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"As soon as there is life, there is danger."
- Ralph Waldo Emerson [1860].

Stress is an everyday fact of life. Even primitive man could not escape from its clutches. Whenever confronted with overwhelming stress [like lightning, thunder, wild animals, fire etc.] he usually responded in one of the two ways, depending on his perception of the situation. He would either fight or flee. His body prepared itself to handle either of these two situations [fight / flee].

In spite of his current level of progress and advancement the modern man, is yet to conquer stress. The threat-provoking situations have probably changed, but man’s response to these threats has not changed. In today’s high-pressure world, the stresses and strains of modern living have become increasingly hard to bear. Stress is something, which cannot be avoided. It creeps in stealthily, and has a potential to make you or mar you.

Man has made tremendous progress in almost every walk of life. We are now achieving objects once considered impossible to be achieved. Our past generations could not even imagine of what we have achieved and accomplished. Modern scientists & researchers have absolutely changed our lifestyle. Science has incessantly pouring on us new materials and devices to make our physical life more happy and comfortable.

However, pollution of air, water, body and mind is also the result of science. Modern life, with its quick pace, noise, social pressures, environmental poisons and our orientation to sedentary mental work, presents almost all of us with constantly stressful situations. We witness despair and disappointment on the
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faces of our young generation. Signs of restlessness are apparently visible in the
dry and dull eyes of our young men and women. Sloping shoulders, flat chests and
bulging stomachs have become their characteristics.

Today, we can claim that we are modern and civilized but cannot claim
that we are genuinely happy. We, today, use tranquilizers for sleep, pills for
purgative and tonics for vigour. Tranquilizers and sedatives are in vogue in our so-
called modern society.

Lounging for material wealth has hardened our heart. Human values are
decreasing. Work to time, competition and commotion have made us suffer from
stress and strain. Mental tension or strain produces undesirable consequences.
These stress and strain are the causes of physical as well as psychological disease
such as diabetes, cancer, acidity, ulcer, migraine and hypertension.

Though we do differ in the extent to which we are stressed and the way in
which we are stressed and the way in which we react to it – the fact remains that
all of us are affected by it in some way or the other, at some time or the other.

Education in any social order arises out of the need to perpetuate that
society, to provide continuity in its way of thinking, doing or behaving to
reinforce its value structure and to establish conformity to those norms that it sees
as consequential and sustaining. At the same time, to endure its viability in a
changing demanding and challenging modern world setting, it must seek to
redirect and reconstruct the social order to meet the needs of future.

According to Mouli [1996], democratic country like India has the
commitment to provide opportunity for all. It is empowered to provide every
individual a fair opportunity for development of the personality according to the
abilities, aptitudes and interests. There are at present glaring imbalances of
educational development in different parts of the country.

Education has a fundamental role to play in personal and social
development. It is not a miracle cure or a magic formula opening the door to a
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world in which all ideals will be attained. It is one of the principal means available to foster a deeper and more harmonious form of human development and thereby to reduce poverty, exclusion, ignorance, oppression and war. In other words, everyone expects something from education. Parents working or jobless adults, business and industry, communities, governments & of course children, pupils and students place a great hope in education. Improving the quality of education depends on first improving the recruitment training, social status and conditions of work of teachers, they need the appropriate knowledge and skills, personal characteristics, professional prospects and motivation if they are to meet the expectations placed upon them [Delors,1996].

Patankar [1999]. there has been an unprecedent expansion in the education system of countries during the last 30-40 years. Institutions have expanded manifold and simultaneously numbers of teachers have also increased. We have about 57 million teachers in the schools and out of every twelve teachers in the world, one teacher is in India, larger than the teachers. This is the situation today. Tomorrow it is going to be still larger in view of our constitutional commitment to universalization of Elementary Education before we enter the 21st century. The interest of such a large workforce cannot be overlooked.

We live in a stressful age. Stress not only comes from our jobs but from the constant change we face daily. Our fast paced society, where change is constant and we rush from one place to another, has negative effect on our health & wellness. By exploring the way we lead our lives & modifying our lifestyle we can lessen the effects of stress and learn to channel stress in positive manner (Brand, 1999).

Job stress has been called “The 20th Century disease”. Chances are you know someone who has it or you’ve experienced it yourself. The knot in your stomach, sleepless nights, the vague sense of hopelessness, that uneasy feeling as you dress for work, those sudden burst of anger at home or in the car (De Leno, 2000).
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1.1. TEACHER AS A PIVOT

According to an old Indian prayer, as written in Shakti Sangam Tantra:

“गुरुः ब्रह्मा गुरुः विष्णु
गुरुः देवो महेश्वरः
गुरुः साक्ष्मेऽपरमः ब्रह्मा
तस्मय श्री गुरुः नमः”

Which means, “The teacher is God Brahma, God Vishnu, he is God Maheswar. He is the whole Universe, obeisance to the teacher”. The teacher is the central figure in any social system, which the former proposes to create. This is as true of the modern school system as it was in the old days of the Indian Gurukal system, given the best accommodation, equipment and other facilities, if the teacher is of poor quality, the education system is bound to fail. Such as educational system will adversely effect the social system In fact, no other aspect of the social structure is so vital for its progress as the teacher.

The teacher has a great responsibility at time when our society is under going transformation. She along with the co-workers, will be required to take up constructive leadership in re-orienting education to meet national needs. She will have to work as an active agent in ushering forth a new social order based on equality, liberty and justice. Indeed, the teacher’s task is stupendous.

The teacher occupies a place of paramount importance in any system of education, no other aspect of education is so vital for its progress as the teacher. The teacher is the pivot of the educational system, maker of mankind, architect of society.

According to Well (1908), “The teacher is a real maker of history.” He is the torchbearer of race and guardian of the future of mankind. He is essentially a nation builder. He is the key man on whom depends the future of the child and that of a mankind. He plays an important role in shaping and moulding the personality of a child. According to Wather (1963), “Good teachers cost more
but poor teacher’s most”. As an incompetent doctor is dangerous for the physical welfare of the people. So an incompetent teacher is much more dangerous to the nation, since he maims or injures the personality of the children and crams their very soul.

**Patankar (Feb, 1999)**, teachers shape the destiny of the nation in the classroom. They develop societies, indicate the path of progress to the nation and sustain the human aspects of existence.

They nurture and cultivate humanistic, ethical and moral values among pupils. Education being the survival need of the human beings, the role of the teachers has become crucial factor. In view of the technological progress and new grounds broken by scientific discoveries, the role of teachers is assuming new dimension. The future of the nation depends on the quality of the human capital shaped by them in schools. Teaching is more a mission than a profession. They have to carry torch of knowledge to all with a missionary zeal.

### 1.2. ROLE OF TEACHER

In developing countries, many educational reforms, changes and innovations are being introduced to prepare the youth to become more aware and self-reliant. At the same time, great demands are being put upon teachers to keep up with the changes that are being made continually in techniques of education. As per **Shah (1969), Linton, Ralph. (1945)**, the term ‘role’ has been defined differently by different writers in social sciences literature. Some refer by it to what the society expects of an individual occupying a particular social position in the social system. Some others define it as the behaviour of the individual occupying a particular social position. The former refers to the ‘standard of behaviour’ expected of the individual by the society and the latter to the ‘actual behaviour’ of the individual. The teacher’s role, for e.g. may be defined by 1) The teachers themselves, the incumbents of the position, 2) the incumbents of counter positions (students, principals and school board members) within the school.
systems, and 3) the incumbents of positions in external social system (parents and community leaders).

According to Shah (1981), "The teacher has an important, vital role to play in our effort to relate education to national development and social change. It is the responsibility of the teacher to guide and inspire his students, to enrich his discipline to inculcate values which are in consonance with our cultural heritage and our social objectives. This involves the transmission of knowledge through research, investigation and enquiry. In order to do justice to this very challenging task, the teacher has to be actively involved in programmes of community development, extension education, curricular and extra-curricular activities, national and emotional integration and social service.

The role of teacher in the context of philosophy of education is not going to be easy and smooth. The teacher should have a genuine interest in youth and an understanding of psychology. He should be able to contribute to scholarship and advancements of the frontiers of knowledge. Apart from these traditional functions, which continue to be as valid today as ever before, the teacher has to perform two new functions. Firstly, he has to play an important role in the transformation of the education system through active participation in such programmes as restructuring of courses, examination reforms, faculty improvement, rural orientation, practical and relevant education. Secondly, he should have commitment to a society based on justice and should, therefore, strive for the inculcation of these values and extension of knowledge and skills to society at large. In fact, the teacher should become an effective instrument in the processes of development and social changes. He should be a key factor in the transformation of our value system.

As opined by Shah (1966) while recognizing the supreme importance of education as an agent of social change & the role of the teacher in that process, the education commission, it appears to me, has not given adequate attention to what the teacher can do in behalf.
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According to Chaudhary (1998), in the educational sector teacher has to play an important role to develop the wholesome personality of student. The student is the backbone of the society and the pillar of the nation. Higher Educational has manifold dimensions such as teaching, research, extension and social service. Taking into consideration this broad view, teachers should be efficient managers inside classroom and also in the institution at large.

Recently, there has been drastic changes in the teachers' tasks and roles, due to the expansion and change in higher educational system. Teachers have to cater for students, coming from varied socio-culture and economic settings as students have different needs Today’s teacher has to understand the scientific and technological progress/achievements that are made in India & try to use various media for the students in the progress of learning. Now teachers should not limit themselves within the per view of traditional methods of teaching but have to take new role of facilitators of learning and agents of social changes.

1.3. STATUS OF TEACHER

Shah (1981) states, “Millions of words are written and spoken on the status of teachers as builders of the nation, as peace builders, playing a very important role in promoting democracy, human rights and values for a better future life in the better world. The society expects much from teachers in terms of social status, salaries, working conditions etc. which draw lesser and lesser attention of the society”

UNESCO-ILO recommendations 1966 concerning the status of teachers are yet to be implemented by many countries in the world. These recommendations pertain to teacher preparation programmes, teacher training institutions, further education for teachers, and conditions for effective teaching learning, social security and teachers salaries.
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1.4. TEACHER’S PROFESSIONAL RESPONSIBILITIES

The teacher’s role in relation to the larger society is closely related to his professional responsibilities in the generally accepted sense of the word. These latter include, for e.g., the socialization of the individual by the transmission of tradition and culture, the fostering of a spirit of critical industry and imparting of the necessary intellectual equipment so as to provide to the student a frame of reference and the development of skills and attitudes appropriate for gainful employment. In a developing society the second and third functions have to be interpreted in a more radical sense than is necessary in developed societies. Transmissions of tradition looked upon as a function of education has, therefore, to be interpreted in a different way in a developing society. More precisely, in respect of the transmission of tradition one has to think of a critical, selective approach to it in the light of value goals intellectually accepted by the society but as yet waiting for assimilation in its emotional and attitudinal make up. Secondly, the intellectual content of the traditionally Indian outlook on man and the Universe needs to be radically revised in the light of knowledge made available by modern science. Until this is done it will be impossible to harmonise the two basic components of the nation’s philosophy of life. These components are intellectual on one hand and ethical on the other. The values of a modern, secular democracy that most of the articulate spokesman of India’s quest during the last hundred and fifty years have sought to foster re-inherently incompatible with task of the education to promote the growth of a modern intellectual approach made necessary by the growth of science and indispensable for the realization of these values (Shah, 1966).

Pali (1996), opined that teacher is the key to the whole educational process. The quality of the teacher in our educational system is more important than all the other educational factors taken together—syllabus, textbooks, equipment etc. The importance of a teacher in a community cannot be ignored. In a developmental sequence, the quality of citizens and ultimately the well-being of the nation.


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The National Policy on Education(1986) rightly states that “the socio-cultural ethos of a society is reflected by status of the teachers and that no people can rise above the level of its teachers”. The first and the most important roles of teacher is discharging duties as teachers, that is teaching and facilitating development of the student which in turn, will influence the community. According to this view, the teacher’s role is conceptualized in terms of 3C’s—curricular activities, co-curricular activities and community participation.

Shamsuddin (1966) is of opinion “The teacher is the kingpin in the entire education system. Developmental activities relating to social, cultural, intellectual, aesthetic and emotional aspects revolve around him. If he is conscientious and dedicated to his profession the future of the nation can be said to be in safe hands”.

From time immemorial, the teacher has been termed as the ‘torch bearer’ of civilization, the one, who by the light of his knowledge removes the darkness of ignorance. There is no profession so rewarding, so demanding and so rich in potentialities as the profession of teaching. Those who are in it have an opportunity for public service, which is reserved for few profession and few occupations.

Rao S. Narayan (1986) views, “In ancient India, tradition gave a lofty place to the teachers and he was regarded very differently by the society. Salutations were offered reverentially to the teacher by the young who were admonished to treat teachers respectfully and affectionately as they would to their parents. The role of the teacher was not merely concerned with the imparting of knowledge and skills to the young. He/She was enjoined to mould and shape the personality of his wards. In this pursuit, he unquestionably enjoyed perfected freedom to choose and use whatever methods, strategies and approaches he thought appropriate. No one ever questioned him and he (teacher) on his part did what he honestly felt was the best for the young pupils. The times were different the values of life and society were understandably not the same as of recent times. Present day values do not bear any semblance to the ones of the days of yore. They have undergone a sea change. The objectives of education are closely linked with the social changes and
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the teacher’s role must change as the social value and objectives of education change.”

1.5. WOMEN IN INDIA A COUNTRY PROFILE

Bose (1997) states, “The principle of gender equality has been basic to traditional Indian thinking and the Hindu religious philosophy. This is more than amplified by the religious dualism or deification of male and female gods. Indeed a plethora of goddesses continue to occupy pivotal places in Indian mythology. The concept of woman as Sakthi, the primal energy force finds expression in the famous epic Mahabharta, which exalts woman as a “light of the house, mother of the universe and the supporter of the earth and all its forests”. Various research studies also testify that during the Vedic period, women participated fully in the religious rituals, enjoyed freedom of movement, had the same rights and access to education as men, married later and had a say in the choice of their marriage partners. Over the years, however, the honoured position that women enjoyed in the family and society began to undergo radical changes. On the one hand she was hailed as the embodiment of purity and spiritual power and on the other she was treated as an essentially weak and dependent creature needing the constant guardianship and protection of man. Marriage, motherhood and service to the husband came to be regarded as the most valuable attributes of women. Despite the various socio-cultural handicaps, Indian women have played a very active role in the economic, social and political development of their country.”

The increasing involvement of women in social and political transformation was facilitated by the pronouncements of Mahatma Gandhi, the chief architect of the country’s Freedom Movement. According to Gandhi, freedom of all individuals and “Women is the companion of man gifted with equal mental capacities. and she has the same right of freedom and liberty as he.” Nevertheless, in India, for various reasons, women have not began accorded equality of status, with men in almost all aspects of social, cultural, economic and political life (Bose, 1997)
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1.5.1. WOMEN'S EMPOWERMENT

There is continued inequality and vulnerability of women in all sectors-economic, social, political, education, health care, nutrition and legal. As women are oppressed in all spheres of life, they need to be empowered in all walks of life (Suguna, 2001).

Women's empowerment is a global issue and discussion on women’s rights are at the forefront of formal and informal campaigns worldwide. The concept of women’s empowerment appears to be the outcome of several important critiques and debates generated by women’s movements throughout the world, and particularly by Third World feminists. Its sources can be traced to the interaction between “feminism” and the concept of “popular education” developed in Latin America in the 1970s (Walters, 1991).

1.5.2. WOMEN AND WORK

Sharma (1999) opines that ‘Women and Work’ is an emerging aspect of Human Resource Management (HRM). Women will be the equal sharing workforce in the next century. There is also a growing realization that ‘women and work’, have an additional dimension of ‘home and family’ and often women have to work harder to cope with the multiple roles and demands. Women constitute the new workforce in an organization and are entering into most of the professions. In fact they are the workforce of future India, taking equal share of responsibilities like men. Even though the importance of gender at workplace is not considered as an important aspect of human resource management by most people, this is gradually creeping into the world of work. It is being realized that in spite of cultural roots of gender hierarchies, women make a mark in their performance. One of the major factors changing the world of work today and in the next few years is the presence of women in every sphere of organizational life. Women constitute about fifty per cent of national population and are important as human resources.
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Women’s work is not only a means of effective economy and raising the standard of living of the people, it has an equally important psychological perspective as women derive a sense of satisfaction in being considered valued members of the society. Since position in society and role in the community is largely dependent on work, it is seen as the means to satisfy human beings’ need for belonging to a group and for a meaningful relation to others (Drucker, 1977).

1.5.3. WOMEN AND WORK: THE INDIAN SCENARIO

Indian society has witnessed tremendous socio-cultural changes in the recent years. These are particularly evident in infrastructure, spread of education, emancipation of women, awareness of political rights and associated consciousness of rights and privileges. Today women dominate the field of nursing and are in good number in medicine, computer science, research and education. Women are entering in other fields of science and technology based professions and are occupying high position (Sharma, 1999).

1.5.4. WOMEN IN ECONOMIC LIFE

Bose (1997), states that Indian women have generally engaged in economic activity, thereby contributing significantly to household income as well as to the national economy. However, the pattern of women’s participation in economic activities outside the home is a complex one and varies according to geographic region, caste and social class. Although women constitute an important segment of the national labour force, their contribution to the economy has not been adequately accounted for in the labour force statistics. The existing methods of measuring economic activity has rendered invisible much of the work performed by women.

According to the 1991 census data, only about 23% of the women as against 52% of the men were reckoned to be economically active. The activity rate for rural women (27.2%) being nearly three times for urban women (9.7%). Woman’s employment in the organized sector has increased significantly, from
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about 1.9 million in 1970 to 4.0 million in 1993. Nearly 62% of organized sector women employees are now employed in the public sector.

1.5.5. THE KINDS OF JOBS WOMEN CHOOSE

Women are mostly concentrated in occupations like school teaching, nursing, stenographers and typing, they also work as telephone-operators and are in medicine (Sharma, 1999). According to 1981 Census “In teaching institutions women were 45.8%, whereas percentage of men was 18.8%.”

1.5.6. LIMITATIONS IN CAREER CHOICE AND DEVELOPMENT

Studies report that mid career, women are generally lazy behind men with similar initial performance. The reasons are found to be that the priority given to family demands were barriers to career development. Kalarani (1976), women had to accommodate to husbands careers and had to opt for positions compatible with their family roles (Sinha, 1987).

Many Indian women refused transfers, promotions, etc as they did not want to move out and get separated from their families (Ramu, 1977).

Due to women’s preoccupation with marriage, family and child care responsibilities, career development is affected and this results in role strain and role conflict and sometimes they sacrifice career for family. (Sharma, 1999).

1.5.7. PROFESSIONAL ROLE PERFORMANCE

As Women’s role is associated with home making, bearing and rearing of children, and hence with attributes such as warmth, patience, sympathy, grace, endurance, etc they are tracked into lower prestige work and not considered leadership material (Venkataramanhram, 1979).

If a woman is successful in her occupation she is less successful as a woman (Muthuchidambaran, 1990, Brown and Klein, 1982) as there is
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incongruence between occupational role expectations and feminine role expectation

1.5.8. PERCEPTION OF EQUITY AND JUSTICE IN WORK DESIGN

Working woman group fall in several categories, i.e., woman engaged in domestic duties only, women labour force, in teaching profession, in offices and in managerial/administrative positions. The highest inequity perception group perhaps is the group of women engaged in domestic duties playing important supportive functions for other earning members of the family. Often household work and child bearing are considered as valueless. We forget that no nation can make a mark unless the children of that nation are healthy. For doing this noble work, the society is impinging, such social injustice to women ‘consciously’ or ‘unconsciously’. The lot of working women are also quite similar. One often finds that employers’ hesitation in keeping women employees for various social reasons and there is job insecurity and exploitation. Women often find that in comparison to their male colleagues they get late promotions, lesser salaries and poorer benefits (Sharma, 1999)

Women’s work included both unremunerative and remunerative (paid) work. The former includes all life support activities and the contents differ with class, age and residence (rural/urban). It covers unpaid work of women on family farms enterprises, etc. This component is neither valued nor counted by most of the official data system and has remained a grey area of research. An ILO report estimating the values of “housework” says that women contribute roughly 25-30% of the GNP

1.5.9 WOMEN IN THE TEACHING PROFESSION

In India, some professions/occupations such as teaching have drawn more women than others. Data from the Department of Education indicate that during the past four decades there has been a progressive improvement in the number of female teachers at different levels of education. The ratio of female teachers per 100 male teachers increased from 20 in 1950-51 to 42 in 1993-94 at the primary
level; from 18 to 52 in the middle schools; and from 19 to 50 at the higher secondary level. Available data also indicate that an increasing number of females have been recruited as teachers in colleges and universities and the ratio of female to male teachers increased from 9 in 1950-51 to 28 in 1985-86.

1.6. RESPONSIBILITIES OF WOMEN TEACHERS

Rao (1986) views the responsibilities of the women teachers as under:

A: **Teachers’ role in relation to the student includes:**
1. Character development of students.
2. Effective teaching – learning.
3. Catering to individual differences of students.
4. Class room management

B. **Teacher’s role in relation to community includes:**
1. Participation in parent-teacher and similar activities.
2. Participation in community affairs.
3. Making herself available to parents at scheduled times to discuss pupil progress and behaviour.
4. Envincing a sympathetic, helpful and understanding attitude towards parents and their children’s school problems.
5. Assuring through personal behaviour in the community is favourable.

In addition to all this, women also have to perform the role of mother and look after the various household activities (like doing household work, washing clothes, dishes and utensils, sweeping etc.)

Hence, employed working teachers paid employment represents only a portion of total women’s work load and that the teacher’s mental health plays an important role in the teaching-learning process. If the teacher is not in the sound mental health, she can do incalculable harm to the nation in terms of poor...
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guidance to the students. She cannot do justice to her job. Her maladjustment will not only adversely affect her personality but will produce maladjustment in children put under her charge.

1.7. CAUSES OF TEACHER'S STRESS

There are teachers who are worried about so many things that they lose sleep, are so sensitive that they frequently get angry, are often sarcastic and unfriendly and live isolated and narrow lives. Their personality weaknesses are not serious enough to warrant hospitalization, but still their effectiveness as teachers are often revealed in their treatment of students. When teachers lose control, their behavior springs from some emotional instability.

Whenever an individual encounters a demand, resources are mobilized to meet it. When demand and resources are relatively balanced, stress is minimal. However, when the balance is destroyed because the demands escalate or the resources for meeting them dwindle, then stress develops. The tired individual makes more mistakes and is more susceptible to thwarting and sometimes the individual feels excessively tired without having exerted herself. Fatigue arises very quickly when the underlying to feel enthusiastic about anything and when she is enthusiastic, she hardly feels tired. When a teacher feels ineffective and perceives that her career depends upon chance, fate and other extraneous factors, her mental health is likely to be more impaired.

According to Azarov (1988), there are four basic types of relationships that develop a teacher's inner self. Firstly, his attitude towards the world of object, towards science, technology and culture etc. Secondly, his attitude towards people, towards children and their parents, colleagues, school administrators to those around him and especially those in trouble and experiencing difficult times. Thirdly, his attitude towards nature. And fourthly, and this is especially important his attitude towards himself, like consciousness of himself as a teacher.
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A teacher like any other person has a complex personality. His psychological needs, attitudes, prejudices, conflicts and personal social values are translated into behaviour patterns, which become potent influences on pupils behaviour. The pupils respond to the teacher’s presence and behaviour in terms of their own needs, values and previous experience. These varying behaviour patterns become social stimuli to which the teacher in turn responds as sources of satisfaction and as sources of personal frustration. A teacher’s personal adjustment is important in two ways i.e. firstly, it affects his competence as a teacher and also the development of his pupils and secondly, in its own right for the good mental health of the teacher.

As well-adjusted, mentally healthy teacher is a boon to his organization and the class. efforts should be made firstly to identify the sources of frustration in teaching and secondly to remove these frustrations. Simultaneously, there is need to promote mental health in teachers and thereby increase their effectiveness Provus (1969) identified five major areas of teacher frustration viz poor organization of instructional program, inadequate curriculum planning and material selection, excessive non-teaching duties, and insufficient time for working with individual student and administrative interference. These five areas fall in the category of bureaucratic restrictions causing professional dissatisfaction.

School administration, which is callous and apathetic, lowers teacher’s morale. On the other hand, democratic interpersonal relationships with administrators make teaching an enriching experience studies have reported that teacher morale is the highest in an open organizational climate (Sharma & Quarishi, 1973).

Lindgren (1976) opined that one of the major sources of stress arouse from the necessity to play many different roles that are in conflict with one another. Therefore, the teacher must integrate his roles and organize them around the values in his life that are most important to him and playing roles in ways that are not in basic conflict with his self concept.
Kyriacou and Sutcliffe (1977) summarized research on factors that contribute to teacher’s stress and listed them. They were, viz excessive clerical work, supervisory duties, inadequate salary, negative student attitudes, poor staff relations, inadequate building and equipment over load, large classes, inadequate training, low of the profession in society, conflicting demands and lack of parental cooperation.

Trendall (1989) found many teachers under physical and mental strain, and reported that the most frequent sources of stress viz lack of time, large classes, teaching workload and pupil misbehaviour, but the existing relationship between teacher stress and teacher effectiveness was not a simple one according to him. Some of the major causes of dis-satisfaction, low morale and inefficiency in the teaching profession which he identified are listed below:

1. Unmatched salaries.
2. Workload.
3. Individual difference.
4. Large classes.
5. Lack of equipment.
6. Promotion policy.
7. Lack of in-service training facilities.

Higher occupational status, income and education has been related to greater problem-focused coping (e.g. Pearlin and Schoolers, 1978). Paid work is generally related to better mental health for married women with children (Repetti, Mathews and Waldron, 1989). Whereas marriage and motherhood are negatively associated with strong career orientation (Hock, Morgan and Hock, 1985). Life circumstances (e.g. family and work roles, education and income), sex role attitudes and agentic traits (self efficacy, optimism, instrumentality, proactive health behaviours) as moderators of stress process because these constructs represents means by which women may experience:

A) Differential exposure to work stressors.
B) Differential availability of resources and
C) Differential perceptions of the meaning of employment stress.
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Murphy (1986) found female teachers experiencing more stress than males in the area of time management and even reported high scores of physical symptoms of stress in teacher-teacher relation.

The role of women as a school teacher is vital as she makes noteworthy contribution in the holy task of building the future of the country. As women teachers perform more than one role simultaneously, the multiplicity of roles is inevitable among them, which creates confusion regarding their roles. The cycle of conflict goes on between the expectations of others and the expectations by oneself. All this phenomenon of conflicting expectations is turned as role conflict. Being teacher, woman cannot carry out efficiently each of her roles as a wife, mother, house-holder and social being. Many times she suffers from guilty conscious and finds herself torn between home, school, and society. Her family and social life suffers in marital disharmony and marital frictions. This condition creates social and psychological problems.

The adjustment and maladjustment of a teacher affect her home role, job role, and a social role. All this has an indelible impact on the nation in general and society in particular to which she belongs. Shakuntala (1996). This leads to anxiety, depression and psychosomatic illness-all related to the enormous stress their peculiar role places them under (Sharma, et al; 1996).

Hence this study will focus its attention on the job stress in employed women teacher of various status, education and age and effect of relaxation techniques on job stress, anxiety, blood pressure, hypertension and heart rate.

15. JOB STRESS

Stress has been defined as “the state manifested by the specific syndrome which consists of all the non-specific induced changes within a biological system.” (Selye, 1950)
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Stress originally a concept of the physical sciences has come into common usage in the biological and human sciences to describe a state in which the vital functioning of the organism is threatened. Stress involves a sufficiently potent danger to psychological or physical well-being as to require extra ordinary measures for the maintenance of the organized behavior or these failing, stress may lead to disordered behavior, anxiety or other emotional disturbances (Korchin, 1963).

Occupational stress has become an all-pervading feature of modern organizations involving serious cost both in human and financial terms. An employee’s job role, which is composed of set of activities to be performed by him, constitutes the most significant part of his job life and is responsible for bringing in maximum amount of job satisfaction or job stress and anxiety. Role stress usually results from conflicting incompatible or unclear expectations that are derived from work environment (Kahn, Wolfe, Quinn, Snoeck and Rosenthal, 1964).

Cooper and Marshall (1971) indicated that occupational stress meant negative environmental factors or stressors (e.g. workload, role, conflict/ambiguity, poor working conditions) associated with a particular job.

“Environment conditions that require behavioral adjustment” (Benson et al., 1974) and again Seyle (1974), “The non specific response of the body for any demand made upon it”. Seyle, the world authority on stress whose research originated the work with over stressed animals, stated “complete freedom from stress is death” and he advised, “Live with stress and enjoy it”.

French (1976) viewed work stress and resulting strain in terms of the interaction between the individual and the environment which could be measured directly. According to this model, work stress occur primarily as a result of poor person-environment fit and are major producers of psychological and physiological strain. Thus French defined occupational stress as those job characteristics which pose a threat to the individual. He defined occupational
strain as the deviation from the normal response that an individual would experience in a given situation.

Chandler (1976) defines stress as “a mental and/or somatic disfunctioning in one teacher due to one or more agents in the school settings perceived to be threatening to the extent that the teacher actively employed one or more coping devices for relief.”

According to Sylvestor (1977) teachers work in an environment which is isolated from other adults, a working condition shared by few outside the teaching profession. Further, teachers work daily with students who have unique problems and unique potentials. During school hours, teachers must cope with numerous interruptions, student absenteeism, and mainstream students with special needs, numerous reports, insufficient funding and lack of parent support. The school day does not end when students go home, preparation and grading must be done after hours. More and more demands are placed on teachers regularly without their consent.

Stress can also be defined as a failure to adapt. It occurs when the environment or internal demands exceeds an individual resources to adapt. (Lazarus and Launier, 1978).

Kyriacou and Sutcliffe (1978). “Teacher stress may be defined as a response of negative affect (such as anger or depression) by a teacher usually accompanied by potentially pathogenic physiological and biochemical changes (such as increased heart rate or release of adrenocorticotropic hormones into the bloodstream) resulting from aspects of the teachers and mediated by the perception that the demands made upon these teachers constituted a threat to his self-esteem or well being and by coping mechanisms activated to reduce the perceived threat. As they pointed out, interpersonal characteristics (such as enduring personality traits) may interact with an individual’s perceptions of stressful stimuli so that stress reaction will very differentially among individuals even when the objective external conditions are the same.”
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Beehr and Newman (1978) defined job stress as condition where in job related factors interact with workers to disrupt or enhance his psychological and physiological conditions and he is forced to deviate from normal functioning. Job stress arises from interactions between people and their jobs and is characterized by changes within people that force them to deviate from their normal functioning.

According to Spielberger (1979) the term stress is used to refer to a complex psycho-biological process that consists of three major elements. The process is initiated by a situation or stimulus that is potentially harmful or dangerous stressors. If a stressor is interpreted as dangerous or threatening, an anxiety reaction will be elicited.

Schular (1979) took a somewhat different approach to stress in work organization. Schular outlined three types of stress (constraint stress, opportunity stress and demand stress), which are related to organizational qualities. These stressors are seen as being related to a variety of negative physiological, psychological and behavioral symptoms.

According to Sahni (1982) stress is the wear and tear of life caused by an excessive demand on the body system to cope. The pricks and pressures of daily life ranging from bodily adjustment to sudden temperature or humidity or changes in the weather, an emotionally charged argument with spouse or boss, all constitute stress. Stress is any stimulus from the environment, which demands some extra adjustment effort or survival effort from body.

Small amount of stress may appear and disappear like bubbles, but when a person perceives an imbalance between the challenge that faces him and the resources that he has to meet it, stress can be like a weight or a wall. It is however, important to note that balance or imbalance is not between actual demand and actual capability but between our evaluation of the challenge and our perception of our capacity to meet it (Smith & Others, 1986).
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The term stress can be defined in various ways. Stress may be an internal state which can be caused by physical demands on the body such as disease, exercise, extremes of temperature, professional hazards and so on or by environmental and social situations which are evaluated as potentially harmful, uncontrollable or exceeding our resources for coping (Morgan & Others, 1993).

Teaching, like every other profession has some stress inbuilt, which may, in fact be necessary by way of motivation. Normally, it gives no cause for concern. It becomes problem only when it exceeds the coping abilities of the teachers. Also, experience tells, some teachers take it as a *run of the mill* affair giving no due attention to it, while there are others, for whom every stressful *mole-hill* appears an *Himalayan* obstacle to overcome. Their differentiated perceptual reactions to stressful situations are significant and bound to affect their professional effectiveness. If it is assumed that those two types of teachers equal in all other respects but with varying responses to *Stress-evoking* situation, will teach effectively we are trying to bury our heads in sands. (Pinglia, 1991)

Job-related stress can be defined as the emotional, mental and behavioural reaction. Vulnerability caused by elements in job environment that are in large part out of the awareness of the worker. The cause of the perceived stress is usually attributed by the person to reasons that are acceptable to the person or to the person’s peers (Kagan, et al; 1995).

Stress is typically defined in terms
1. The external environment stimulus characteristics
2. Individual’s emotional states or
3. An interaction variable emphasizing the relationship between individuals and their environment (Boyle, et al; 1995)

Stress is an agitated physiological state in which the electrical transmission of information along neurons is heightened to the point that the nervous system may collapse and/or bodily function may perform poorly. Most individuals pursue displacement activities to relieve stress, unfortunately these efforts are half way measures, which often make the stressful situation worse.
INTRODUCTION

More effective scientific methods are available for alleviating stress. Stress is a heightened electrical activity within the neurons of the central and peripheral nervous system such that various bodily systems begin to function improperly or feel altogether. (Hollar, 1996)

Sharma, Sharma and Varma (1996) state in simple terms, stress is a reaction/response to any kind of change. It is the physical and emotional response to situations, which are perceived as novel, frightening, confusing, exciting or tiring. It not only gets precipitated by external demands but can also be generated from within by our hopes, fears, expectations and beliefs. It acts like a signal for the mind and body to get prepared for any eventuality.

Stress is “the demand including the appraisal of threat, placed on an organism rather the response of the organism to those demands” (Beckwith, 1996). The process that occurs in response to events that disrupts or threatens to disrupt our physical or psychological functioning. (Baron, 1996).

Stress is defined as a feeling of tension that is both emotional/physical. It can occur in specific situation. Different people perceive different situations as stressful. Stress management refers to the effort to control and reduce the tension that occurs with a situation that is considered difficult or unmanageable. (Ellis, 1999)

According to Shetty (2000) “Stress appears when our bodies react to a challenge, mental or physical, by increasing metabolism”, elevating blood pressure, shooting up heart beat and breathing rate”. Most of the time we do not fight against stress and this gets us into trouble. A surplus of unused adrenaline causing through our bodies can lead to a host of psychological problems.

1.8.1. JOB STRESSORS

Stress is often defined as an excess of demands over the individual’s ability to meet them. While the stressors are the pressures that induce the stress response. These stressors may come from within a person like – attitudes, beliefs,
expectations in relation to world and to oneself, one’s habits, behaviour or personality. On the other hand there are stressors, which come from the environment or are external in nature e.g. home, work, social or cultural. Having too much to do in less a time is the common problem. The solution to this problem is obvious either there should be less of work to do, or more of time to accomplish it or some help to do it.

According to Healy (1991) 27% of workers cited job stress as a single greatest factor in their lives ahead of divorce and death.

Some of the sources of pressure for job stress as cited by Atkinson, 1995 are shown in figure 1.1:

Fig.1.1. Sources of pressure for job stress.

According to Sharma, Sharma & Varma (1996) there are three different types of Job Stressors which are given below:

1. **Occupational Stressors:**
   - Change in work practice requiring new skills
   - Numerous deadlines.

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- Unclear goals.
- Boss with abrasive communication style.
- Lack of leadership in times of crises.
- Poor design of work process.
- Inadequate reward.
- Low salary.
- Poor prospects.
- Lack of clarity about the scope and responsibilities of the job.
- Hostile customers.
- Trapped in an unsatisfying job.
- Incompetent co-workers.
- Transfer involving geographic relocation.
- New management style.
- Technological change.
- Boredom and monotony.
- Job without meaning.
- Insufficient time to do job properly.
- Equipment breakdowns.
- Insubordinate juniors.
- Frequent night shifts.
- Conflicting demands.

2. Physical and Environmental stressors:

- Unsuitable chairs.
- Noisy surroundings.
- Poor lighting.
- Poor ventilation.
- Unhygienic conditions.
- Toxic fumes.
- Odours.
- Precision work causing eye strain.
3. **Psychological Stressors:**
   - Office politics.
   - Hostile atmosphere.
   - Isolated environment.
   - Over crowded environment.
   - Sexual harassment.
   - Indecisive strollers.
   - Bullies.
   - Silent, unresponsive types.
   - Loudmouths
   - Rude people
   - Moaners and groaners
   - Know-it-alls

**Baron (1996)** states- “Most adults spend more time at work than in any other single activity. It is not surprising, then that jobs or careers are a central source of stress. Some of the factors producing stress in work settings are -

\[\text{Fig.1.2. - sources of work-related stress.}\]

Many factors contribute to stress at work several of the most important are summarized here.

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• Change,
• Work condition,
• Workload,
• Role issues,
• Relationship at work,
• Career development,
• Home-work interface,
• Job insecurity and,
• Management issues.

1.8.2. CONSEQUENCES OF JOB STRESS

Stress can influence our physical and psychological well being, or performance on many tasks, and even the ultimate course of our careers. Stress is a major problem in our society. About 75% of bodily disease is said to be stress related. Stress is often a factor in heart disease and cancer, two of the leading causes of death, some other physical disorder including diabetes, pneumonia, T.B., stomach and intestinal problems as also minor ailments such as chronic headaches and influenza (Miller, 1983; Institute of Medicine, 1981, 1982).

In America alone, several billion tranquilizer pills are prescribed each year and although stress cannot be quantified, it is involved in much of our unhappiness, irritability, and dissatisfaction. How could high levels of stress have such diverse effects on the human body? For reasons not yet fully understood, severe and prolonged stress tends to lead to suppression of the body's immune system, which normally fights off invading bacteria, viruses and cancerous growths (Jemmott and Locke, 1984).

According to Brief (1984) cardiovascular disease, gastrointestinal disorders, respiratory problems, cancer, arthritis, headaches, bodily injuries, skin disorders, physical strain or fatigue and death are some of the purported physiological responses.
Cooper (1986) in his model of stress gives a list of symptoms of occupational ill-health.

1. Diastolic Blood Pressure.
2. Cholesterol level.
3. Heart-rate.
4. Smoking.
5. Depressive mood.
7. Job dissatisfaction.
8. Reduced aspiration.

The symptoms of stress outlined in Fig 1.3 – are believed to stress from primitive fight or flight response to perceived danger. This response produces surges of chemical reactions in the blood stream, which can cause psychological problems such as Post Traumatic stress disorder or Cumulative stress disorder for e.g. High Blood Pressure, Migraine, Asthma, etc.

**Fig.1.3. : List of Ailments recognized to have stress background.**

<table>
<thead>
<tr>
<th>Hypertension: high blood pressure</th>
<th>Menstrual difficulties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coronary thrombosis: heart attack</td>
<td>Nervous dyspepsia, flatulence &amp; Indigestion</td>
</tr>
<tr>
<td>Migraine</td>
<td>Depression</td>
</tr>
<tr>
<td>Hay fever &amp; allergies</td>
<td>Hyperthyroidism</td>
</tr>
<tr>
<td>Asthma</td>
<td>Diabetes Mellitus</td>
</tr>
<tr>
<td>Pruritis Intense Itching</td>
<td>Skin Disorders</td>
</tr>
<tr>
<td>Peptic Ulcers</td>
<td>Tuberculosis</td>
</tr>
<tr>
<td>Constipation</td>
<td>Coloitis</td>
</tr>
<tr>
<td>Rheumatoid Arthritis</td>
<td>Indigestion</td>
</tr>
</tbody>
</table>

**Source:** Cary Cooper : *Stress and employer Liability* (p9)
INTRODUCTION

The link between stress and personal health, according to medical experts, is very strong indeed (Kiecolt – Glaser & Glaser, 1992). In fact, some authorities estimate that stress plays some role in 50 to 70 percent of all illness (Frese, 1985). Moreover, included in these percentages are some of the most serious and life-threatening ailments known to medical science. To list just a few, stress has been implicated in the occurrence of heart disease, high blood pressure, hardening of the arteries, ulcers, and even diabetes.

The body manifests the stress reaction by a rise in blood pressure, increased adrenaline, changed heart beat, more red blood cells, slow digestion, ulcers and heart attacks, as change in body chemistry (such as in uric acid level and blood pressures) and as depression, anxiety, alcoholism and even death (Stotland, 1994).

Stressful situations produce adverse psychological and physiological changes, which in turn, may result in disease. Two broad possibilities have been proposed these have been referred to as “indirect” and “direct” effects (Fig). Thus stress may have indirect effects on health by increasing level of risk behaviour (e.g., smoking, alcohol consumption) or may have direct effects on specific physiological mechanism (e.g., increase in blood pressure) as well as effecting the individual’s resistance to disease through suppression of the immune system, or by exacerbating or triggering a disease process in an already vulnerable individual (Weinman, 1994).

Psychological factors linked to stress include high anxiety, depression, irritability and hostility, emotional exhaustion and burnout (Pitlery and Fogarty, 1995).
INTRODUCTION

Sharma, et al; 1996 states- Long-term stress can become too demanding and debilitating. It can destroy your looks, your vitality and eventually your health. It accelerates the aging process and reduces immunity to various illnesses, including ulcers, high blood pressure, arthritis, constricted blood vessels and heart disease. Recently it has also been linked with cancer and AIDS. Thus its final effect may be serious illness of the body or the mind or even death.

Psychological responses to occupational stress include anxiety, depression, dissatisfaction, boredom, somatic complaints, psychological fatigue, and feeling of futility, inadequacy, low self-esteem, alienation, psychoses, anger repression and loss of concentration. Indices of excessive work loads to be positively related to reports of sadness, unhappiness and feeling blue. Dispensary visits, drug use and abuse, over or under eating, nervous gesturing, pacing, risky behaviour, aggression, vandalism, stealing, poor interpersonal relations and suicide or attempted suicide are examples of potential behaviour consequences of occupational stress (Auerbach, 1996).

Quite often job stress can cause physical symptoms which many people don’t realize as work related. Migraine headaches, stomach problems, back problems, heart problems and the ailments can be caused by stress on the job. Stress can cause some very real physical reactions in our bodies. Anxiety or Panic attacks are the best examples. Seemingly, out of nowhere, a person experiences a racing heart beat, tightness in the chest, dizziness, sweaty hands and dry mouth and a feeling of disorientation (De Leno, 2000)

Jet Stress.help.com.(2000) found stress can cause a long list of problems

- Headaches and backaches
- Inability to fight illness
- Skin, heart and digestive problems
- Tiredness, depression, difficulty sleeping
- Eating a lot more or lot less than usual
- Feeling short tempered and/or worried all the time
INTRODUCTION

Anxiety is a central concept in all theories of personality. No condition has been as widely held to be at the root of human misery, adjustment, failure or even the positive accomplishments of mankind, as has anxiety. It is regarded as a casual factor for such diverse behavioural consequences as insomnia, immoral acts, debilitating psychological and psychosomatic symptoms, idiosyncratic mannerisms of endless variety, student agitations and industrial unrest.

There is no unanimity among the investigators with regard to definition of anxiety. Symonds (1946) considered anxiety as a fundamental factor in the psychology of adjustment. He defined anxiety as mental distress with respect to some anticipated frustration.

English and Pearson (1947) considered anxiety to be an “effect” which means an “emotion or a feeling tone” or “a special effective state which grows out of the conflict between institutional needs” and special restraints on the fulfillment of these needs.

Edworthy (2000) – stress can result in physical and mental ill health, a lowering of job satisfaction and a loss of sense of achievement. These changes, by their very nature, will impair the quality of that individual life. Fig. 1.5.

![Stress Relationships Diagram](image-url)
INTRODUCTION

Freud (1955) differentiated three types of anxiety: objective anxiety, neurotic anxiety and moral anxiety. All the three types have the single quality of being unpleasant. They differ only in respect of their sources.

Anxiety is sometimes confused with fear though two are different concepts. A solid distinction between the two is given by Freud (1955). Most of the psychologists have followed him in considering anxiety to be quite different from fear. They associated anxiety with awareness of danger, which are indeed neurotic. On the other hand, fear results from the factual occurrence of threatening object, which is realistic. A person’s (well adjusted) social life depends most upon the degree to which his personality is stable and adjustive which in turn depends upon his emotional stability. The more anxious a person is, the more he is emotionally disturbed and vice-versa.

If anxiety could be controlled by biological or social means, fundamental alterations in the organization of our civilization would ensue and the probability of individual happiness would be greatly enhanced. Anxiety is the most pervasive psychological phenomenon of our time (Hock and Zubin, 1950). Anxiety is the official emotion of our age (Schlesinger, 1948). A painful uneasiness of mind over an impending or anticipated ill (Webster, 1956).

A danger signal felt and perceived by the conscious portion of the personality. It is produced by a threat from within the personality with or without stimulation from external situation (APA, 1952). An unpleasant emotional state in which a present and continuing strong desire or drive seems likely to miss its goal, a fusion of fear with the anticipation of future evil, marked and continuous fear of low intensity, a feeling of threat, especially of a fearsome threat, without the person’s being able to say what he thinks threatens (English and English, 1958).

Drever (1958) has defined anxiety as “a chronic complex emotional state with apprehension or dread as its most prominent component characteristic of various nervous and mental disorders.”
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Portnoy, (1959) in the American handbook of Psychiatry: “... Subjectively experienced uneasiness apprehension anticipation of danger, doom, disintegration and going to pieces, the source of which is known by the individual and towards which he feels helpless, with a characteristic somatic patterns. This somatic pattern shows evidence of increased tension in the skeletal muscles (stiffness, tremors, weakness, unsteadiness of voice, etc.), the cardiovascular system (palpitation, blushing or pallor, faintness, rapid pulse and increased B.P. etc). There may also be other manifestations such as cold/wet, extremities, rapid or irregular breathing, frequency of urination and sleep disturbance.”

For Grinker (1961), “Anxiety is a universal human emotion of an indescribable foreboding or dread of personal doom” “A fear” contended Rathunde (1963) “a quickly passing cloud that moves across the sun, anxiety is the cloud that lingers and beclouds the man”

Almost everyone agrees that anxiety is an unpleasant-feeling state, clearly distinguishable from other emotional states and having physiological concomitants (Ruebush, 1963)

“Anxiety seems to be the dominant cliche of modern life. It shouts in the headlines, laughs nervously at cocktail parties, nags from advertisements, speaks suavely in the board room, whines from stage, clatters from the Wall Street. Fickers, jobs with fake youthfulness on the gold course and whispers in privacy each day before the shaving mirror and the dressing table. Not merely the black statistics of murder, suicide, alcoholism and divorce betray anxiety (or that special form of anxiety which is guilt) but almost any innocent everyday act. The limp or ever hearty hand shake, the second pack of cigarettes of the third martin, the forgotten appointment, the stammer in mid-sentence, the wasted hour before the TV set, the spanked child, the new car unpaid for” (Spielberger, 1966).

Prick (1968) stated that normal anxiety is an irrational warning sign manifesting itself within human existence as a response to an objectively or subjectively experienced existential threat. From the view point of physiology, anxiety is a state of maximal biological tension which is mobilized in the
organism as soon as the drive of self-preservation is impeded in its manifestations”.

The term anxiety did not gain light in psychological literature until the 1930’s (Sarbin, 1968). Derived from the Latin “angere”, to strangle, anxiety was used to translate Freud’s “Angst”. Its use today is widespread not only among psychologists but also among educators, other professional people and laymen in general. It is the signal of danger at all levels of functioning in the interest of conversation, defence and self-preservation.

Pikunas (1969) called it as “unrealistic and unpleasant state” of the body and mind.

Burton (1971) and Martens (1971) have come out with “trait” and “state” anxiety. State anxiety is a transitory state that fluctuates over time and as Spielberger et al (1970) opined, is “Characterized by subjective, consciously perceived feelings of apprehension and tension, accompanied by or associated with activation or arousal of the autonomic nervous systems”. Thus state anxiety is an uncomfortable feeling that is said to be situationally aroused. It can be equated with “Test anxiety”. Trait anxiety, on the other hand, is considered to be a more enduring personality characteristic. It is same as general anxiety. Both can be expressed as “latent” and “overt” behaviour (Spielberger, 1966).

Anxiety is a sort of cunning, malicious golem, which seems to serve us well, at least for a time, but eventually turns and threatens to destroy its creators. Anxiety is not only our official emotion; it is the primary focus of a concentrated effort aimed at the improvement, and perhaps the perpetuation, of human life (Levitt, 1971).

Izard (1972) opined that anxiety is a pattern of emotions, a complex emotional reaction that includes fear as well as other fundamental emotions and their interactions and it can be adequately conceptualized and understood or effectively assessed and treated when considered as a unitary concept.”
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Stern's (1973) investigation disclosed that anxiety is an uncomfortable mode of livid-consciousness, a general and diffuse response of the whole individual to a situation, which is “livid”. Life situations are so complex and demanding that anxiety as an emotional reaction is bound to play its part in shaping the general tendencies of behaviour.

Natranjan (1976) in his study, “The concept of anxiety” hypothesized that an anxiety state is produced in an individual in a threat situation due to the interaction of three variables. These are: 1) Stimulus uncertainty during occurrence of threat (situation variable) 2) Feeling of helplessness in the presence of danger (subjective variable) and 3) A high level of chronic anxiety (Personality Predisposition).

Longman's Dictionary of Psychology and Psychiatry (1984) states, “Anxiety is a pervasive feeling of dread, apprehension and impending disaster. It is a response to an undefined or unknown threat which in many cases stems from unconscious conflicts, feelings of insecurity or forbidden impulses within ourselves.”

Phares, (1988) opined in Freudian theory “The circumstances that give rise to the formation of ego and later to the super ego produce a painful effective experience called anxiety. Exaggerated responses to the heart, the lungs and other internal organs are perceived and experienced as anxiety. The essential function of the anxiety is to serve as a warning signal to the ego that certain steps must be initiated to quit the danger and thus protect the organism.”

Chauhan, (1993) views “An anxiety is a vague but enduring fear. Some anxiety is natural, rational and useful in helping a person to deal constructively with the causes of his fears. But when the amount of anxiety becomes disproportionate to the situation and persists for a longer period then we refer it as neurotic anxiety.

Macmillian Dictionary of Psychology (1994) - A feeling of fear or dread, when severe, it is accompanied by symptoms like sweating, shaking and rapid
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Heart-beat caused by arousal of sympathetic system. There is a tendency among the psychiatrists and psychologists to use this term when there is no obvious external cause for fear, and to use the word ‘fear’ when there is (compare free-floating anxiety). Learning theorist, on the other hand, use the term to mean a drive that can be aroused by punishment, and can be classically conditioned to the stimuli preceding punishment, diminution of the anxiety drive reinforce the instrumental responses of avoidance and escape.

The preceding description of anxiety indicates that it overpowers its possessor by rendering him incapable of normal behaviour. Disturbances in skeletal motor activity, speed, perception, memory, learning and problem solving has been attributed to anxiety. But every instance of motor tremor, impairment of memory or learning cannot solely be interpreted as a manifestation of anxiety (Swatantra, 1995).

Anxiety is an internalized fear, aroused by an impulse to commit. It is a danger signal to the ego that dangerous impulse is about to break. It is, in fact, an unconscious reaction to depressed tendencies (Mohany, 1996).

Stratton and Hayes (1996) define anxiety as “a stressful state resulting from the anticipation of danger. Anxiety has a physiological component (the alarm reaction or fight or flight reaction), a cognitive aspect, particularly in narrowing attention, and a subjective experience of discomfort. Each of these components may help the person deal effectively with clearly recognized, real and immediate dangers, but can be damaging both psychologically and physically when the anxiety persists, as in occupational stress or unresolved unconscious conflicts.”

According to Sharma (1997) “Anxiety is feeling of extreme worry or fear which persists even after the event has ceased to exist or which has not happened or there is no obvious reason. No external cause for fear exists. The fear actually relates to past unpleasant experience stored in the unconscious mind and disturbs him. As these impressions persists, he cannot escape from anxiety.”
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According to McHugh, (1997) “Anxiety is an unpleasant mood of tension and apprehension. It is fear’s first cousin and like fear, it has prominent automatic effects when severe, but fear is an emotion sharply focused on immediate dangers. Anxiety is usually imposed by anticipation of future danger, distress or difficulties. As an emotional response common to people, anxiety is useful. Activities that arose it are avoided and those that diminish it are sustained. Although anxiety may spur people to perform difficult tasks skillfully and admirably, when excessive it is a hindrance, as some well prepared students demonstrate when facing a critical examination. Anxiety is a medical problem when it is excessive, inappropriate or without obvious cause.”

According to Lloyd (1999), “Anxiety a universal experience which has an important protective function in the face of danger. It becomes morbid when symptoms are out of proportions to external circumstances or if they persist long after a threatening situation has been averted”. Further, “Generalized anxiety disorder has a prevalence of 2 to 5% with women being more susceptible than men.”

Ahuja (2002) states, “Anxiety is a normal phenomenon which is characterized by a state of apprehension or unease arising out of anticipation of danger. Normal anxiety becomes pathological when it causes significant subjective distress and/or impairment in functioning of the individual.”

1.9.1. TYPES OF ANXIETY

Cattell and Scheier (1961), Lazarus (1966) & Spielberg (1966, 1990) have made distinction between acute or situational anxiety and anxiety proneness or pre-disposition. Situational State anxiety is a transitory state that is short lived, occurs in response to the stimulus and is likely to vary in intensity as a function to variety of associated physiological reaction. On the other hand, anxiety proneness (generalized anxiety trait) is a relatively unfluctuating condition of the individual which exerts a constant influence on his behaviour (Levitt, 1968).
Spielberger (1966, 1990) conceived the relationship between state and trait anxiety as analogous in certain respects to the relation between the physical concepts of kinetics and potential energy—“State anxiety, like K.E. refers to an empirical process or reaction which is taking place now at a given level of intensity. Trait anxiety, like P.E. indicates a latent disposition for a reaction of a certain type to occur if it is triggered by appropriate stimuli.”

Spielberger (1966) The degree of state reaction is a function of trait level, i.e. individual highly prone to anxiety should react more strongly to stressful circumstances, though the expectations are always there depending on individual experience.

Freud (1955) referred to two general sources of potential danger. The external world (objective) and one’s own internal impulses (subjectively). **Objective anxiety** is an unpleasant emotional state aroused by anticipation of harm from an external danger, and emotional reaction is proportional in intensity to the magnitude of the external danger. In Freud’s view, **neurotic anxiety** also involves psychological process. In neurotic anxiety, the sources of danger are from unacceptable internal impulses that were punished in childhood and subsequently, repressed.

In both objective and neurotic anxiety, the ‘anxious’ can observe and describe his or her unpleasant feelings and can report the intensity and duration of these feelings (Spielberger and Rickman, 1990).

According to Macmillian Dictionary of Psychology (1994) Anxiety is of two types—

1. **State anxiety** — Anxiety that depends on a person’s situation and varies with it.
2. **Trait Anxiety** — A person’s characteristics over all levels of anxiety.

Ahuja (2002) separates anxiety into two types:

1. **Trait anxiety**. This is a habitual tendency to be anxious in general and is exemplified by ‘I often feel anxious’.
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2. State anxiety: This is the anxiety felt at the present moment exemplified by 'I feel anxious now.'

1.9.2. SOURCES/CAUSES OF ANXIETY

According to Sharpe (1992), Anxiety can arise as a result of any of four situations:
1. A situation which places a high level positive expectation in jeopardy. The more important the expectation and the more serious the threat, the greater the likely anxiety.
2. A situation which casts doubt on self image. The greater the importance which is attached to that element of self-image, the greater the likely anxiety.
3. Any pieces of behaviour which are accessed as being unhelpful may be a source of anxiety because, by definition they threaten expectation of self-image. The more negatively the piece of behaviour is assessed the greater the anxiety it is likely to generate.
4. Any negative expectation will automatically produce a certain amount of anxiety. It arises as a result of inadequate reinforces being present in the person's life style.

1.9.3. SYMPTOMS OF ANXIETY

While describing the physical symptoms of anxiety, Gunn (1962) has commented, "There may be mild nausea, loss of appetite and some loss of weight. He may have heart palpitation without apparent reason and there may be cardiovascular changes such as low blood pressure and an increased irritability."

According to Coleman (1981), "He frequently complains of muscular tightness especially in the neck and upper shoulder region, chronic mild diarrhea, frequent urination and difficulties in digestion, concentration and sleep."
Anxiety states are marked by emotional over reaction. The symptoms include general apprehension, feelings of insecurity, restlessness, insomnia, excessive sweating, dizziness, trembling and vague fears etc. (Kar, 1993).

According to Chauhan (1993), “The attack of anxiety may cause difficulty in breathing, pounding of heart. Person feels as if he is dying of cardiac or gastric disease and becomes even more anxious”.

Mohanty (1996) states, “When a person encounters dangerous situation or experiences anxiety, he is bothered with physical symptoms like heavy sweating, trembling of lips and hands, rapid breathing or breathing difficulty, rapid heart beat, increased pulse rate, dryness of mouth and frequent urination etc. Also dizziness, muscular fatigue and tension are common symptoms”.

Mohanty (1996) states, “Persons suffering from anxiety attacks are sensitive to criticism and are quickly discouraged. Tenseness, irritability, fears arising out of fantasies or imagined danger, acute panic and loss of sleep, mild depression, lack of concentration and inability to make decision are other common psychological symptoms. Vague feelings, arising out of anxiety make them continuously upset and uneasy leading to feelings of discomfort. They worry unnecessarily over possible errors.”

According to Lloyd (1999), “The clinical features of generalized anxiety are conveniently divided into two groups, psychological and somatic.

**Psychological**: - Apprehension, fears of impending disaster, Irritability and Depersonalization.

**Somatic**: - Tremor, Sweating, Palpitations, Chest pain, Breathlessness, Headache, Dizziness, Diarrhea, Frequency of micturition, Initial Insomnia and Poor concentration.”

According to McHugh (2000), “Regardless of the cause of anxiety, its manifestation are divisible into three groups:

1. The inner feeling of tension, apprehension and dread that form the anxious mood itself.
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(2) A disturbance of the intellectual power. The anxious patient is unable to think clearly and to use proper judgement, to learn efficiently, or to remember accurately.

(3) The somatic and autonomic symptom that accompany anxiety include tension headache, tremor, giddiness, dyspnea, heart palpitation, gastric distress, urinary frequency, backache, and general feelings of weakness.

Golwala (2000) grouped the symptoms of anxiety into two categories

(1) Physical: They are referable to autonomic nervous system (a.n.s) imbalance & commonly include palpitations, shortness of breath, tremulousness, unsteadiness, dryness of mouth, headache or heaviness of head, giddiness, blurring of vision, frequency of micturition & diarrhea and excessive sweating particularly in palms and soles, etc. One finds tachycardia, elevation of blood pressure, increase in depth & frequency of respiration.

(2) Psychological: Worries, nervousness, apprehension, irritability and a morbid fear as if something dreadful is going to happen are the commonest. Difficulty in concentration and forgetfulness, sleep disturbances including nightmares, reduction in efficiency, feeling fatigued and tired are also present.

1.10. BLOOD-PRESSURE

The term “blood pressure” has these days become a commonly used word. One often hears some saying, “My blood pressure rises when I meet such and such person”, or someone else is reported suffering “low blood pressure”.

According to Eysenck (1975) Blood pressure is the prevailing pressure in the blood vessels, which can be measured physically. It can be measured directly with a manometer introduced into vessel, or indirectly with an inflated sphygmometer strapped around the arm. There are two components, one hydrostatic and other haemodynamic. The latter is the consequence of the heart’s activity, serves to overcome resistance to flow and decrease continuously in the
circulatory system in the direction of the blood flow (from 120mm Hg via aorta, via 35mm Hg in the capillary circulation to 0 in the veins near the heart). In the arteries it fluctuates between a systolic (120mm Hg) and diastolic (80mm Hg) value. These fluctuations of pressure appear as the pulse and can be recorded as a sphygmogram. The mean blood pressure is regulated by the vasomotor center in the brain stem by way of pressure points in the blood vessels and heart activity, as well as vascular contractile power.

Shryock (1982) states "In measuring a person's blood pressure, the doctor takes two readings, the high and the low. The highest pressure the heart produces as it pumps blood into the arteries is called the systolic pressure. The low reading (diastolic) is the measure of the pressure that remains in the arteries just before the next heart beat takes place. The readings are expressed in millimeters of mercury-indicating the height of a column of mercury that this much pressure supports. The reading is given thus: 120/80. Average normal blood pressures are lower in children (90/60 at age six) than in young adults (120/80). The normal range for blood pressure in a healthy young adult is 90 to 140 for the systolic and 60 to 90 for the diastolic. A popular belief persists that an adult’s blood pressure normally increases as he becomes older. Average blood pressure does increase with age, but this is not normal. Persistent reading above 140 systolic and 90 diastolic actually indicates hypertension."

According to Wasir (1990) "There is no precise measure which can be termed as a normal pressure, but generally, in persons above 20 years of age, blood pressure level up to 140/90 mm Hg is considered as normal. Several population surveys and figures from Life Insurance Companies have shown that lower the blood pressure readings, longer is the life span. As the blood pressure rises, the longevity falls. As blood pressure levels show marked fluctuation upon physical and mental activity, only if several readings are found to be above 140/90 mmHg, the person should be advised treatment."

The term 'blood pressure' refers to systemic arterial pressure. A variety of factors like cardiac output, elasticity of blood vessels, vasomotor tone, viscosity of blood and its volume operate to maintain the resting
level of arterial pressure. The effects of factors like emotional stress, muscular exercise and posture, produce transient changes in B.P. Blood pressure is the lateral pressure exerted by the moving column of the blood on the walls of the blood vessels. With the pumping action of the heart, the pressure rises to the maximum level during systole and falls to the minimum level during diastole Ghai (1990).

Blood pressure according to New Webster Dictionary and Thesaurus and Medical Dictionary (1992) the pressure exerted by the blood on the walls of the arteries.

According to Blitz Edition (1994). Blood pressure is pressure or tension of the blood against the inner walls of blood vessels, especially the arteries, due to the muscular pumping activity of the heart. Abnormally high B.P (hypertension) may be associated with various conditions or arise with no obvious cause. Abnormal low blood pressure (hypotension) occurs in shock and after excessive fluid or blood loss from any cause. In mammals, the left ventricle of the heart pumps blood into the arterial system. This pumping is assisted by waves of muscular contraction by the arteries themselves, but resisted by the elasticity of the inner and outer walls of the same arteries. Pressure is greatest when the heart ventricle contracts (systolic pressure) and least when the ventricle is filling up with blood and pressure is solely maintained by the elasticity of the arteries (diastolic pressure). Blood pressure is measured in millimeters of mercury (the height of a column on the measuring instrument, a sphygmomanometer). Normal human blood pressure is around 120/80mmHg. The first number represents the systolic pressure and the second the diastolic. Large deviations from this figure usually indicate ill health.

Stratton and Hayest (1996) state, “The force with which blood travels through the arteries and the veins of the body. High blood pressure is a reliable indicator of long-term stress, and a precursor to many stress disorder.”

Sharma (1997) opines, “The pressure that the blood exerts to flow to all parts of the body. It is measured in mmHg. Blood pressure is of two categories..."
maximum and minimum. The blood pressure is maximum when the heart contracts and forces blood into the arteries and it is minimum when the heart muscles relax. The maximum pressure is called *systole* and minimum as *diastole*.

Blood pressure is different in different persons and in the same person it varies from time to time. It depends on many factors as age, general health, sex and mental and physical stress and strain. Blood pressure gives an idea as to the volume of blood in circulation and elasticity of blood vessels. Normally blood pressure is higher in the old people than the young and in males than the females. The maximum blood pressure in a young man is 120 and it may go up to 140 for an old person and for a woman it is less by 10. If the maximum pressure is above level and minimum more than 90 it requires attention. The blood pressure is measured by means of an instrument called sphygmometer and stethoscope.

*www.mckinley.uic.edu* (1997): “Each time your nurse or physician “takes” your blood pressure, they are recording two measurements: your systolic pressure and your diastolic pressure. If the two measurements were 110 and 70, they would be written as “110/70”. Your systolic pressure (the first and highest number) is the pressure or forces the heart places on the walls of your blood vessels, as it is working/pumping with each heartbeat. Diastolic pressure (the second and lowest number) is the lowest pressure the blood places on the walls of your blood vessels when the heart is relaxed between beats.

Both of these measurements are important. A high systolic pressure indicates strain on the blood vessels when the heart is attempting to pump blood into your blood stream. If your diastolic pressure is high, it means that your blood vessels have little chance to relax between heartbeats. Occasional high blood pressure is common. Anxiety, exercise, or nervousness can cause you to have a high reading.

Blood Pressure as cited in *Stedman’s Medical Dictionary* (2000), the pressure or tension of the blood within the arteries, maintained by the contraction of the left ventricle the resistance of the arteries and capillaries, the elasticity of the arterial walls, as well as the viscosity and vol. of blood, blood pressure is always expressed as relative to the ambient atmospheric pressure.
INTRODUCTION

According to *Guyton* (2001) “This is the outward force of the blood against each unit area of the vessel wall. It is normally expressed in millimeters of mercury (mm Hg). Blood is pumped by the heart in pulses, each beat of the heart normally ejecting approximately 70 ml of blood. This is called the stroke volume output. As a result, the arteries become greatly distended during cardiac systole, and during diastole the excess blood stored in the arterial tree “run off” through the systemic vessels to the veins. Thus, the aortic pressure rises to its highest point during systole and falls to its lowest point at the end of diastole. The high point and the low point are called respectively the systolic and the diastolic pressure. In the normal adult, the systolic pressure is approximately 120 mm Hg and diastolic pressure 80 mm Hg. This is usually written as 120/80.

**www.novartis.com** (2002) : Everyone has blood-pressure. As blood is pumped through your arteries, it creates force against the inside wall of your blood vessels. The amount of blood the heart pumps and the resistance of the arteries, determine your blood pressure.

The standard way to show blood pressure is in millimeters of mercury (mm Hg). This unit of measurement refers to how high the pressure inside your arteries is able to raise a column of mercury. Blood pressure is recorded as two numbers: a top number and a bottom number.

- The top number measures blood pressure when the heart is pumping. It is known as systolic blood pressure.
- The bottom number measures blood pressure when the heart is resting. It is known as diastolic blood pressure.

Blood pressure varies with the time of the day as well as with the activity, so it should be checked several times to determine your average blood pressure.
1.10.1. TYPES OF BLOOD PRESSURE

Eysenck (1975) cites two types of blood pressure.

1. Hypotension: excessively low blood pressure as a sign of defective regulation in the vegetatively labile or in conditions of cardiac weakness of fatigue and fainting.

2. Hypertension: abnormally high tension generally used to denote high blood pressure.

Mehta (1993) states two conditions of blood pressure.

1. Hypertension: is persistent elevated systolic or diastolic blood pressure. Causes of hypertension are Essential Hypertension, Renal (e.g. Acute nephritis), Vascular (e.g. Arteriosclerosis), Endocrine (Cushing syndrome) and Neurological.

2. Hypotension: is diminished blood pressure. Causes are postural, cardiac (e.g. shock), Endocrine (e.g. Addison’s disease), Chronic wasting disease (viz.-T.B., Anaemia etc) and Functional (Anorexia nervosa).

1.11. HYPERTENSION

After several large epidemiological studies from world over, it has been accepted that in adults, blood pressure level up to 140/90mmHg should be considered as normal. As there are greater fluctuations in the upper (i.e. systolic) pressure than the lower (i.e. diastolic) pressure, it is the latter, which has been mostly taken for purposes of demarcating the severity of hypertension. If the average of the three blood pressure readings taken in quiet surrounding on different occasions shows above 140/90 mmHg., the person is considered to be having high blood pressure. Diastolic pressure between 90-104mmHg, termed as mild hypertension constitute the major chunk (about 70%) of the total hypertensive population Wasir (1990).
INTRODUCTION

As per the Blitz Encyclopaedia (1994), Hypertension is “abnormally high Blood Pressure due to variety of causes, leading to excessive contraction of the smooth muscle cells of the walls of the arteries. It increases the risk of kidney disease, stroke and heart attack.”

Boon and Fox (1999), states “The distribution of blood pressure is not Gaussian, but skewed towards hypertension. Hypertension is defined arbitrarily at levels above generally accepted ‘normal’ for e.g. 140/90 at the age of 20, 160/95 at the age of 50. According to these criteria, about 15% of the population can be regarded as hypertensive. However, the morbidity and mortality risks associated with increased blood pressure rise continuously across the ranges of pressures, although more steeply at higher pressure.

The risks associated with a particular blood pressure are dependent upon the combination of risk factors in the specific individual. These include the risks associated with age (risk increases with age), gender (males> females), ethnic origin (blacks>whites), diets (high salt), smoking and concomitant disease (e.g. coronary artery disease).”

Golwalla (2000) opined Hypertension as - Arterial pressure like most physiological measures is variable, but a blood pressure above 140/90 mm Hg. is considered abnormal. Hypertension can be primary or essential when there is no obvious precipitating factor, or the much less common secondary where there is some identifiable cause like:

1. Renal
2. Endocrine
3. Cardiovascular
4. Cerebral
5. Trauma
6. Polycythemia rubra vera.

According to Stedman’s Medical Dictionary (2000), Hypertension is “High arterial blood pressure”.
www.americanheart.org, (2000). High blood pressure, or hypertension is defined in an adult as a systolic pressure of 140 mm Hg or higher and/or a diastolic pressure of 90 mm Hg or higher. Blood pressure is measured in millimeters of mercury (mm Hg). High blood pressure directly increases the risk of coronary heart disease (which leads to heart attacks) and stroke, especially along with other risk factors.

<table>
<thead>
<tr>
<th>BLOOD PRESSURE (mm Hg)</th>
<th>OPTIMAL</th>
<th>NORMAL</th>
<th>HIGH</th>
<th>HYPERTENSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYSTOLIC (top number)</td>
<td>Less than 120</td>
<td>Less than 130</td>
<td>130-139</td>
<td>140 or higher</td>
</tr>
<tr>
<td>DIASTOLIC (bottom number)</td>
<td>Less than 80</td>
<td>Less than 85</td>
<td>85-89</td>
<td>90 or higher</td>
</tr>
</tbody>
</table>

Fig. 1.6. - Source www.americanheart.org, (2000).

High blood pressure can occur in children or adults, but it is particularly prevalent in African-Americans, middle-aged and elderly people, obese people, heavy drinkers, and women taking oral contraceptives. People with diabetes mellitus, gout, or kidney disease have a higher frequency of hypertension. High blood pressure usually has no specific symptoms and no early warning signs. It's truly a "silent killer".

Williams, (2001) stated, "In adults, a diastolic pressure below 85 mm Hg is considered to be normal; between 85 and 89 is high normal; 90 to 104 is mild hypertension; 105 to 114 moderate hypertension; 115 or greater is severe hypertension. When the diastolic pressure is below 90 mm Hg, a systolic pressure below 140 mm Hg indicates normal blood pressure; between 140 and 159 is borderline isolated systolic hypertension; 160 or higher is isolated systolic hypertension."

Gayton, (2001) states, "Hypertension is a disease characterized by excessively high mean systemic arterial pressure and the person is usually..."
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considered to be hypertensive if the arterial pressure is greater than 140/90 mmHg.

www.Novartis.com (2002) : Hypertension, the medical name given to High Blood Pressure is defined in an adult as a Blood Pressure greater than or equal to 140 mmHg, systolic pressure and greater than or equal to 90 mmHg diastolic pressure.

When an individual has hypertension, the blood vessels become tight and constricted, forcing your heart to pump harder to move blood through your body. These changes cause the blood to press the vessel walls with a greater force. Overtime, fatty deposits may build up along the walls and cause hardening of the arteries. This process is called atherosclerosis. The heart must work even harder to pump blood through these hardened arteries. Sometimes blood clots form on these arteries, causing a heart attack or stroke. A “silent killer”, High Blood Pressure usually has no symptoms, yet it can lead to serious and even life threatening problems if left untreated. The good news is that there are ways to manage hypertension.

In general, your Blood Pressure is considered high if its consistently 140/90 or higher. A normal Blood Pressure reading is below 130 systolic and 85 diastolic.

<table>
<thead>
<tr>
<th>Category</th>
<th>Systolic Pressure</th>
<th>Diastolic Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Optimal</td>
<td>less than 120</td>
<td>and less than 80</td>
</tr>
<tr>
<td>Normal</td>
<td>less than 130</td>
<td>and less than 85</td>
</tr>
<tr>
<td>High Normal</td>
<td>130-139</td>
<td>or 85-89</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Hypertension</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1 (Mild)</td>
<td>140-159</td>
</tr>
<tr>
<td>Stage 2 (Moderate)</td>
<td>160-179</td>
</tr>
<tr>
<td>Stage 3 (Severe)</td>
<td>180 or higher</td>
</tr>
</tbody>
</table>

Source: (from the 6th report of the Joint National Committee on Detection, Evaluation, and treatment of High Blood Pressure, NIH publication, 1997.)
www.webmd.lycos.com. (2002): As the heart beats, it pumps blood for circulation throughout the body. Blood pressure is measured as systolic (pressure of the blood in the arteries when the heart beats) and diastolic (pressure between heart beats). High blood pressure, or hypertension, is generally considered to be a pressure greater than or equal to 140 systolic and 90 diastolic (measured in mm of mercury). High Blood Pressure is serious but modifiable risk factor for heart disease and stroke.

1.11.1. CAUSE AND SYMPTOMS OF HYPERTENSION

With increasing industrialization, urbanization and migration, social and cultural changes are taking place rapidly. This requires adapting and making adjustments faster. For many, this process of adaptation is stressful. Hypertension or high blood pressure is directly related to the stressful situation an individual faces. Some of the causes and symptoms of hypertension given by various authors are as follows.

According to Mehta (1993) causes of hypertension are as follows:-

1. **Essential Hypertension.**
2. **Renal:**
   - Acute nephritis
   - Interstitial nephritis and pyelonephritis
   - Polycystic kidneys
   - Renal artery stenosis
3. **Vascular:** Arteriosclerosis, coarctation of aorta
4. **Endocrine:** Phaeochromocytoma, Cushing’s syndrome, Hyperoxosis
5. **Neurological:** Raised intracranial tension, head encephalopathy, bulbar-polio, etc.
6. **Miscellaneous:** Polyhaemia, aortic incompetence, toxaemia pregnancy, periarteritis nodosa, gout, etc.
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According to Sharma, et al (1996), uncontrolled high blood pressure can strain the heart and contribute to the hardening of blood vessels. This in turn results in premature heart attacks neurological problems and other disease of the blood vessels. In more than 95% of cases a specific underlying cause of hypertension is not found. Such patients are said to have “essential hypertension”.

In about 5% of unselected cases, hypertension can be shown to be a consequence of a specific disease or abnormality. They are as follows:

1. **Coarctation of the aorta**
2. **Renal disease:**
   - Parenchymal renal disease, e.g. Glomerulonephritis, Chronic pyelonephritis. Collagen vascular diseases Poly cystic kidney disease.
   - Renal artery stenosis.
3. **Endocrine disorders:**
   - Phaeochromocytoma
   - Cushing syndrome
   - Conn’s syndrome (primary hyperaldosteronism)
   - Hyperparathyroidism
   - Acromegaly
   - Primary hypothyroidism
   - Congenital adrenal hyperplasia
   - 11 beta-hydroxylase, 17-hydroxylase deficiency.
4. **Drugs:** Oral contraceptives containing oestrogens anabolic steroids, corticosteroids, non-steroidal anti-inflammatory drugs, carbenoxolone, sympathomimetic agents.
5. **Pregnancy + pre-eclampsia.**

Hypertension occasionally causes headache or polyuria but provided there are no complications, most patients remain asymptomatic. Accordingly, the diagnosis is usually made at routine examination or when a complication arises. (Boon & Fox, 1999)
INTRODUCTION

According to Gohvalla (2000), “Hypertension can be primary or essential when there is no obvious precipitating factor, or the much less common secondary hypertension where there is some identifiable cause. Some of the causes are:

1. **Essential hypertension**
2. **Renal**
   a) Severe unilateral disease - Hydronephrosis, stenotic or aberrant renal artery, renal infection, trauma, unilateral pyelonephritis, wilm’s tumour.
   b) Bilateral renal disease - Chronic pyelonephritis, glomerulonephritis, analgesic nephropathy, polycystic disease of kidney, enlarged prostrate, urethral stricture with bilateral hydronephrosis, systemic disease involving e.g. polyarteritis nodosa, disseminated lupus erythematosus, diabetes, amyloidosis, systematic sclerosis.
   c) Kidney transplantation
3. **Endocrine**
   a) Adrenocortical disease - Conn’s syndrome, idiopathic aldosteronism, dexamethasone responsive aldosteronism adrenal carcinoma, Cushing’s syndrome
   b) Phenochromocytoma
   c) Acromegaly
   d) Hypothyroidism
   e) Hyperparathyroidism
4. **Cardiovascular**
   a) Coarctation of aorta
   b) Raised systolic pressure in aortic regurgitation or complete heart block
   c) Middle aortic syndrome
5. **Cerebral** - Increased intracranial pressure encephalitis, bulbar poliomyelitis, cerebral trauma
6. **Toxic** - Pregnancy toxemia, steroids, oral contraceptives, lead.
7. **Polycythemia rubra vera**
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Symptoms:

a) No Symptoms – Uncomplicated hypertension is symptom less.

b) Headache – may occur in patients with very high arterial pressure, or hypertensive encephalopathy. The headache is usually occipital and present on waking.

Williams (2001) states “The majority of patients with hypertension have no specific symptoms referable to their blood pressure elevation and will be identified only in the course of a physical examination. Though popularly considered a symptom of elevated arterial pressure, headache is characteristic only of severe hypertension. Most commonly it is localized to the occipital region, is present when the patient awakens in the morning, and subsides spontaneously after several hours. Other possibly related complaints include dizziness, palpitations, easy fatigability and impotence. Complaints referable to vascular disease include epistaxis, hematuria, blurring of vision owing to retinal changes, episodes of weakness or dizziness due to transient cerebral ischemia, angina pectoris, and dyspnea due to cardiac failure.”

“Hypertension is a very common abnormality in humans. It can be produced by many diseases. Principal causes of sustained diastolic hypertension in humans:

1. Unknown (essential hypertension)
2. Adrenocortical diseases
   a) Hypersecretion of aldosterone (Conn’s syndrome)
   b) Hypersecretion of other mineralocorticoids
   c) Hypersecretion of glucocorticoids
3. Catecholamine secreting tumors of adrenal medullary or paraganglionic origin (pheochromocytoma).
4. Tumors of juxtaglomerular cells
5. Narrowing of one or both renal arteries
6. Renal disease
   a) Glomerulonephritis.
b) Pyelonephritis.

c) Polycystic disease.

7. Narrowing of the aorta.
8. Severe polycythemia.
9. Oral contraceptives.” (Ganong’s, 2001)

1.12. HEART RATE

Davis (1975) opined that heart rate (Syn Heart beat) is the number of heart beats per minute. The normal value is 60 pulses. Various regulating mechanism allow the rate to rise during physical activity (greater volume of blood supplied to the heart), up to a possible maximum of 220-beats per minute. The heart rate is determined by measuring the pulse or ECG impulse per minute (cardiochronograph, cardiograph, electrocardiograph etc.). Recording of heart rhythms is an important part of any examination of circulatory function, and enables conclusions to be drawn on the functional conditions of the heart. The rate is faster in abnormal metabolic conditions, and slower in case of trained athlete.

Shryock (1982) expresses, “the rate of heart-beat normally varies between 60 and 120 per minute, depending on how active, physically and emotionally the person is at the moment. When sitting quietly, the average healthy person’s heart beat about 72 times per minute. Irregular heart beat, or a rate abnormally fast or a rate which changes suddenly, can occur in either normal or diseased hearts. Such changes of rhythm or rate are important, then, as they develop in association with some actual disease or as the change may handicap the heart in providing the body’s tissues with necessary blood. When these changes occur in persons with normal hearts, they often experience such symptoms as palpitation, a feeling of weakness, or an acheing in the heart region. The diseases that may be associated with changes in rhythm and rate include rheumatic heart disease, arteriosclerotic heart disease, advanced coronary artery disease, disease of the thyroid gland, acute infections, and injury to the heart.”
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The heart rate normally an average about 72 per minute, but in children is more rapid (90-110) and in old age may become slow (55-65). Quite trivial disturbances are sufficient to cause acceleration in the heart rate for e.g., the emotion aroused by a medical examination, or the effort of climbing stairs etc. Ogilvie and Evans(1989).

According to Wasir (1990), “The heart starts beating long before we are born and after birth our life entirely depends on the continuous rhythmic beating of this hard-working, strong human pump. Cessation of heart beat means cessation of life. The heart has the inherent automatic mechanism of adjusting its speed according to the requirements of the body. Except under some diseased states, the heart generally behaves like a very faithful servant complying to the whims and wishes of its master. It changes its speed and force of contraction to meet the often-changing demands of our body as per the circumstances and environmental situations. In young children, the heartbeats about 90-100 times in the minute while in adults the heart beat is in the range of 70-80 times per minute. With regular long term physical exercise programmes, the heart is so trained that it can do its full work even at a rate around 50-60 times per minute. In the normal person, the heart beat increases during emotional states, physical exercise, pregnancy, anger and excess consumption of tea, coffee and alcohol. All goes well so far as the heart is beating regularly at a speed between 60-80 a minute under normal condition.”

Ghai(1990) opines, “ Heart-rate is the number of heart beats for one minute. The heart rate is not constant in any one subject; the rate varied slightly from beat to beat. Such fluctuations are random but there is a regular variation in heart rate associated with respiratory movements. The rate quickens during inspiration and slows down during expiration.

Normal heart rate: 70-80/min. and
Range is from 60-100/min.

Rate above 100/min is called tachycardia and below 60 min bradycardia. Emotional stress, nervousness, anxiety and apprehension produce tachycardia.
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The normal heart beat rate ranges between 60 and 80 beats per minute. During physical or mental exertion, the rate may rise to 150 or even 200 beats per minute. We are often aware of our heart pounding just after a strenuous work-out. Stress, anxiety, excessive alcohol and smoking, frequently causes palpitation (increased heart beat) (Sharma et al., 1996)

“The heart-rate in a normal adult person is about 72 times a minute. The heart rate in a child is approximately 90 times a minute. It is slower at rest but is faster on exertion or excitement. The cardiac pace maker in right ventricle regulates the beats.” (Sharma, 1997)

Golwala, (2000) states, “No absolute normal, varies in different individuals and in same individual under different circumstances. In the adult male at rest during waking stage, rate varies between 60-80 per minute and in the adult female from 70-90 per minute”.

According to Stedman’s Medical Dictionary (2000), Heart-rate is the rate of heart’s beat, invariably recorded as the number of beats per minute.

Parmley (2000) states,”Heart rate is an obvious determinant of cardiac performance and is one of the most important mechanisms available to the heart to increase cardiac output (cardiac output=stroke volume x heart rate). The magnitude of the heart rate may be an important indicator of the cardiovascular status of an individual patient. Heart rate (wide normal range, usually (60)-100 beats/minute).”

Ganong (2001), states the heart beats about 70 times a minute at rest. The rate is slowed (bradycardia) during sleep and accelerated (tachycardia) by emotion, exercise, fever and many other stimuli.

Guyton (2001) states, “The natural contraction of cardiac muscle varies in different parts of the heart. The muscle fibers, in the S.A. node, a small area of special cardiac muscle located in the posterior wall of the right atrium beneath the
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opening of the superior vena cava have a natural rate of rhythmicity of about 72

times per minute.

www.howstuffworks.com (2002) The average heartbeat is 72 times per
minute. In the course of one day it beats over 100,000 times. In one year the heart
beats almost 38 million times, and by the time you are 70 years old, on average, it
beats 2.5 billion times. Everyone’s pulse (average heart rate per minute) changes
as we age. Here is a chart of average pulse at different ages:

<table>
<thead>
<tr>
<th>Age</th>
<th>Pulse</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newborn</td>
<td>130</td>
</tr>
<tr>
<td>3 months</td>
<td>140</td>
</tr>
<tr>
<td>6 months</td>
<td>130</td>
</tr>
<tr>
<td>1 year</td>
<td>120</td>
</tr>
<tr>
<td>2 year</td>
<td>115</td>
</tr>
<tr>
<td>3 year</td>
<td>100</td>
</tr>
<tr>
<td>4 year</td>
<td>100</td>
</tr>
<tr>
<td>6 year</td>
<td>100</td>
</tr>
<tr>
<td>8 year</td>
<td>90</td>
</tr>
<tr>
<td>12 year</td>
<td>85</td>
</tr>
<tr>
<td>Adult</td>
<td>60-100</td>
</tr>
</tbody>
</table>

www.home.connectnet.com (2002) The typical adult has a resting heart-
rate of about 72 beats per minute whereas highly trained runners may have
readings of 40 bpm or lower

RELAXATION

Everyone needs to relax – especially worried people, anxious people,
nervous people, and those suffering from stress or fatigue.
Harriman (1963) describes relaxation as “the return of muscles and ligaments to their normal level of tonus after a period of contraction.”

Nitseh (1975) has described relaxation as in cybernetics the return of a system to a normal state due to trophotropic adjustment after ergotropic actuation. The effect of relaxation pauses diminishes with the pause length with negative acceleration. To counter fatigue, especially in intensely fatiguing activities, several short pauses (to eliminate fatigue, peaks favourable motivation effect), are preferable to a great number of long pauses.

According to Shryock (1982), “Rest alternating with activity, relaxation alternating with work, sleep alternating with wakefulness are cycles necessary for normal life and health. In conditions of injury or disease these cycles become even more important, assuming therapeutic importance.”


Relaxation Therapy has been described as per Blitz Edition (1994): Development of regular and conscious control of physiological processes and their related emotional and mental states, and of muscular tensions in the body, as a way of relieving stress and its results. Meditation, hypnotherapy, autogenics and biofeedback are techniques commonly employed.

Coping with stress involves learning new skills. Relaxing is a skill. It may not solve your stress problem by itself, but it may put you in a state where you are able to think about or reflect on a problem. It may also deal with number of aches and pains caused by tension. Most forms of relaxation owe something to Jacobsen who developed a procedure for progressive muscle relaxation in the 1920’s and 1930’s. Groups of muscles are alternately tensed and relaxed, until the whole body is relaxed. Some other techniques place greater emphasis on breathing, and controlling rate and speed of breathing. There are a number of other techniques or disciplines which have something to do with managing physical tension but which
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offer more than just relaxation they are- Biofeedback, The Alexander Technique, Massage, Yoga and Meditation (Atkinson, 1995).

Stress is a fact of life. It's all around us: at work, in our environment, and in our personal lives. Because stress arises from so many factors and conditions, it's probably impossible to eliminate it completely. But we can apply techniques to lessen its potentially harmful effects. Several of these techniques can be divided into three major categories: *physiological, cognitive, and behavioural*, (Baron, 1996).

Nothing perhaps has been so grossly misunderstood as the art of relaxation. For one thing, relaxation should not be mistaken for inertia; for another, it also does not mean lying around and doing nothing. Relaxation really means rest after effort, more truly, conscious rest after conscious effort. It therefore follows that the more perfect the effort, the more perfect is the relaxation. According to Stebbins, a prime researcher in this area states, "relaxation is a complete resignation of the body to the law of gravity; the mind to nature; and the transference of all energy to deep, dynamic breathing." (Atkinson, 1995)

The basis of modern relaxation techniques lies in the meditation heritage of our own philosophy. The three major forms of current relaxation practices - meditation, progressive relaxation and autogenics - emerged in the western world during the period 1890 to 1930. (Sharma et al., 1996)

A range of techniques brings about a relaxed state in subject. Usually used as a component in therapy, for e.g. in maintaining a relaxed state in a phobic patient as they approaches the feared object. Many of the techniques used in psychotherapy are based on methods developed for meditation, such as yoga, or are variations of hypnotic induction procedures. (Stratton and Hayes, 1996).

Relaxation is - a change of pace of activity which tends to reduce everyday tension and stress and lets the body recuperate from fatigue and restore energy. Ability of body to relax can be cultivated. (Sharma, 1997).
According to Stedman’s Medical Dictionary (2000)
Relaxation: Dilution, loosening, lengthening or lessening of tension in a muscle.

According to Sharma (2001), “Relaxation is the opposite of movement. It is characterized by a reduction or complete absence of activity in the muscles which is accompanied by a lowering of activity in the rest of the body with heart rate, respiratory rate and other regulatory functions working at a lower pace. Relaxation is a neuromuscular function, which results in a lowering of tension in the skeletal muscles. In other words minimal muscular activity. Relaxation is a skill, which can be learned. Relaxation techniques can be used to lower general muscular tension.”

1) The act or process of relaxing, or the state of being relaxed, as relaxation of the muscles
2) Remission from attention and effort, indulgence in recreation, diversion, or amusement.

1) The exponential return of a system to equilibrium after a disturbance
2) A state of refreshing tranquility (Syn. easiness)
3) An occurrence of control or strength weakening, “the relaxation of requirements”
4) Freedom from activity (work or strain or responsibility)

1.13.1. STRESS AND RELAXATION RESPONSE

Our body has two powerful built-in systems to help protect our health—a stress response and a relaxation response. The stress response is triggered in voluntary by a real or imagined threat, and a feeling of not being able to cope. The relaxation response is elicited consciously and need to be repeated, or practiced.
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The stress response includes three involuntary physiological reactions, fight, flight or fright. These occur whenever we are faced with the stressful or threatening situation. Our body becomes prepared to react to what we perceive to be a real threat. There are three options: hold your ground and fight, flee, or to overcome with fear and remain frozen.

We are confronted with stress in our lives, which cause stress responses. Even memories of previous stressful situations can trigger a stress response (rapid heart-beat, nausea, sweating, etc.). A Stress response is activated by the hypothalamus through the sympathetic nervous system releasing adrenaline and nor-adrenaline, which causes arousal and physical reactions, such as increased pulse and gasping for more oxygen. Digestion is halted and the muscles are filled with a rush of blood. Blood pressure increases rapidly and the body's metabolism goes into high gear.

When you are in a perpetual state of stress, you flood your body with stress hormones, nor-adrenaline which stimulates the adrenal glands. This in turn will release cortisol. Cortisol is needed for us to respond to stress. But when stress is too intense and not relieved, excess cortisol is toxic, inflicting serious damage and speeding of the ageing process. Cortisol is found at abnormally high levels in persons with depression, alcoholism, heart disease and cancer. Therefore, these are most likely the result of continuous stress.

Stress responses are also evoked during less intense emotional threats such as loss of a loved one, a job, a home, a traffic jam or criticism. When we are repeatedly provoked by these types of threats, the result can be disastrous to our well-being. Prolonged stress without relief can produce physiological breakdowns, which result in digestive disorders, cardiovascular disease, sexual and reproductive dysfunction, diminished immune responses and many other chronic degenerative illnesses.

The Relaxation Response is a natural restorative process and a powerful built-in healing mechanism. It can be achieved by using our mind to create a beneficial way for our body to respond. Thus can improve our general state of
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health and even reduce the need for medication. Relaxation response is a mechanism to stabilize a body from a stress response.

Relaxation responses control the harmful aspects of the primitive unconscious stress response by neutralizing the negative effects. The relaxation response is an antidote to the stress response. When a relaxation response is elicited, nerve signals from the hypothalamus activate the parasympathetic nervous system, which results in slowing down heart rate, and breathing rates, blood pressure decreases, body metabolism is lowered and muscles relax. Basically, the whole body unwinds.

The relaxation response puts the mind and body in a state of rest and tranquility. It is achieved by the mastering techniques that help you “let go” of stress. Usually, the relaxation response is achieved when you match the relaxation strategy to the type of stress you are experiencing.

Relaxation is a skill. Like any skill, it requires patience and perseverance. It requires transforming feeling of anxiety and pain into something positive and becoming more accepting. It is about learning how to change your attention or focus, redefine an experience or situation, realign your body, thoughts and feelings so that negative energy is transformed into positive energy. This is when you will be able to transform a stress response into a relaxation response (www.davidsmithcmt.com, 2002). There are several relaxation techniques which reduce and transform stress responses into relaxation responses which are dealt in this chapter under the heading “Types of Relaxation Techniques”.

1.13.2 TYPES OF RELAXATION TECHNIQUES

“the reasonable man adapts himself to the world;
the unreasonable one persists in trying to adapt the world to himself.”
- George Bernard Shaw

Stress, whether good or bad, is an all pervading facet of life. It is unavoidable and inescapable so everyone attempts either (1) to maintain stress at
manageable levels; (2) to get away from it temporarily or (3) to learn to use it to their advantage. In short, each one of us resorts to certain strategies to handle stress and its effects. Stress can be managed by bringing about a change in three areas: yourself, others and environment. However, to bring change in others and environment is rather a difficult task. But one can surely bring change in oneself by changing one's food habits, life styles etc. One sure and easiest way to manage stress is the relaxation-techniques. Various authors have given various relaxation techniques and one can make a choice from these groups of techniques/exercises, which suits one the best.

Various authors, experts etc. have given different techniques to combat stress. Some generally and most commonly used techniques are described here briefly.

According to Sharma (2001) some of the relaxation techniques are as follows:

1. Neuromuscular relaxation or progressive relaxation was developed by Jacobson many years ago. The technique is learned by developing as much tension as possible in a particular group of muscle, then relaxing to release the tension. The aim is to develop in the muscles sensitivity to different levels of tension. The idea is to control muscles, then relax and recognize the difference between tension and relaxation in the muscle.

2. Differential Relaxation: From the basis of progressive relaxation, which involves working through all muscle groups as comprehensively as time permits, the athlete could develop to differential relaxation where the aim is to relax all the muscles except those working.

3. Meditation: Progressive relaxation concentrates on the degrees of tension in the muscles and subsequently effect on the CNS and the brain. Most other relaxation techniques concentrate on mental control and the flow of information (efferent nerve supply) to the muscle. Examples of these techniques would be meditation, autogenic training and visualization. Meditation is a mental technique using a mantra, a non-stimulating meaningless sound, which provides a focus attention in a very passive manner. Very simply it prevents a person's mind wandering by passively
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Ever since the time of man’s arrival in the Good earth, he must have worked, for his survival depended on his work. We can not conceive of man, even of the primitive times, without his doing one kind of work or the works. In the beginning there was not much of a difference in the kind of work men did, but focusing on the mantra. There is a reduction in nervous stimulation that produces a relaxing effect, but the practice of meditation is also a useful method of increasing concentration.

4. **Autogenic Training**: Autogenic training involves self-induced responses to develop a deep state of relaxation. The technique, one of auto-hypnosis or self-hypnosis, uses a series of exercises to produce two physical sensations—warmth and heaviness. Attention is focused on producing these sensations, and the training involves months or more of regular practices to become proficient enough to experience heaviness and warmth in the limbs, a sensation of relaxed calm heart and respiratory rates, accompanied by warmth in the abdominal region (which produces a calming effect on the central nervous system and enhances muscular relaxation) and coolness in the forehead. The method uses auto-suggestion as a means of training for relaxation, which is followed by training in autogenic meditation involving imagery of visualization. The full range of autogenic training takes a relatively long time, but it had proved effective.

5. **Visualization**: It is a method of imaging oneself in an environment conducive to relaxation. The particular object of visualization will be personal, but obvious examples are, lying on a secluded beach in very scenic peaceful countryside.

Relaxation techniques vary from simple mental exercises to extensive forms of training. Choice or use of a relaxation technique will vary considerably with the individual.

1.4. **RELATIONSHIP BETWEEN JOB STRESS, ANXIETY, BLOOD PRESSURE, HYPERTENSION AND HEART RATE**

Ever since the time of man’s arrival in the Good earth, he must have worked, for his survival depended on his work. We can not conceive of man, even of the primitive times, without his doing one kind of work or the works. In the beginning there was not much of a difference in the kind of work men did, but
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slowly, man’s world of work has become progressively differentiated; though haltingly & slowly, there was steady progress and widening of the avenues. Thus, the world of work has come to be confusingly complex in the modern times.

Presently, men learnt to pursue different kinds of activities to eke out their livelihood, which have in time, come to be identified with different occupations. Men had to devote a good part of their lives in pursuit of their occupations to make a living. The relationship between man and his work, therefore, is of great importance (Rao. 1986).

Today person spend vast amount of his time, in work-situations, where the organizational settings exerts its direct control, pressures and demands. The degrees of these demands differ in different work situations and the degree to which the pressures are felt differ form person to person (Chaturvedi-1983)

As per Sharma, Sharma and Varma (1996), “A good portion of waking life is spent at our work-place. Work plays an important role in determining one’s identity. That is why people often introduce themselves by stating what they do for living. Work and workplace being so important, it is crucial that they also become a valuable source of satisfaction for us which in turn determines our health and well being.”

The term job stress brings to mind terms like job dissatisfaction, work overload, deadlines, conflicting demands, uncertainty, monetary problems, noise, overcrowding and so on. Stress at work is produced both by external factors such as the physical environment, the nature of the job or interpersonal relationships and by your state of mind as well as your ability to cope with the work demands.

According to Baron (1996), “Most adults spend more time at work than in any other single activity. It is not surprising, then, that jobs or careers are a central source of stress. Some of the factors producing stress in work settings are obvious, for e.g., blatant sexual harassment or discrimination or extreme overload – being asked to do too much in too short a time. Interestingly, being asked to do too little...”
can also cause stress. Such underload produces intense feelings of boredom, and these, in turn, can be very stressful.

Moreover, a stressful working environment can lead to the development of psychological and physical problems or contribute to a worsening of existing health problems. Stress can influence our physical and psychological well-being, our performance on many tasks, and even the ultimate course of our careers.

1.14.1. STRESS AND HEALTH: THE SILENT KILLER

The link between stress and personal health, according to medical experts, is very strong indeed (Kiecolt-Glaser & Glaser, 1992). In fact, some authorities estimate that stress plays some role in 50 to 70 percent of all physical illness (Frese, 1985). Moreover, included in these percentages are some of the most serious and life threatening ailments known to medical science. To list just a few, stress has been implicated in the occurrence of heart disease, high blood pressure, hardening of the arteries, ulcers, and even diabetes.

According to Atkinson (1995) “The World Health Organization takes as a definition for health the presence of physical and emotional well-being in the individual. Stress certainly detracts from the well-being of the individual. Coronary heart disease is pre-eminent when it comes to considering illness and stress, along with hypertension. Following heart disease the second most common stress-related illness are probably those of alimentary canal, ranging from indigestion to ulcers. Two major problems are peptic ulcers and irritable bowel syndrome.”

Many people believe that stress is strongly implicated in a number of immunological disorders, and stress may well lower our resistance to infectious diseases of all kinds. It certainly seems to be linked to diabetes mellitus; both in terms of its onset and in the course of the illness. It seems likely that the involvement of stress in diabetes is different for juvenile and maturity onset groups. Other illnesses, which may be linked with stress, include asthma; some
types of cancer, migraine, pre-menstrual tension, rheumatoid arthritis certain skin disorders and various types of mental and emotional disorders.

The relationship between stress and these illnesses is complex. As per Baron (1996) the mechanisms involved remains to be determined precisely, but growing evidence suggests that the process goes something like this. By draining our resources and keeping us off balance physiologically, stress upsets our complex internal chemistry. In particular, it may interfere with efficient operation of our immune system—the elaborate internal mechanism through which our bodies recognize and destroy potentially harmful substances and intruders, such as bacteria, viruses, and cancerous cells. Foreign substances that enter our bodies are known as *antigens* when they appear, certain types of white blood cells (lymphocytes) begin to multiply. These attack the antigens, often destroying them by engulfing them. Other white blood cells produce antibodies, chemical substances that combine with antigen and so neutralize them. When functioning normally, the immune system is nothing short of amazing: each day it removes or destroys many potential threats to our health and well-being. Unfortunately, prolonged exposure to stress seems to disrupt this system.

The “work worries” causes anxiety among the individuals, which in turn causes personal stress and strains. If the individuals do not relax themselves or relieve themselves of their stress and strain, it may in turn cause in them increased blood pressure, heart-rate and at times hypertensive cases.

**1.15. SIGNIFICANCE OF THE STUDY**

In the past, education was something more than mere acquisition of knowledge and skills. Even today, it is vaguely accepted to be true and valid but dismissed as ideal and divorced from reality. Today, the one objective of education, which had increasingly come to be emphasized, is the vocational aim of education, a means to train and equip young men and women to fit into different occupations. The teachers’ role naturally comes to be regarded as a simple one in that he has only to impart the necessary specific skills. Teaching has
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become routine, mechanical and an assemblage of piece-meal operations. It was somewhat believed that this method of depersonalization and de-emphasizing of the educational practice or system. Teaching has come to be broken down into smaller job assignment, necessitating the need for greater co-ordination, which ended up with excessive administrative controls and a high degree of formalization. The teacher has lost his “personality” and has become just another “worker” (“white collared”) earning his “wages”. The factors leading to devaluation of teacher’s role, have presently assumed coercive force in making teachers administrative or organizational systems. Teachers like workers have to produce and meet vague production, targets of “percentage of passes”, irrespective of whether all the other pre-requisite are satisfied. In the process of mass production and quantitative expansion, the basic goal of education is abandoned as expedient. With the institutionalization of education and reducing the role of the teacher to that of a worker or, for that matter to a human machine (Rao-1986).

Joshi, Biswal and Munther (1996), states no one can ignore future. For the better present the knowledge of past and the perception about future is essential. Accordingly, one can shape one’s present or a bright future. The status of women in the society is changing from time to time. The rapid growth of industrialization, westernization and modernization helps to increase the responsibility of women in the society and it seems quite distinct in last few years.

Ravindranatha (1999), states it is being increasingly recognized these days in most of the developing countries that an effective and efficient participation of the women section who constitute almost 50% of the population (sometimes even more because of disproportionate sex ratio) is very much needed for the growth and development of any society. As a result of such an increasing understanding, the position, status and the place of women in almost all the developing countries (barring some religious-fanatic nations) is being constantly and continuously revived and revitalized and this phenomenon has acquired and accelerated impetus especially after the II-World War period when various undeveloped countries surged towards the headlong modernization. Employed women in a developing country like India which is in phase of transition poses great number of problems to the educated employed women themselves at the first
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This is because, first and foremost, the educated—employed women will have to face value contradictions between those traditional ones in their family situations and the modern ones at their places of work and outside; secondly, a situation of role multiplicities between child caring and household work on one side and working outside on the other; thirdly, many educated—employed women will also have to face the exploitative tendencies of their high-up authorities, and lastly, educated—employed women after having worked long hours at their places of work will find lack of time and energy for creative pursuits.

Educated—employed women in our country and elsewhere have often been playing the double role of bearing and caring children on one hand as well as working outside the home. This remains as heaviest stumbling block around the neck of female emancipation. A report of the world conference of the UN decade for women thus remarks: “For millions of women in the third world who cook and clean, sew and wash, plant & weed, care for the old and bring up the young—a 16-hour day is not uncommon. . . Through out the developing world, a major problem is that women’s work is often invisible—a man laying a water pipe in a city is a part of the statistics of development. A woman carrying a day’s supply of water from a well to a village is not her work, though vital to the task of meeting the daily needs of the family, goes unrecorded, unsupported and unrewarded. For these women, there is neither the time nor the energy nor the opportunity to invest the training courses or self development.”

Bhargava (1998), in one of her papers quotes ‘In India, much is made of what a true woman’s image is and the do’s and don’ts of what a model-wife should follow. A wife’s primary responsibility is her house so whether or not she is working; she must look after the domestic needs as well. Very few men consider that a woman also has some needs, desires and hopes. That the wife has some expectations too. Indian husbands very rarely help their wives. For a working woman who manages her home, life is no bed of roses when women are not able to raise or conform to their traditional expectations, they may be harassed, tortured by the mother-in-law, husbands and other family members too. Life to such women often becomes very boring, dull, drab, drugerous, life-less, mechanical, monotonous and suffocating’.
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Ravindranatha (1999), further implications of multiple responsibilities educated-employed women may be that, these women may not be able to turnout the requisite quantum of work of a particular quality at their places of work, as after all they are not machines to work all throughout the day. They are also human being with needs, desires and expectations when there is no way out for escaping from such multiple burdens, they may just face the situation with fire in their heart and smile on their face.

According to Oza (1998), excessive competition leads to a sense of insecurity and threat of survival, which ultimately creates lack of trust in one’s own self and others. Constant feeling of comparison denies the development and maintenance of healthy social relations and acts as a threat to the individuals under stress, of being cast away from the system (such as loyalty, trust, confidence) such stress, conflicts & frustrations lead to poor and unhealthy mental health that lower down the efficiency and effectiveness of human potentials.

According to Mohan (1989), the stresses, anxieties, conflicts all result in a heavy toil on the behaviour, physique and personality of a person. The impact can range from the psychosomatic disease to mental break-down in clinical side and disruption in performance and learning from simple psychomotor tasks to academic and intellectual tasks.

Baron (1996), stress is a fact of life. It’s all around us at work, in our environment, and in our personal lives. Because stress arises from so many different factors & conditions, it’s probably impossible to eliminate it completely. But we can apply techniques to lessen its potentially harmful effects (Carver, Scheier, & Weintraub, 1989; Folkman et al: 1986). Several of these techniques could be divided into three major categories physiological, cognitive, and behavioural.

Many studies have been reported where the relaxation therapy has proved to be very effective and successful in reducing stress viz with managers and administrators (Dubey, 1989) with sportsmen (Zilli, 1989; Singh, A., 1989) with hypertension patient. Andrews (1963), views that the practice of relaxation can
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conserve energy & prevent undue fatigue. This may increase efficiency and the capacity for work and for play. The latter tends to produce enjoyment & satisfaction in the activity. Hence, this study is taken up with a view to promote better teacher effectiveness and help her in stress management.

To sum up, stress is an everyday fact of life. Stress is by and large, a modern phenomenon and has assumed grave dimensions particularly in the post-industrial society. The very mode of life—with its quick pace, noise, social pressures, environmental poisons and orientations to sedentary mental work are inherent stressful situations. The rat race for achieving economic and career goals, without caring for means, is indeed a widespread phenomenon of contemporary life. Lounging for material wealth, tight work schedules, neck-to-neck competition and no time to rest and relax makes one suffer from stress and strain. Comforts afforded by present civilization/society are numerous by means of various developments in the fields of science and technology. But at the same time it put forwards various challenges to man to accomplish those material comforts. Man has to continuously strive to cope or adjust to these challenges or these new changes afforded to him by the society by large. The numbers of these challenges or changes are numerous as compared to man ability to adjust. When this balance is not attained or when the demands exceed the person’s resources to meet them, it results in stress.

We can therefore say we live in a stressful age. Causes of stress can be grouped into three categories viz.:-

1. Physical Stressors: - Pollutants, drugs, food, radiation, noise, temperature, humidity etc
2. Social Stressors: - Also known as life-stress event covers all daily life events, daily hassles, stress at work, etc
3. Psychological Stressor: - Include intense emotions, frustrations, guilt, worry, anger, resentment, hate, love, jealousy etc

Of all these stressors, job stress is considered to be the main source of stress these days. Job stress has also been called “The 20th century disease”. Stress
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Results into various physical as well as psychological diseases such as diabetes, cancer acidity, ulcer, migraine, headaches and hypertension. Even AIDS is also many a times connected with stress. As a result of all these, man falls prey to numerous drugs. These drugs usually have their own side effects, which makes the situation more complex. Most of these drugs develop the tolerance level in humans. As a result a higher dosage is required.

Fifty percent of human resource comprises of women. The working women have to perform multiple roles—she has to perform many important roles in the family like role of mother and looking after various household activities. apart from her routine occupational work. The working women do carry out the household work as second shift. Further implications of multiple roles and responsibilities of the employed women may be that, these women are unable to turn out the requisite quantum of work of particular quality at their places of work, as after all they are not machines to work through out the day. They are also human beings with needs, desires and expectations. When there is no way out for escaping from such multiple burdens, they end up facing stress.

A number of adjectives have been used to portray the role of teacher—“The teacher is the back-bone of the educational system. He is the maker of human generation and architect of the society. Teacher’s as nation-builders Teacher is the key to the whole educational process. Teacher is the kingpin in the entire educational system. And is often termed as torch-bearer of civilization. All this shows the amount of responsibility placed on teacher’s shoulders.

The children are always addressed as the backbone of the society, pillar of the nation, future of the nation, leaders of tomorrow and so on. Teacher is the only person who is in constant association with the future of our nation i.e. the children. When stressed out, woman teacher cannot carry out efficiently to each of her roles as a wife, mother, house-holder and social being. Many times, she suffers from guilty conscious and finds herself torn between home, school and society. Her family and social life suffers. This condition creates social and psychological problems. The adjustments and maladjustment of a teacher affects her home role, job role and social role. All this has indelible impact on the nation.
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in general and society in particular to which she belongs. If the teacher is not in the sound mental health, she can do incalculable harm to the nation in terms of poor guidance to the students. She can not do justice to her job. Her maladjustment will not only adversely affect her personality but will produce maladjustment in children put under her charge. Since she maims or injures their (children) personality and crams their very soul. But when she is mentally healthy she feels effective and enthusiastic and when she is enthusiastic she hardly feels tired. And if she is conscientious and dedicated to her profession the future of nation can be said to be in safe hands.

There are various techniques to reduce stress like – Breathing techniques, muscular relaxation, biofeedback, autogenic training, yoga, meditation and mental imagery. The teachers can choose the techniques of their choice to become more effective, productive, efficient and of sound health in other words to reduce their stress level. According to the investigator there are two drugs which anyone can use and has no side effect at all and that they rather give so many benefits to the individual. These two “drugs” are mental relaxation through controlled MIND and regular PHYSICAL EXERCISE. Above all these drugs do not cost anything.

As there are numbers of studies regarding jobs stress in different work situation, but no such study was there with women teachers, who are the prime movers of nation. Since woman by nature is a teacher. Hence this study was taken up to help them reduce their stress level and make them effective individuals.

STATEMENT OF THE PROBLEM

The study sets to explore the effect of relaxation techniques on job stress, anxiety, blood pressure, hypertension and heart-rate in employed women teachers, the problem may be stated as “The Effect of Relaxation Techniques on Job Stress in Relation to Blood pressure, Hypertension and Heart-Rate in women teachers.”
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1.17. OBJECTIVES

1.17.1. GENERAL OBJECTIVE

To study the effect of relaxation techniques on job stress in relation to blood pressure, hypertension and heart-rate in women teachers.

1.17.2. SPECIFIC OBJECTIVES

1. To study the difference between high stressed and low stressed teachers in response to relaxation techniques.

2. a) To study the stress level of women teachers.
   b) To study the anxiety level of employed women teachers.
   c) To study the blood pressure level of the women teachers.
   d) To study the hypertension among women teachers.
   e) To study the heart-rate in women teachers.

3. To study the effect of relaxation techniques on stress anxiety, blood-pressure, hypertension and heart-rate among employed women teachers.

1.18. HYPOTHESES

1. High stressed women teachers will show better response to relaxation techniques employed than the low stressed teachers.

2. There will be a significant difference in pre-test and post-test scores and values on variables of stress, anxiety, blood pressure and heart-rate of teachers in the experimental group.

3. There will be a significant impact of the relaxation techniques on the stress, anxiety, blood pressure, hypertension and heart-rate among employed women teachers.
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1.19. DELIMITATIONS OF THE STUDY

The present study has been delimited with regard to the following aspects:

1. It is confined to the employed women teachers only.
2. The study is delimited to the teachers of (10th and 12th) classes.
3. Only 114 teachers constitute the sample.
4. The sample was drawn from Chandigarh and its surrounding areas.
5. Study is confined only to the variables of job stress, anxiety, blood pressure, hypertension and heart-rate.