly less distress, depression, anxiety. No noteworthy changes was found in the adapting abilities of either groups.

♣ Eppley etal⁵⁰ reviewed effectiveness of relaxation technique on anxiety. Computer searches were used to locate studies on the effects of relaxation techniques on trait anxiety.

Effect sizes for the different relaxation treatments like progressive Relaxation, EMG Biofeedback and various forms of meditation, etc were calculated.

Results showed that most of the relaxation treatments for stress produced similar effect sizes except for transcendental Meditation which had significantly better effect size (p < .005). Meditation had significantly lesser effect.

Correlations with effect size was calculated for age, sex, population, duration and hours of treatment, experimental design, pretest anxiety, characteristics, experimenter attitude, type of publication, attrition, etc. It was found that only duration, hours, and attrition mainly influenced effect size.

♣ Guzicki et al⁵¹ examined the reductions in anxiety and improvements in teaching associated with cue-controlled relaxation techniques. The cue-controlled relaxation was taught in a workshops, among elementary school teachers.

Anxiety was assessed using direct observation of external behavior and self-report of internal states and the result of anxiety reduction on teaching behaviors were also examined.

Post training, significant decreases in motor manifestations of anxiety, significant increases in rewarding behavior, and reduced disapproving behavior to zero on most days was seen among the teachers.

This study concluded that training in the self-management of stress and tension significantly affect the anxiety and teaching behaviors of teachers.

♣ Strong J etal⁵² studied the effectiveness of applied relaxation and applied relaxation with biofeedback. Forty women with chronic low back pain underwent these relaxation workshop.

Results of the study showed that participants in both the groups showed a similar improvement on 2 out of 3 measures. On the pain rating index measure, participants in the applied relaxation group with biofeedback treatment group showed a significantly better improvement.

♣ Patel MP etal⁵³ directed a Study to assess the Effectiveness Of Muscle Relaxation Therapy on Stress among Staff nurses. Study demonstrated that restorative experts, for example, Medical undergraduates, Nurses and Nursing undergraduates experience numerous stressor operators.

Medical clinics are considered as one of the most unpleasant workplaces, on the grounds that there, it is the matter of people's demise and life. Nursing job is commonly seen as an upsetting and requesting profession. It is both physically and mentally challenge.

There are different techniques prescribed to control or lessen the pressure. Dynamic Muscle Relaxation Therapy is a systematic treatment for overseeing stress and accomplishing a deep state of relaxation. It is a powerful and generally utilized procedure for stress help. With standard practice it gives a total stress free life.

The discoveries of the investigation uncovered that in pre test the vast majority of the medical caretakers 53.3% had moderate pressure, 40.0% had medium pressure and 6.7% had extreme pressure. In post test the majority of the medical attendants had gentle pressure 73.3 % and no pressure 26.7 %.

It is inferred that Progressive Muscle Relaxation Therapy is successful in decreasing the feeling of anxiety of the staff medical caretakers.

♣ Nirmanmoh Bhatia et al⁵⁴ conveyed out a cross sectional examination on occupational stress amongst nurses from two tertiary care hospitals in Delhi. Samples were 87 randomly chosen staff medical caretakers.

Information was gathered utilizing self-directed poll on stressors in every day life and at workstation and socio statistic profile. Results uncovered 87.4% of medical attendants revealed word related pressure.

Exceptionally distressing sources were Time Pressure, dealing with different issues at the same time, for example, work circumstance and duties. Elevated level of ability necessity of the activity was the most significant stressor legitimately identified with nursing profession.

The study concluded as high prevalence of stress found amongst medical caretakers and suggests that the need for stress reduction programmes targeting medical care workers.

♣ Beverly J. Myers⁵⁵ studied stress among psychiatric nurses at Albama. The critical indicators of psychiatric nurses stress in the study found factors like the human services association, family social help, age, nursing training, long stretches of nursing background, hours worked. Study concludes that Psychiatric nurses appeared to be at a greater risk for stress.

↓ Urmila Rani Srivastava⁵⁶ conducted a study on shift work Related to Stress at Varanasi, India. Data collection regarding general health of the shift workers was compared with control Group of day worker.

Results showed that shift workers were found to have significantly higher levels of job and life stress. It was also seen that role ambiguity and work overload were the main predictors of negative mental health outcomes among shift workers.

Study also concludes that shift work is opposite to the human biological system which causes multiple psychological, physiological and psychosocial problems for shift workers.

♣ Eleni Moustaka⁵⁷ explored about the sources and impacts of Work-related worry among the medical caretakers. Consequences of the investigation demonstrated that various parts of working life are interface with stress, to be specific work over-burden and job based factors, for example lack of power, role ambiguity, and role conflict.

Dangers to profession advancement and accomplishment, including risk of excess, being underestimated and misty advancement prospects are upsetting.

Stress is related with diminished effectiveness, decreased capacity to perform, a specific sort of medical clinic unit, stress emerges from the physical, mental, and social parts of the work place. Significant levels of pressure antagonistically influence patient consideration.

♣ Kane PP⁵⁸ did an exploratory investigation to distinguish pressure causing psychosomatic sickness among medical caretakers at 2 emergency clinics in Maharashtra.

Demographic information gathered by a poll and stress evaluated by adjusted pressure appraisal rating scale. Information gathered from 106 staff attendants.

The outcomes demonstrated that 26.42% had gentle pressure, 66.04% had moderate degree of stress, and 7.55% had serious degree of stress.

The work related pressure incorporate not completing work at time (78.3%), spinal pain because of standing for extended periods of time (61.3%), lack of staff (58.5%) and night obligation (20.8%).

♣ Christopher Sudhaker⁵⁹ inspected a study to evaluate employment stress, adapting strategies and the job quality index of nurses working in multispecialty emergency clinics at Mangalore.

This investigation embraced review approach and 60 staff attendants chose utilizing non-likelihood comfort examining procedure. Overview approach received for data collection. Statistic Performa of medical caretakers gathered utilizing Job Stress Index, Coping agenda, and Job quality file.

The after effects of the examination uncovered that the medical caretakers had moderate to significant levels of stress. The examination demonstrates that there is close connection between adapting techniques, work quality, and the activity stress. Improving these factors will improve Job full fillment in this manner improves the nature of nursing care.

♣ Mandres CM etal⁶⁰ studied the effectiveness of the relaxation techniques, in stress reduction and optimization strategies for coping in teenagers.

The present examination evaluate the degree of stress present among young people, concentrating the adapting procedures they execute in their lives and how relaxation systems show productivity in diminishing the degree of stress.

Study was conducted among 60 secondary school understudies with a normal age of 16 and 17-year-old.

The members were isolated into two group: the experimental group and the control group. The members in the experimental group were applied to eight sessions of relaxation techniques of 20 minutes each.

Following 30 days from the primary test, level of stress was examined again alongside the adapting vital methodology, among the 60 members, keeping the conditions of the design research with the two groups, respectively the experimental group and the control group.

The results revealed that the stress level among the participants in the experimental group, decreased after applying the techniques of relaxation.

♣ Priyanka R etal⁶¹ found that out of 30 samples in pre test 47% were suffering from moderate stress and 47% were suffering from mild stress and 6% were normal. Out of 30 samples 13% are suffering from mild stress and 87% are normal. The pre test mean value was 38.03 with 6.63 SD and post test mean value of 20.86 with 3.339 SD.

♣ Barber etal⁶² conducted a study on progressive muscle relaxation technique is effective in producing relaxation among bus drivers than the simple instruction to sit quietly.

There were two conditions, twelve subjects were assigned to a progressive muscle relaxation condition, on the remaining 36 subjects were assigned to three control groups.

They were placed in a semi recumbent position and given the simple instruction to sit quietly. Result shown that PMRT was effective in producing relaxation as indicated by physiological measures among bus drivers.

♣ Giju Thomas⁶³ conducted a quasi experimental study to decide the viability of progressive muscle relaxation technique on Anxiety among elderly people in selected old age home at Bangalore.

Study was conducted out in Sarvodaya mature age home, Bangalore. Information was gotten from the 40 older people remaining in Sarvodaya mature age home through the standard state trait Anxiety inventory scale the degree of Anxiety was evaluated.

The finding of the examination uncovers that the mean degree of Anxiety during pretest was 89.82 and post test it was diminished to 69.55. There was a viability found after STP of dynamic progressive muscle relaxation technique.

♣ **Kwekkeboom.K.L**⁶⁴ conducted an examination to audit randomized preliminaries of relaxation techniques utilized for the treatment of stress in grown-ups and to synthesize evidence regarding the efficacy of specific techniques.

Studies were evaluated and sorted dependent on the kind of relaxation intervention (progressive muscle relaxation [PMR], autogenic training, jaw relaxation, rhythmic breathing, and other relaxation exercises) and other techniques.

Most of the investigations assessed had shortcomings in system, which constrained the capacity to make inferences about intercessions.

♣ MekyFA⁶⁵etal studied stress and its management among primary school teachers.

Results showed that 64.7% were having moderate stress and 22.4% were having severe stress.

Factors to cause severe stress among the participants were as follows bad behavior of students, stretched working hours and less salary were the common reported.

It was seen that after introducing the stress management program, the percentage of teachers who did not had stress increased from 12.9% to 32.9% and the

percentage of those who had severe stress decreased from 22.4% to 5.9%. Study concluded that, $1/5^{th}$ of primary school teachers in supposed teaching as a severely stressful job.

♣ Forman SG etal⁶⁶ studied stress management among teachers. In this study urban secondary school teachers were included in the study using a cognitive-behavioral stress management program. Estimation data were also collected from the control group.

Outcome variables were self-reported anxiety and stress and observations of teacher classroom behavior. Results of the study showed that the training program significantly reduced self-reported stress and anxiety.

Follow-up data after 6 weeks of the training also indicated further decrease of stress. Results also indicated decreases in motor manifestations of anxiety in the classroom as a result of the training.

4 Yang X etal⁶⁷ studied relationship between quality of life and occupational stress among teachers. Results of the study showed that the mean scores of quality of life for both male and female teachers in this study were significantly lower than those for the Chinese general population except mental health and vitality (P < 0.05).

It was found that male teachers scored significantly higher than female teachers for physical functioning, bodily pain, vitality and physical health (P < 0.05). Role overload, Age, vocational strain, physical strain, psychological strain, recreation and rational coping were significantly associated with both the physical and mental component summaries of the Short forms-36.

Gender, physical environment and self-care appeared to be robust indicators of physical health (P < 0.05), while role insufficiency, interpersonal strain and social support were strong indicators of mental health (P < 0.05).

♣ Solomon A etal⁶⁸ studied the level of stress among school teachers in selected schools at vellore. The study results showed that a majority of teachers i.e. 34 (42.5%) had moderate level of stress followed by 23 (28.75%) of teachers had mild stress and severe level of stress respectively.

The study results also revealed that educational status and years of experience had statistical significance with level of stress.

MATERIALS & METHODS

Study Design:

Cross sectional Study

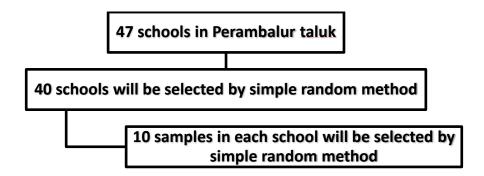
Study population:

All school Teachers in Perambalur District

Study Duration – 1 and a half years

Study period - Jan 2018 - June 2019

Sampling method



SAMPLE SIZE CALCULATION:

Assuming the prevalence of stress among the school teachers as 50% to get the maximum sample size and it is calculated by using the formula

$$n = 3.84*(p*q)/d^2$$

$$p = 50\%$$
, $q = 1-p$

Allowable error = 5%,

Confidence level = 95%, Power = 80%

$$n = 3.84*50*50/25$$

$$n = 384$$

The final sample size is calculated as 400 approximately

INCLUSION CRITERIA:

Age range between 18-65 years

Those who are willing to participate

EXCLUSION CRITERIA:

Those who are not willing to participate

Regular use of Tranquillizers

Previous History of Psychiatry disorder

TOOLS:

The following Demographic Characteristics were included age, gender, marital status, income level, education level, other diseases etc.

The Perceived Stress Scale (PSS) is the most widely used psychological instrument for measuring the perception of stress. It is a measure of the degree to which situations in one's life are appraised as stressful.

Items were designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives. The scale also includes a number of direct queries about current levels of experienced stress.

The PSS was designed for use in community samples with at least a junior high school education. The items are easy to understand, and the response alternatives are simple to grasp. Moreover, the questions are of a general nature and hence are relatively free of content specific to any subpopulation group.

The questions in the PSS asked about feelings and thoughts during the last month. In each case, respondents are asked how often they felt a certain way.

Individual scores on the PSS can range from 0 to 40 with higher scores indicating higher perceived stress.

Scores ranging from 0-13 would be considered low stress.

Scores ranging from 14-26 would be considered moderate stress.

Scores ranging from 27-40 would be considered high perceived stress.

INTERVENTION:

Perceived Stress Scale questionnaire was administered by the principal investigator before and after Intervention. After study subjects signing the concern to participate, we should exhibit the video to train The Benson's relaxation method to study subjects.

One senior teacher will be selected from each experimental school to guide the study subjects to practice correctly a time, twice a day, Morning and evening for 20 mins for 4 weeks. They were also contacted Home daily to remind about the timed practice The instruction of the Benson's relaxation Technique

The following are,

- 1. Stay in confident Position
- 2. Close your eyes
- Calm down and relax your body. Relax from your toes to lap of your need
- 4. Take a deep breath from your nose and exhale from the mouth whenever exhaling, repeat one word or number inhale and exhale with comfort and confidence
- Do this for 15 mins, try to keep your body and muscles relax
 then open your eyes slowly and don't move for some minutes
- 6. Don't care about interfering thoughts and let them go

DATA ANALYSIS:

Data were analyzed using Statistical package for the social sciences Software (SPSS version) 16.0. Descriptive statistics such as Central and dispersed indexes were first run and independent sample t-test were applied to compare the two groups.

Demographic data was categorized into questions, chi square used in analysis of the obtained data. Pre and post intervention score in each group were compared using paired t-test. The chi square test was used to compare qualitative variables. The level of significance was defined as 0.05.

Ethical Consideration:

Ethical clearance were obtained from the Institutional Ethics Committee on Human Subjects, DSMCH.

RESULTS

Mean age					
	N	Minimum	Maximum	Mean	Std.
AGE					Deviation

Mean age of the study participants was found to be 36.21±9.14 years.

Table 1: Socio-demographic profile of the study participants

Socio-demographic profile	Frequency	Percent		
Age group				
20-30 Years	132	33.6		
31-40 Years	141	35.9		
41-50 years	85	21.6		
>51 years	35	8.9		
Gender				
Male	151	38.4		
Female	242	61.6		
Religion				
Hindu	345	87.8		
Muslim	6	1.5		
Christian	42	10.7		

Marital status					
Married	309	78.6			
Divorced	7	1.8			
Unmarried	73	18.6			
Separated	1	.3			
Widow	3	.8			
Literac	Literacy				
Profession (Ph. D)	1	0.3			
Degree (UG)	200	50.9			
Degree (PG)	192	48.8			
Higher Secondary	12	3.1			
Type of family					
Joint	179	45.5			
Nuclear	200	50.9			
Three generation	14	3.6			
No of family member					
1-5 member	316	80.4			
6-11 member	77	19.6			

Table 1 shows socio-demographic profile of the study participants. Majority of the participants were in the age group of 31-40 years (35.9%) followed by 20-30 years (33.6%).

Majority of the participants were females (61.6%), belonging to Hindu religion (87.8%).78.6% of the participants were married. Literacy status of the participants showed that majority of the participants had their degree (UG) (50.9%). Nuclear family comprised of 50.9%.

Fig 1: Distribution of study participants according to age group

(n=393)

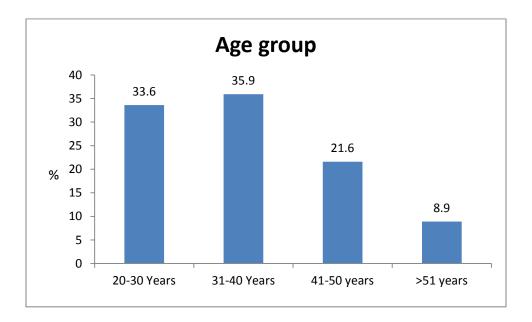


Fig 2: Distribution of study participants according to gender

(n=393)

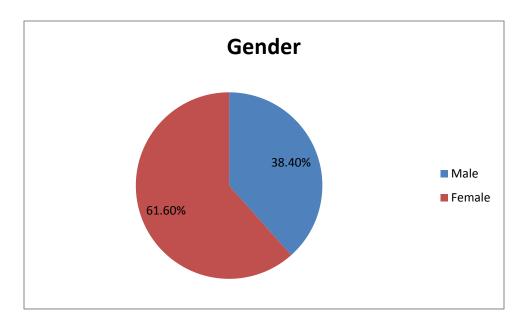


Fig 3: Distribution of study participants according to religion

(n=393)

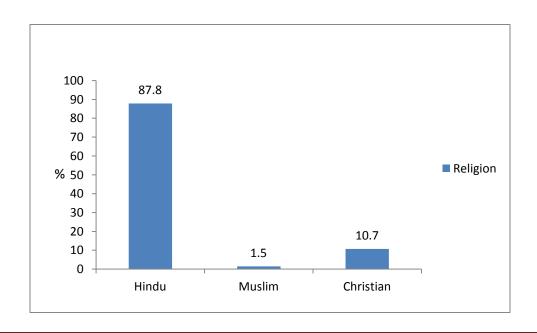


Fig 4: Distribution of study participants according to Marital status (n= 393)

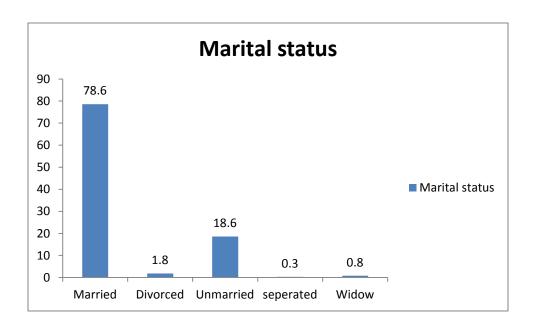


Fig 5: Distribution of study participants according to literacy status (n= 393)

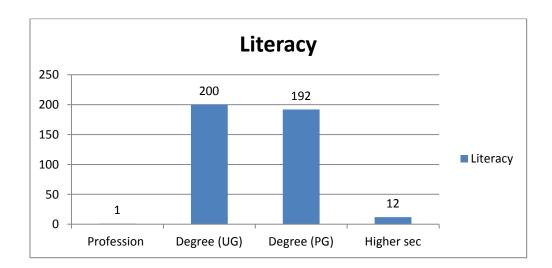


Fig 6: Distribution of study participants according to type of family(n= 393)

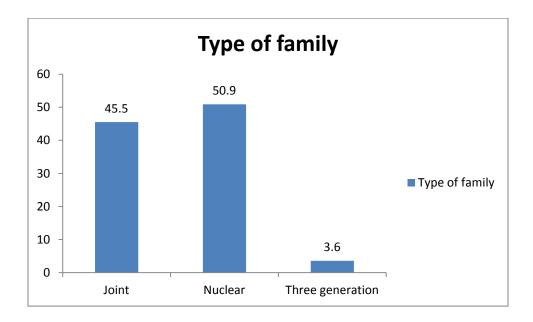


Fig 7: Distribution of study participants according to number of family member



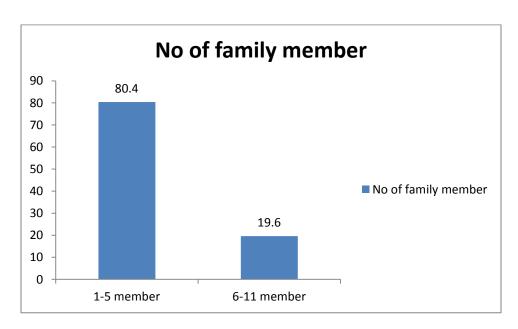


Table 2: Socioeconomic status of the participants

Socioeconomic	Frequency	Percent
status		
Upper class	352	89.6
Upper middle	22	5.6
class		
Middle class	14	3.6
Lower middle	2	0.5
class		
Lower class	3	0.8

Majority of the participants were from upper class (89.6%).

Fig 8: Distribution of study participants according to socioeconomic status of the participants (n= 393)

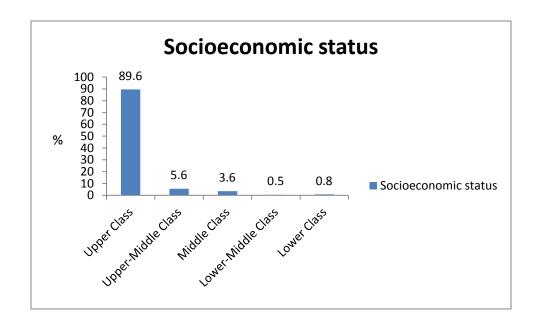


Table 3: Distribution of male participants according to personal habits(n= 393)

Variables	Yes F (%)	No F (%)	Chi square value	P value
Smoking	11	140	18.13	< 0.01
f (%)	7.3%	92.7%		
Alcohol consumption	28	123	48.31	< 0.01
f(%)	18.5%	81.5%		

Table 3 shows distribution of male participants according to personal habits. 7.3% of the male participants were indulged in smoking and 18.5% of the male participants were consuming alcohol. The difference across the groups was found to be statistically significant (p<0.01).

Fig 9: Distribution of male participants according to personal habits (n= 393)

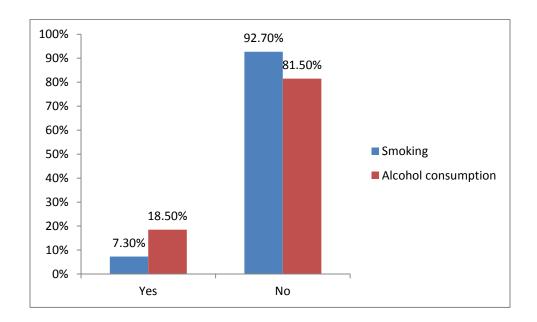


Table 3 and fig 9 shows distribution of male participants according to personal habits. 7.3% of the male participants were indulged in smoking and 18.5% of the male participants were consuming alcohol. The difference across the groups was found to be statistically significant (p<0.01).

Table 4: Morbidity profile

Diabetes mellitus	Frequency	Percent
Yes	25	6.4
No	368	93.6
Total	393	100.0
hypertension	Frequency	Percent
Yes	18	4.6
No	375	95.4
Stroke	Frequency	Percent
Yes	1	0.3
No	392	99.7
Heart disease	Frequency	Percent
Yes	4	1.0
No	389	99.0
Dyslipidemia	Frequency	Percent
Yes	5	1.3
No	388	98.7
Seizure	Frequency	Percent
Yes	2	0.5
No	391	99.5
Hypo thyroid	Frequency	Percent
Yes	4	1.0
No	389	99.0

Results showed that 6.4%, 4,6%, 0.3%, 1.0%, 1.3%, 0.5%,1.0% of the participants had diabetes mellitus, hypertension, Stroke, Heart disease, Dyslipidemia, Seizure and Hypothyroid respectively.

Fig 10: Distribution of study participants according to diabetes (n= 393)

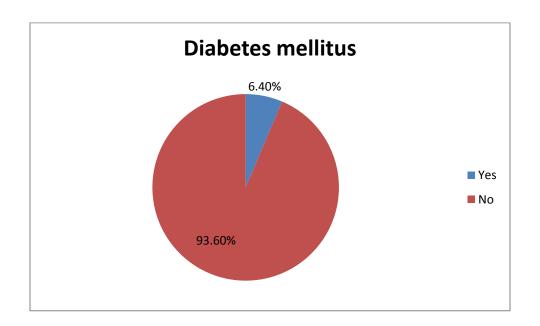


Fig 11: Distribution of study participants according to hypertension (n= 393)

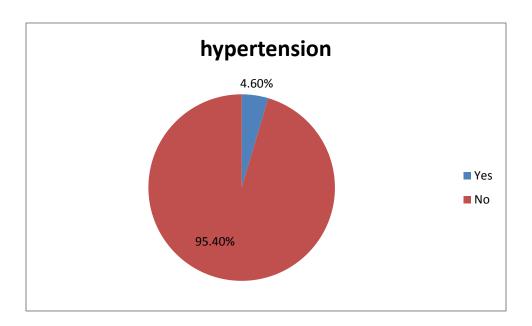


Fig 12: Distribution of study participants according to stroke (n= 393)

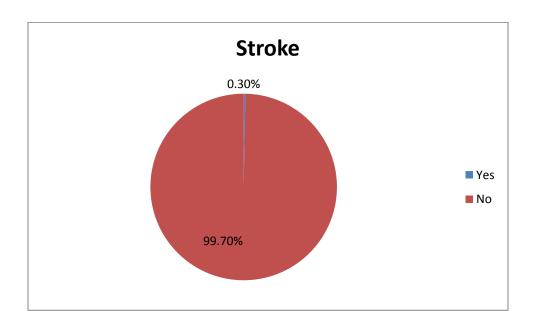


Fig 13: Distribution of study participants according to heart disease (n= 393)

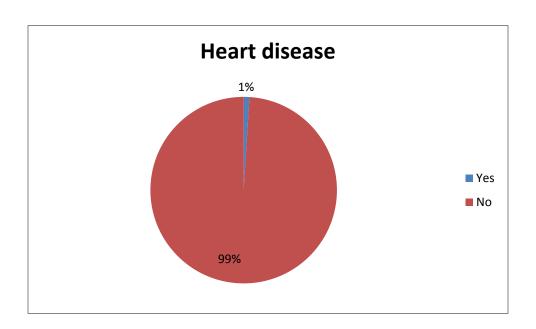


Fig 14: Distribution of study participants according to dyslipidemia (n= 393)

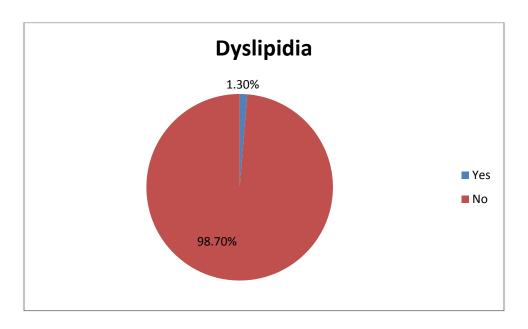


Fig 15: Distribution of study participants according to seizure (n= 393)

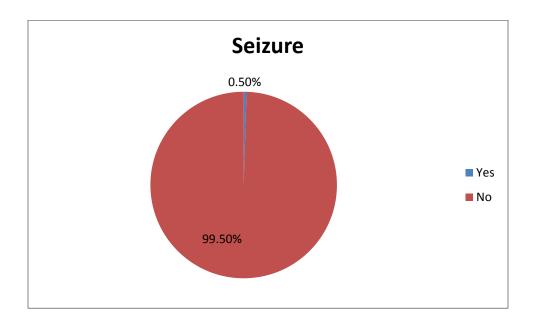


Fig 16: Distribution of study participants according to hypothyroid (n= 393)

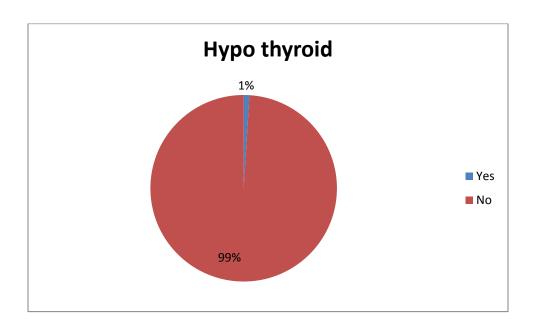


Table 6: Duration of teaching

Duration of teaching	Frequency	Percent
2-4 yrs	59	15
<2 yrs	29	7.4
>4 yrs	305	77.7
Total	393	100.0

Table 6 showed duration of teaching. Majority of the participants had teaching experience of more than 4 years (77.7%).

Table 7: Hours of working

Hours of working	Frequency	Percent
<4hrs	9	2.3
>4hrs	384	97.7
Total	393	100.0

Table 7 showed hours of working. Majority of the participants had teaching experience of more than 4 hour (97.7%).

Table 8: Prevalence of stress

Prevalence	Pre	Post
of stress	intervention intervent	
	(SD)	(SD)
	52.6%	47.1%

Results showed that prevalence of stress in pre intervention phase was 52.6% and in post intervention phase was 47.1%.

Table 9: Comparison of pre and post intervention

	Pre	Post	CI	P value
	intervention	intervention		
Stress score	(SD)	(SD)		
	21.05±7.61	16.06±6.33	4.62	<0.01

It was found that mean pre intervention score was 21.05 ± 7.61 and post intervention score was 16.06 ± 6.33 . There was significant association between pre and post intervention score (p<0.01)

DISCUSSION

The present cross sectional study was conducted among all teachers in Perambalur District over the duration of 1 and half years from Jan 2018 to June 2019.

The purpose of the study was to find prevalence of stress and the effectiveness of relaxation training on stress among school teachers.

Socio demographic profile

Mean age of the study participants in our study was found to be 36.21±9.14 years. In the study conducted by Shyam Swaroop S mean age of the teachers was found to be 35.2 years with standard deviation of 9 years.

Socio-demographic profile of the study participants in this study showed that majority of the participants were in the age group of 31-40 years (35.9%) followed by 20-30 years (33.6%).

Majority of the participants were females (61.6%), belonging to Hindu religion (87.8%), 78.6% of the participants were married.

Literacy status of the participants showed that majority of the participants had their degree (UG) (50.9%). Nuclear family comprised of 50.9%. Majority of the participants in our study were from upper class (89.6%).

In the study conducted by Shyam Swaroop S, 71.2 % of the teachers were males and 28.8 % were females. 64.5 % of teachers were having monthly income of less than Rupees 6000. Majority of the participants had professional degree that is 81.1%.

In the study conducted by Dawn Setal, 42.31% of the participants were male teachers and 57.69% of the participants were female teachers. Majority of the teachers that is 58.57% were middle aged (31- 50 age group). 53.84% of female teachers were 40 years or below. Majority of the teachers were married and 2.7% were separated or divorced .Majority of the teachers were from Hindu religion.

Personal habits

In the present study, 7.3% of the male participants were indulged in smoking and 18.5% of the male participants were consuming alcohol. The difference across the groups was found to be statistically significant (p<0.01).

In the study conducted by Chambers R et al, higher prevalence of smoking and alcohol consumption was found among the teachers under stress, which exceeded the recommended limits among teachers.

Morbidity profile

Results of the present study showed that 6.4%, 4,6%, 0.3%, 1.0%, 1.3%, 0.5%,1.0% of the participants had diabetes mellitus, hypertension, Stroke, Heart disease, Dyslipidemia, Seizure and Hypothyroid respectively.

In a study conducted by Keiper RW et al, it was stated that Stress leads to bad performance, job dissatisfaction, accidents and various health problems like diabetes, hypertension, stroke etc.

Working Duration

In the present study majority of the participants had teaching experience of more than 4 years (77.7%). Majority of the participants had teaching experience of more than 4 hour (97.7%).

In a study conducted by Shyam Swaroop S majority of the teachers had more than 10 years of experience. About 61 % of the teachers were having less than 10 years of experience. 58.5% had Up to 6 hours of working.

Results showed that prevalence of stress in pre intervention phase was 52.6% and in post intervention phase was 47.1%.

In a study conducted by Shyam Swaroop S, it was found that 57% had no stress among all teachers. It was seen that 16.9% had mild stress and more than a quarter of the teachers were suffering from severe stress.

Singh M et al found that Indian teachers are suffering from very high level of stress. High level of occupational stress among Indian school teachers can be explained by high workload.

In the study conducted by Dawn Setal, 12.42% teachers were severely stressed with a stress score of 4 or more. 37.57% teachers were mildly stressed with a stress score between 2 and 3 and 26.33% teachers were moderately stressed with a stress score between 3 and 4.

It was found that mean pre intervention score was 21.05 ± 7.61 and post intervention score was 16.06 ± 6.33 .There was significant association between pre and post intervention score (p<0.01)

SUMMARY:

- Mean age of the study participants was found to be 36.21±9.14 years.
- Majority of the participants were in the age group of 31-40 years (35.9%) followed by 20-30 years (33.6%). Majority of the participants were females (61.6%), belonging to Hindu religion (87.8%). 78.6% of the participants were married. Literacy status of the participants showed that majority of the participants had their degree (50.9%). Nuclear family comprised of 50.9%
- Majority of the participants were from upper class (89.6%).
- 7.3% of the male participants were indulged in smoking and 18.5% of the male participants were consuming alcohol. The difference across the groups was found to be statistically significant (p<0.01).
- Results showed that 6.4%, 4,6%, 0.3%, 1.0%, 1.3%, 0.5%,1.0% of the participants had diabetes mellitus, hypertension, Stroke, Heart disease, Dyslipidemia, Seizure and Hypothyroid respectively
- Majority of the participants had teaching experience of more than 4 years (77.7%).
- Prevalence of stress in pre intervention phase was 52.6% and in post intervention phase was 47.1%.
- It was found that mean pre intervention score was 21.05±7.61 and post intervention score was 16.06±6.33 .There was significant association between pre and post intervention score (p<0.01)

CONCLUSION:

This study indicates that teachers in higher education were exposed to high levels of occupational stress. In this present study Majority of the participants were females (61.6%), and teachers who are having teaching experience > 4yrs (77.7%) were exposed to high prevalence of stress.

From the present study, pre intervention phase of stress was 52.6% and post intervention stress was 47.1%, which is reduced due to relaxation techniques.

Hence we come to the conclusion that meditation, yoga and relaxation techniques are good stress relieving methods.

LIMITATION OF THE STUDY:

Out of 393 participants, 90 could not be able to follow, due to personal reasons of the participants and unwillingness to reveal personal details for the study.

Student behavior pattern, work atmosphere, relationship with colleagues and the subject of teaching which are considered as important controlling factors in other studies have not been included in this study.

There was a lack of attention from the participants, when the relaxation techniques was taught.

RECOMMENDATIONS:

From the present study, post intervention were found to be 47.1%, hence we recommend meditation, yoga as the stress relief methods. Further female teachers getting helping hand from the spouses in their household works may just be a big difference. Sharing responsibility of duties in administration between the teachers also can decrease the stress level of the teachers.

Work Out Priorities:

A list should be made on prioritizing the tasks which are possible and tick them off when done.

Identification Of Stress Situation:

To make a list of events that can leave them emotionally drained with one or two ways to reduce the stress for each.

♣ Don't React To Imagined Insults:

Give people the benefit of the doubt to talk over the situation with someone you trust.

REFERENCES

- 1. Hunter DJ, Reddy KS. Non communicable diseases. New England Journal of Medicine. 2013 Oct 3; 369(14):1336-43.
- 2. Unwin N, Alberti KG. Chronic non-communicable diseases. Annals of Tropical Medicine & Parasitology. 2006 Aug 1; 100(5-6):455-64.
- 3. Quick JC, Quick JD, Nelson DL, Hurrell Jr JJ. Preventive stress management in organizations. American Psychological Association; 1997.
- 4. Brener ND, Billy JO, Grady WR. Assessment of factors affecting the validity of self-reported health-risk behavior among adolescents: evidence from the scientific literature. Journal of adolescent health. 2003 Dec 1;33(6):436-57.
- 5. Levine S. A definition of stress?.InAnimal stress 1985 (pp. 51-69). Springer, New York, NY.
- 6. Selve H. History of the stress concept.
- 7. Murray IR, Baber C, South A. Towards a definition and working model of stress and its effects on speech. Speech Communication. 1996 Nov 1;20(1-2):3-12.
- 8. Yang X, Ge C, Hu B, Chi T, Wang L. Relationship between quality of life and occupational stress among teachers. Public health. 2009 Nov 1;123(11):750-5.
- 9. Selye H. Stress without distress. In Psycho pathology of human adaptation 1976 (pp. 137-146). Springer, Boston, MA.

- 10. Schneiderman N, Ironson G, Siegel SD. Stress and health: psychological, behavioral, and biological determinants. Annu. Rev. Clin. Psychol.. 2005 Apr 27;1: 607-28..
- 11. Miley KK, O'Melia MW, DuBois BL. Generalist social work practice: An empowering approach. Pearson; 2016 Feb 22.
- 12. Davis LS. Shape matching using relaxation techniques. IEEE Transactions on Pattern Analysis and Machine Intelligence. 1979 Jan (1):60-72.
- 13. White JK, Sangiovanni-Vincentelli AL. Relaxation techniques for the simulation of VLSI circuits. Springer Science & Business Media; 2012 Dec 6.
- 14. Blix AG, Cruise RJ, Mitchell BM, Blix GG. Occupational stress among university teachers. Educational research. 1994 Jun 1;36(2):157-69.
- 15. Albertson LM, Kagan DM. Occupational stress among teachers. Journal of Research & Development in Education. 1987.
- 16. Gaziel HH. Coping with Occupational Stress among Teachers: a cross-cultural study. Comparative Education. 1993 Jan 1;29(1):67-79.
- 17. Okebukola PA, Jegede OJ. Determinants of occupational stress among teachers in Nigeria. Educational Studies. 1989 Jan 1; 15(1):23-36.
- 18. Tang CS, Au WT, Schwarzer R, Schmitz G. Mental health outcomes of job stress among Chinese teachers: Role of stress resource factors and burnout. Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior. 2001 Dec; 22(8):887-901.

- 19. Stein F, Cutler SK. Psychosocial occupational therapy: A holistic approach. Singular; 1998.
- 20. Gelder M, Garth D, Mayou R (1993). Oxford Textbook of Psychiatry (2nd edn.)
 Oxford: Oxford University Press.
- 21. Ramos A, Mormède P. Stress and emotionality: a multidimensional and genetic approach. Neuroscience & Biobehavioral Reviews. 1997 Dec 27;22(1):33-57.
- 22. Sánchez JI, Fernández DM. Acculturative stress among Hispanics: A bidimensional model of ethnic identification. Journal of Applied Social Psychology. 1993 Apr;23(8):654-68.
- 23. Anderson KM, Manuel G. Gender differences in reported stress response to the Loma Prieta earthquake. Sex Roles. 1994 May 1;30(9-10):725-33.
- 24. Verma R, Balhara YP, Gupta CS. Gender differences in stress response: Role of developmental and biological determinants. Industrial Psychiatry Journal. 2011 Jan;20(1):4.
- 25. Maslach C, Jackson SE, Leiter MP, Schaufeli WB, Schwab RL. Maslach burnout inventory. Palo Alto, CA: Consulting psychologists press; 1986.
- 26. Buunk BP, Ybema JF. Social comparisons and occupational stress: The identification-contrast model. Health, coping, and well-being: Perspectives from social comparison theory. 1997:359-88.
- 27. Needle RH, Griffin T, Svendsen R. Occupational stress coping and health problems of teachers. Journal of School Health. 1981 Mar;51(3):175-81.

- 28. Bradley J, Eachus P. Occupational stress within a UK higher education institution.

 International Journal of Stress Management. 1995 Jul 1;2(3):145-58.
- 29. Chang SJ, Koh SB, Kang D, Kim SA, Kang MG, Lee CG, Chung JJ, Cho JJ, Son M, Chae CH, Kim JW. Developing an occupational stress scale for Korean employees. Korean Journal of Occupational and Environmental Medicine. 2005 Dec 1;17(4):297-317.
- 30. LaRocco JM, House JS, French Jr JR. Social support, occupational stress, and health. Journal of health and Social Behavior. 1980 Sep 1:202-18.
- 31. Lipsett A. Stress Still Main Cause of Ill Health in Teachers, Says ATL. The Guardian–Education. 2008.
- 32. Brown M, Ralph S. Towards the identification of stress in teachers. Research in education. 1992 Nov;48(1):103-10.
- 33. Mittenberg W, Tremont G, Zielinski RE, Fichera S, Rayls KR. Cognitive-behavioral prevention of postconcussion syndrome. Archives of Clinical Neuropsychology. 1996 Jan 1;11(2):139-45.
- 34. Kyriacou C. Teacher stress and burnout: An international review. Educational research. 1987 Jun 1;29(2):146-52.
- 35. Cooper CL. Identifying workplace stress: Costs, benefits, and the way forward.

 New Solutions: A Journal of Environmental and Occupational Health Policy. 1995

 Feb;4(4):38-40.

- 36. Healy C, McKay M. Identifying sources of stress and job satisfaction in the nursing environment. The Australian journal of advanced nursing: a quarterly publication of the Royal Australian Nursing Federation. 1999;17(2):30-5.
- 37. Eppley KR, Abrams AI, Shear J. Differential effects of relaxation techniques on trait anxiety: a meta-analysis. Journal of clinical psychology. 1989 Nov;45(6):957-74.
- 38. Carrington P, Collings JG, Benson H, Robinson H, Wood LW, Lehrer PM, Woolfolk RL, Cole JW. The use of meditation--relaxation techniques for the management of stress in a working population. Journal of occupational medicine.: official publication of the Industrial Medical Association. 1980 Apr;22(4):221-31.
- 39. Keable D. Relaxation Training Techniques—A Review Part One: What is Relaxation? British Journal of Occupational Therapy. 1985 Apr;48(4):99-102.
- 40. Ghoncheh S, Smith JC. Progressive muscle relaxation, yoga stretching, and ABC relaxation theory. Journal of Clinical Psychology. 2004 Jan;60(1):131-6.
- 41. Westerdahl E, Lindmark B, Eriksson T, Hedenstierna G, Tenling A. Deepbreathing exercises reduce atelectasis and improve pulmonary function after coronary artery bypass surgery. Chest. 2005 Nov 1;128(5):3482-8.
- 42. Celli BR, Rodriguez KS, Snider GL. A controlled trial of intermittent positive pressure breathing, incentive spirometry, and deep breathing exercises in preventing pulmonary complications after abdominal surgery. American Review of Respiratory Disease. 1984 Jul;130(1):12-5.

- 43. Xu CN, Zheng XG, Akiyama M, Nonaka K, Watanabe T. Dynamic visualization of stress distribution by mechanoluminescence image. Applied Physics Letters. 2000 Jan 10;76(2):179-81.
- 44. Jacobson E. Progressive muscle relaxation. Interview Behaviour". Journal of Abnormal Psy-University of Chicago Piess, Chicago. chology. 1938;75(1):18.
- 45. Da Silva TL, Ravindran LN, Ravindran AV. Yoga in the treatment of mood and anxiety disorders: A review. Asian journal of Psychiatry. 2009 Mar 1;2(1):6-16.
- 46. Kaspereen D. Relaxation intervention for stress reduction among teachers and staff. International Journal of Stress Management. 2012 Aug;19(3):238.
- 47. Sultana B, Bano Y, Bano F, Shafa MD. The nature and impact of teacher stress in the private schools of Gilgit-Baltistan, Pakistan. International Journal of Academic Research in Progressive Education and Development. 2012;1(2):64-84.
- 48. Austin V, Shah S, Muncer S. Teacher stress and coping strategies used to reduce stress. Occupational therapy international. 2005 May;12(2):63-80.
- 49. Timmerman GH, Emmelkamp PMG, Sanderman R (1997). The effects of a stress-management training program in individuals at risk in the community at large. Behavior Research and Therapy 36: 863–75.
- 50. Eppley KR, Abrams AI, Shear J. Differential effects of relaxation techniques on trait anxiety: a meta-analysis. Journal of clinical psychology. 1989 Nov;45(6):957-74.

- 51. Guzicki JA, Coates TJ, Goodwin DL (1980). Reductions in anxiety and improvements in teaching associated with cue-controlled relaxation. Journal of School Psychology 18: 17–24.
- 52. Strong J, Crammond T, Mass F (1989). The effectiveness of relaxation techniques with patients who have chronic low back pain. Occupational Therapy Journal of Research 42: 185–91.
- 53. Patel MP. A study to assess the effectiveness of progressive muscle relaxation therapy on stress among staff nurses working in selected hospitals at Vadodara City. IOSR Journal of Nursing and Health Science. 2014;3(3):34-59.
- 54. Nirmanmoh Bhatia et al. Occupational Stress amongst nurses from Two Tertiary

 Care Hospitals in Delhi, India. January 2011, AMJ;3(11)-731-738

 Availablefrom:www.amj. com.
- 55. Beverly J. Myers. Organizational support, perceived social support, and intent to turnover among psychiatric nurses;2006. Available from: Udini ProQuest LLC
- 56. Urmila Rani Srivastava. Shift Work Related to Stress, Health and Mood States.

 Department of Psychology, Banaras University, Varanasi, India
- 57. Eleni Moustaka, Sources and effects of Work-related stress in nursing. Health Science Journal. 2010-volume-4(4). Available from:

- 58. Kane PP. Stress causing psychosomatic illness among nurses; IndianJournal of Occupational Env. Medicine;2009;Apr;13-1- 28-32
- 59. Christopher Sudhaker. Job Stress, Coping Strategies and the Job Quality Index of Nurses Working In Selected Multi Specialty Hospitals at Mangalore. December 2009. Available from:http//www.pubmaid.in.com[56832189]
- 60. Mandreş CM, Crăciun A. The effectiveness of the relaxation techniques, in stress reduction and optimization strategies for coping in teenagers. Romanian Journal of Cognitive Behavioral Therapy and Hypnosis. 2015 Oct;2(4).
- 61. Priyanka R, Tamilselvi S. Effectiveness of relaxation technique to reduce stress among drivers. Int J Sci Res (IJSR). 2015;4:867-.
- 62. Barber and Hahn. The effects of progressive muscle relaxation as a relaxation among the bus drivers for reduction of stress and fatigue. Journal of Health and social behaviour.1982 Aug; 23(3):24-38.
- 63. Giju Thomas. (2006). Effectiveness of progressive muscle relaxation. Retrieved fromhttp://panicdisorder.about.com/od/livingwithpd/a/ProgressiveMuscle-Relaxation-Pmr.htm
- 64. Kwekkeboom.K.L. (2006). Relaxation interventions.Retirved from. http://www.ncbi.nlm.nih.gov/pubmed/17044345

- 65. Meky FA, Wahid A, Gamal A, Youssef Y. Management of stress among primary school teachers in Ismailia city. An intervention study. Egyptian Journal of Community Medicine. 2015 Jan;33(1).
- 66. Forman SG. Stress management for teachers: A cognitive-behavioral program.

 Journal of School Psychology. 1982 Dec 1;20(3):180-7.
- 67. Yang X, Ge C, Hu B, Chi T, Wang L. Relationship between quality of life and occupational stress among teachers. Public health. 2009 Nov 1;123(11):750-5.