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STRESS AND HEALTHWELLNESS, A LONGITUDINAL STUDY

by

Howard Allen White

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Education
Department of Educational Leadership

Western Michigan University
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STRESS AND HEALTHWELLNESS, A LONGITUDINAL STUDY

Howard Allen White, Ed.D.
Western Michigan University, 1995

The purpose of this dissertation was to compare and examine the self-evaluated general health status of individuals in a five year longitudinal research study. Self-evaluations of health status have been shown to predict mortality, above and beyond the contribution to prediction made by indices based on the presence of health problems, physical disability, and biological or life-style risk factors.

The association between the stressful events of everyday living and the onset of the disease process suggests the importance of understanding the specific relationship under which stress is likely to result in illness. This research investigated the interrelationship of the different variables that could effect the onset of illness and disease. The review of the literature suggests that unless the stress response leads to feelings of disintegrity, it is not likely to lead to illness.

The sample population was students in the Masters program in Manufacturing Management at GMI in 1988. There were 110 individuals in the program, 87 males and 23 females. There were 87 individuals who returned the Duke Questionnaire.

Eleven hypotheses were investigated, testing the relationship between the individual scores in a Healthwellness pilot study in 1988, and the scores in a follow-up 1993 longitudinal study. The research issues investigated the reliability and
validity of the health measurements, The Duke Health Profile (Parkerson, 1990), The Wright State Measurement of Burnout Questionnaire (Thornton, 1982) and the Hudson Scales (1982). The questionnaires focused on health functions versus general health perceptions. The research investigated the different health related variables over time in a five year longitudinal healthwellness analysis.

The findings indicate that an important dimension reflected by self-evaluated health is the individual’s own perception of their physical and mental health and wellbeing. Self-assessments of health are an important variable in mortality prediction. They are inexpensive, easy to obtain, and readily available, as used in the questionnaires in this research.
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Many people have shared their knowledge, expertise, encouragement and support during this project. Tradition dictates the formal acknowledgement of certain individuals who helped make this dissertation possible. Formal appreciation is accorded to members of my dissertation committee: Dr. Charles Warfield, Chair; Dr. Uldis Smidchens; and Dr. Carl L. Thornton.

I offer my sincere gratitude to Dr. Robert Kramp and Pat Graves for all their assistance and dedication in the achievement of this onus. Your efforts were greatly appreciated.

A special "THANK YOU" is directed at my wife, who has given me three beautiful children, four lovely grandchildren and many years of her undying love, understanding and devotion. Without her sharing this would be like experiencing a sunrise or sunset; it still is unbelievable but it loses something without someone special to share it with. Barbara, I love you.

Howard Allen White
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CHAPTER I

INTRODUCTION

Physical as well as mental health is interlaced with the whole of social institutional life: family, work, organizational and community. It cannot be ripped out of its context in the living of everyday behavior and beliefs. Our health is the most treasured of our belongings. When it is lost, so are we.

How as a Health Educator, can the professional, technically equipped to offer superior health services, appeal successfully to individuals who do not share his knowledge, values, expertise or his immersion in the health enterprise? How can lay people be persuaded to make the changes in behavior implicit in most efforts to achieve better health levels, particularly in those instances where health risks are undramatic and not immediately apparent?

How can the Health Educator promote positive health wellness in those he comes into contact with? How can he spread the word? How can that individual raise the knowledge and maturity level of those he wishes to enhance?

As leaders, we must make things happen, not sit back and let things happens. In any communication, the writer will share his/her knowledge and values with the reader at the onset. Richard Hofstadter wrote, "intellect is the critical, creative, and contemplative side of the mind" (Burns, 1979, p. 141). Burns writes, "An intellectual is something more: a person concerned critically with values, purpose,
ends that transcend immediate practical needs." He uses the definition, "a person who deals with analytical ideas and data alone is a theorist; the one who works only with normative ideas is a moralist; the person who deals with both and unites them through disciplined imagination is an intellectual" (Burns, 1979, p. 141). Burns goes on to write, "intellectual leaders deal with both analytical and normative ideas and they bring both to bear on their environment" (Burns, 1979, p. 141).

We, as leaders, must enhance the knowledge and maturity level of those individuals who we come into contact with; it is as if we are called upon to spread the word. Leaders have a significant role in creating the state of mind that is society (John Gardner). Educators, teachers and leaders must do everything in their power to help others be all they can be, to reach their fullest potential. "The best service one person can render to another person is to help that person help themselves" (Ralph Waldo Emerson).

Purpose of This Study

The national awareness in health care has intensified in recent years, due to the rapid increase in health care cost. This enhanced awareness has also been due in part to the discussions in Washington D.C. for the need of a National Health Care Bill to cover all Americans. As Educators, Leaders and Researchers we must be guided by the conventions of scholarly inquiry. Therefore, the concept of health measurement must be intensified in parallel to the increasing emphasis on health promotion and management of those receiving the health care. There is no single
health care measure that can do the job of monitoring health care strategies, however progress has been made in conceptualizing health care and formulating schemata for its measurement.

The research issues that will be examined in this study will look at the reliability and validity issues of the health measurements of the questionnaires used in the Duke Research, the 1988 GMI Study and the 1993 Research Questionnaires. The research issues targeted will be sensitivity to perceived changes in health of the target population over-time. The self report questionnaires of the sample population will focus on health function versus general health perceptions and instrument length.

The purpose of this study is to inform and enhance the reader's knowledge about the subject of Stress and Healthwellness. This research study will look at different health related variables overtime in a five year Longitudinal Healthwellness Analysis. A lack of understanding on the part of the individual of what stress is and how it relates to Healthwellness can cause untold suffering, not only for the individuals but also for their families. Furthermore, stress costs our economy billions of dollars in lost productivity a year. The cost to each of us is inconceivable.

The large body of literature in the last 25 years has supported the idea that stressful life events precipitate somatic and psychological disease. This study will look at the possible relationship between stress related stimuli and current health related concerns over a five year period. The possibility of a causal connection between stress and illness is hardly a new idea. Researcher Paykel in a 1974 study reported that the recent life histories of hospitalized persons contain significantly
more frequent and serious stressful events than do histories of matched controls from the general population (Paykel, 1974).

As educators we have the responsibility of significantly enhancing the knowledge base of others so they can make informed decisions about their own well-being. Everyone has heard the term stress, but many do not know what impact stress has on their lives.

Definition of Stress

The definition of stress is not a matter of what is external to the individual, but rather a balance between the external demands made by the environment, or the stress stimulus, and the resources of the individual to cope with these demands. The most important concept here might be that what happens to an individual is less important than how that individual responds to the stimulus. Stress is the stimulus and anxiety is the disease. The stimuli are events in the environment, for example, natural disasters, noxious conditions, noise, pollution, working and living conditions. Anxiety relates primarily to an internal personal problem and or concern. Stress is basically an external, environmental problem or concern.

Stress occurs when there is a perceived excess of environmental demands on an individual's perceived capability to meet the demands, and when failure to meet their demands has perceived unacceptable consequences (McGrath, 1970). Stress occurs if there is lack of fit between the environmental pressures and the individual's capacities to respond.
Stress can be perceived as a situational factor or as a reaction to an environmental stimulus. The preferred perception is that stress is a reaction to a stimulus in the environment, the disturbance of a person's normal state, viewed either physiologically and or psychologically. In naming the external initiator of an organismic stress reaction "stressors", Selye chose the reaction definition (Selye, 1956). Selye's definition of stress was the nonspecific result of any demands upon the body, be it either the effects of mental or somatic stimuli (Selye, 1974). Selye's formation of this definition was based on objective indicators such as bodily and chemical changes that appear after any demands caused by environmental stimuli. Good things are termed eustress and bad things are termed distress. Both are experienced the same psychologically (Selye, 1956:1974).

Human Biology and the Stress Response

One has to keep in mind that the stimulus that causes stress can come from a variety of different situations, either produced by positive or negative interactions between the individual and the environment. Any and all situations are capable of producing the stress response. To understand this concept it is necessary to take into consideration certain factors of the human biology. Research has shown that while individuals may face different problems or concerns, in almost all respects their bodies respond in a like manner, a stereotyped pattern (Selye, 1956: 1974:1980). Identical biochemical changes enable the individual to cope with almost any type of increased demand on vital activity. It appears there are common pathways that must
mediate any attempt to adapt to the environmental conditions and sustain life.

When a prehistoric individual stepped out of his cave he may have been greeted with agonizing fear as he locked eyes with a large animal with visions of human for supper. The result of this stimulus was fear, bone chilling fear. This fear caused the individual to tense his muscles, his heart started to pound and his breathing became rapid. In response to this stimulus the brain readied the body for action. The chemical messages begin to be set in motion. The brain responds to the cause of the stimulus by sending out chemical messages which are carried along neuron pathways in the outer edge of the brain to the hypothalamus. This reaction stimulates the production of the chemical corticotropin releasing factor (CRF). The hypothalamus sends the CRF and other chemical messengers down two different pathways. The first pathway goes to the pituitary where the chemical is changed again, this time into the hormone adrenocorticotropic, ACTH (Spence, 1987). It enters the bloodstream and travels on to the outer layer or cortex of the adrenal gland. Here the ACTH initiates the production of cortisol, a chemical that increases blood sugar and speeds up the body’s metabolism. On the second pathway the message leaves the hypothalamus and triggers electro-chemical impulses down the brain stem and the spinal cord, until the signals reach the core of the adrenal glands. The result is a release of epinephrine (adrenaline), which helps supply extra glucose to serve as fuel for the muscles and brain. Norepinephrine is also produced to speed up the heartbeat and raise the blood pressure. Both pathways feed back to the pituitary to regulate further the stress response (Feldman, 1984). These reactions

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prime the body and ready the nerves for a sudden, "Fight or Flight" response.

Society no longer lives with the same physical hazards as did its prehistoric predecessor, but the modern jungle is no less stressful. New harsh realities greet us daily. These harsh realities can be such simple things as job deadlines, tight travel connections, reckless drivers on the road, completion of a dissertation, and one's company selling one's division after one has worked there 25 years can elicit the same stress response that the cave man experienced when he locked eyes with a large supper seeking animal.

The evolution of mankind as species has been a history of change and crisis. Change creates conflict and conflict creates change (Burns, 1979). Throughout social evolution, man's survival has often depended on the ability to act and react quickly, to mobilize all of his resources for "Fight or Flight". Life in today's world is dramatically different from our ancestors' prehistoric existence. Today's technology protects us from dangers that were once common and unavoidable. Lives now are often disrupted by what Holmes and Rahe referred to as Life's Events (Holmes and Rahe, 1967). The demands of life's events can be personal changes that are hard to cope with, or stress stimuli brought about by moments of crisis resulting from our daily routines, the straws that break the camel's back. Demands such as are made by angry supervisors, spouses or others can elicit the same physical responses experienced by our forbearers when they were faced with life or death situations. These responses are caused by external events or conditions that effect or stimulates the individual, known as stressors. The purpose of the stress is to help mobilize the
body's physical resources to meet the demands of the stimulus or stress producing experience. When the stress response is triggered for reasons other than an emergency situation, the body prepares itself to cope with physical demands that cannot be resolved through physical means. Endorphine and epinephrine are released into the system to stimulate the body's reaction, but have no outlet for expression (Selye, 1974). The study of "Stressology" was formulated by Selye's definition of stress based on objective indicators such as bodily and chemical changes that appear after any demands, whether negative or positive stimuli on the individual's system (Selye, 1980).

Stress an Interactive Link

In today's society we try to control our anger and frustration. For example, individuals who are not pathological do not punch their supervisor because they are upset or kill someone because they do not get their way. During such instances of negative stress stimulus, they experience difficulty coping resulting in a continuation of the stress response. Stress that is unresolved over an extended period of time can lead to physical and emotional problems that may affect physical and emotional wellbeing (Holmes and Masudall, 1974). (It is important to note that stress is not necessarily health threatening. The stress response is, in fact essentially an adaptive response that is health preserving. It only becomes unhealthy when the body's resources are insufficient to meet the demands of the environment.) Researchers have discovered that the stress response is a prolonged psychophysiologic reaction
Robinson, 1990). Stress's initial phase manifests itself through anxiety, which is the subjective manifestation of arousal (Schwartz, 1975). This stage of the stress response precedes both the coping and further psychophysiological change when the individual is confronted, or there is a perceived confrontation or threat.

Because of the link between the individual and the environment, an interactive relationship may best describe the stress response. Lasaur and Falkman postulated that psychological stress "is a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well being" (Lasaur, 1984, p. 378).

Dr. Bruce S. McEwen, Department Head of the Neuroendocrinology Laboratory at Rockefeller University believes when stress is short lived the individual can adapt or cope with the stimulus, but that the production of stress hormones, if out of control, can cause serious damage to the body (Robinson, 1990). The stress hormones strengthen the body's immune system and help the body resist disease. After the stress subsides the body automatically turns the hormones off. If the stress stimulus continues for a prolonged period of time it can badly upset the biochemical balance of the body. The uncontrolled stress response can impair the immune system and leave the body open to invasions of dangerous cells, virus and infections (Robinson, 1990). Physicians have long been aware of the psychological association between stress and illness. In the field of study, psychoneuroimmunology, physicians attempt to explain the biology of stress and the interrelationship between stress and the medical condition. Physicians are aware of the psychological association of stress
and how an individual experiencing the stress response can experience a biochemical alteration that can cause disease (Sutherland, 1991).

The Mind-Body Relationship

Psychoneuroimmunologists study the mind-body relationship and how stress and the body interact, assuming that all diseases are multifactorial. Psychoneuroimmunology is the study of the ways in which psychosocial interactions cause neuroendocrine responses and physical changes (Sutherland, 1991). An ever increasing body of evidence suggests a causative role for acute and chronic stress in many medical disorders and psychiatric states (Maes, 1987). This is the result of the interrelationships among genetic, endocrine, neurologic and immune systems and behavioral or emotional factors. One theory is that emotions are the driving force in a chain of events that leads to the stress response. When the homeostasis is interrupted, the psychosocial interaction leads to neuroendocrine changes, which in turn induce physiologic abnormalities that eventually lead to pathologic changes (Henry, 1982). If you follow this theory, the hypothalamus, adrenal gland, and the other neurohumoral mechanisms play a central role (Selye, 1946). Reaction includes arousal, with an increase in adrenergic activity and energy of the body shift from one of storage to use. The body is getting ready for a "Fight of Flight" response. Sutherland states "Psychological stimuli elicit arousal of the pituitary-adrenocortical system and or the sympathetic adrenal medullary system through inflammatory and anti-inflammatory actions" (Sutherland, 1991, p. 160). The influence of psychosocial
elements that cause an imbalance or disruption of the body homeostasis will stimulate the secretion of corticosteroid, which has long been considered to be the mechanism of stress-induced modulation of immunity and related disease. Sutherland believes the restraining influence of the pituitary on stress responses may help explain the homeostatic maintenance of the body (Sutherland, 1991). The theory, Triangle of the Homeostasis was developed by Coquelin and Gorski in their 1984 study. The triangle is four groups; the Nervous system, the Immune system, the Endocrine system on the three sides of the triangle, with Homeostasis in the middle. The theory states if the balance is off, then the triangle is upset, which throws off the total complex. The autonomic nervous system (ANS) regulates the homeostasis function. The ANS is composed of two subsystems, the parasympathetic (PNS) and the sympathetic nervous system (SNS). The PNS and the SNS represent neural systems that originate in the brainstem and contribute to the regulation of variety of target organs including the eyes, lacrimal glands, salivary glands, sweat glands, blood vessels, heart, larynx, trachea, bronchi, lungs, stomach, adrenal, kidney, pancreas, intestine, bladder, and external genitalia. The PNS promotes functions associated with a growth and restorative system. In contrast, the SNS promotes increased metabolic output to deal with challenges from outside the body. When a visceral organ is innervated by both the SNS and the PNS, the effects are autogenic. An example of this: the SNS neurons dilate the pupil, accelerate the heart, inhibit intestinal movements and contract the vesical and rectal sphincter. The PNS neurons constrict the pupil, slow the heart, potential peristaltic movement and relax the
vesical and rectal sphincters (Porges, 1992). The PNS primarily deals with the anabolic activities concerned with the restoration and conservation of both bodily energy and the resting vital organs (Cannon, 1929). The SNS prepares the individual for the intense muscular action required to protect and defend in response to the external stress stimulus in the "Fight or Flight" reaction. The SNS quickly mobilizes the existing reserves of the body. The eyes dilate, the rate and force of the heart contractility increases, blood vessels constrict and blood pressure increases. Blood is drained from the intestinal reservoir to foster availability and transportation of oxygenated blood to the skeletal muscles, lungs, heart and brain (Porges, 1992). The SNS attempts to optimize the individuals' relationship with the environment. For example, increases or decreases in temperature, noise, pain, and stress producing stimulus agents will produce attenuated PNS tones and increased SNS activity. Gellhorn labeled the PNS as a trophotropic system and the SNS as an ergotropic system (Gellhorn, 1967). The autonomic nervous system responds to both internal and external stimuli.

Walter Cannon, a noted physiologist employed at the Harvard Medical School was the first individual to describe the body's reaction to the stress response. He was the first to identify this stress reaction as the "Fight or Flight" response (Cannon, 1932). Hans Selye, a young endocrinologist was able to specify the changes in the body's physiology. Selye concluded regardless of the source of the stress, the body reacted in the same manner. His research was first published in his classic book, "The Stress of Life". He summarized stress reactivity as a three-phase process,
termed the General Adaptation Syndrome (Selye, 1956).

General Adaptation Syndrome

**Phase One: The Alarm Reaction**

The body shows the changes characteristic of the first exposure to the stress stimulus. During the alarm reaction, the cells of the adrenal cortex discharge their secretory granules into the bloodstream and become depleted of coracoid-containing lipid storage material. There is also hemoconcentration, hypochloremia, and general tissue catabolism in the alarm reaction phase. After continued exposure of the individual to any noxious stimulus capable of eliciting this type of stress response, a stage of adaptation or resistance ensues. A state of alarm cannot be maintained for any prolonged period. If the stress stimulus is so drastic that continued exposure becomes incompatible with life, for example, severe burns, extremes of temperature and other forms of trauma, the individual dies during this first alarm stage. If the individual can learn to cope, or if the "Fight or Flight" reaction can be developed, then other forms of behavior take place besides death or survival. This initial reaction is necessarily followed by the Stage of Resistance.

**Phase Two: The Stage of Resistance**

Resistance ensures that continued exposure to the stressor is compatible with adaptation. The body signs characteristic of the alarm reaction have virtually
disappeared and resistance rises above normal. In this stage the cortex becomes particularly rich in secretory granules. During this stage of resistance there is hemodilution, hyperchloremia, and anabolism, with a return toward normal body weight.

Phase Three: The Stage of Exhaustion

Following long-continued exposure to the negative stimulus or stressor to which the body had become adjusted, eventually adaptive energy is exhausted. The signs of the alarm reaction reappear, but now they are irreversible and the individual dies. This gave us the first indication that the body's adaptability, or adaptation energy, is finite, since under constant stress stimulus and exhaustion eventually ensues.

Psychosomatic Illness

A.T.W. Simeons who related evolution to psychosomatic disease in his work, "Man's Presumptuous Brain", postulated that the human brain (the diencephalon) has failed to develop at the pace needed to respond to symbolic stressors of twentieth-century living. Simeons believes that when our self-esteem is threatened, the brain prepares the body with the "Fight or Flight" response. If the threat to our self-esteem stems, for example, from fear of embarrassment during public speaking, fighting and running away are both inappropriate reactions. Consequently, the body has prepared itself physiologically to do something our psyche prohibits. The unused
stress produced breaks down the body, and psychosomatic disease may result (Simeons, 1961).

Psychosomatic illness and the understanding of how stress reacts on the body and the mind gives us a better appreciation of how stress affects us as individuals. Dr. Harold Wolff was curious as to why only one in one hundred prisoners of war held by the Germans during World War II died before their release, while thirty-three out of one hundred held in Japanese camps died before their release. Dr. Wolff found that emotional stress was much greater in the Japanese prisoner of war camps than in Germans camps. This was the major cause of the difference between the two camps (Wolff, 1953).

There were other researchers who helped to clarify the effects of stress on the body, the mind-body relationship. Stewart Wolf demonstrated the effects of stress on the digestive function (Wolf, 1965). Lawrence LeShan studied the effects of stress on the development of cancer (LeShan, 1966). Levy studied behavior and cancer, which drew a correlation between psychosocial factors and stress (Levy, 1985). George Engle studied stress and ulcerative colitis (Engle, 1955). Whitehead and Crowell studied the psychologic considerations in the irritable bowel syndrome (IBS), and how the IBS has been known to be associated with symptoms of psychologic distress (Whitehead, 1991). Wolf and Wolff studied stress and headaches (1953). According to Dr. Ed Blanchard, a professor of psychology at the State University of New York at Albany, stress is a major cause of tension headaches and of the most common types of headache and migraines as well (Stark, 1992).
Friedman, Meyer and Rosenman identified the relationship between stress and coronary heart disease (1974). Two risk factors for heart disease are high blood pressure and elevated blood cholesterol levels. Both can be exacerbated by stress. "The relationship between stress and hypertension is most apparent, even though the measurement of both variables (stress and hypertension) has been problematic" (Boone, 1991, p. 624).

Type "A" and "B" Personality and Hypertension

Friedman, Meyer and Rosenman's research indicates men with personalities that are more susceptible to stress related stimulus are more prone to heart problems than their non-stressed counterparts. Their research indicates males with type A personalities have three times the incidence of coronary heart disease as do men with type B personalities (Friedman, 1974). Woolfolk and Richardsdon studies indicate stress may be more damaging to the human body and have more effect on the serum cholesterol levels of the blood than do diet, smoking and exercise (Woolfolk, 1978).

Girdano and Everly in their 1978 research suggested that half of all medical problems are stress related. Further studies by American Institute of Stress (AIS) indicate that 75 percent to 90 percent of all visits to physicians involve stress-related complaints (Stark, 1992). "We now know the mechanism of many stress-related disorders", said Dr. Paul Rosch, president of the AIS and Professor of Medicine and Psychiatry at New York Medical College in Valhalla (Stark, 1992, p. 42). Hypertension affects approximately one out of five adults in the United States and has
as one of its major causes, psychological stress. When stress is intense and prolonged, temporary blood pressure elevation may become permanent (Woolfolk and Richardson, 1978). Hypertension is a major factor in strokes, which can cause irreversible brain and heart damage. This accounts for as many as 50 percent of deaths in the United States each year (Culligan, 1979).

Summary

Research by Thomas Holmes and Richard Rahe indicated the more significant the changes in one's life, the greater the chance of the onset of illness (Holmes and Rahe, 1967). Based on these conclusions, further research is needed to understand the correlation between stress and illness. Researchers have found everyday hassles are even more detrimental to one's health than major changes (DeLongis, 1982 and Lazarus, 1984). Stress is not only just bothersome, it is downright unhealthy. Stress can lead to other negative consequences, such as poor relationships with others, low achievement and negative health wellness. There are means to lessening these unhealthy negative effects, but first there has to be an understanding of what stress really is, and what diseases are associated with negative stress. We must be able to identify when we are under the stress stimulus.

Many believe stress can be the "Spice of Life". They suggest falling in love, watching your children and grandchildren being born and growing up and enjoying life. Seeing a beautiful sunrise or sunset, riding a roller coaster and fighting for a cause can unleash the same stress hormones as do less uplifting experiences, sending
the blood pressure soaring and causing the heart to palpitate. A certain amount of stress is a positive and pleasurable thing. It leads to productivity in the human race. But the "Fight or Flight" spasms of too much tension and dullness of too little can lead to the stress response which can cause disease. There are three levels of stress which must be considered. Understress, too little stress which can lead to boredom, absenteeism from work, and substance abuse; regular stress, which keeps you full of life and ready for the thrill of life; and stress overload, which results in burnout, physical and emotional disorders. Either too much stress or too little stress can lead to problems. The challenge for each person is to find the level of manageable stress that meets one's everyday needs and to maintain that level as a balance. Stress can be beneficial, the spice of life, or harmful, the kiss of death, depending on the individual's interpretation of the stress response.
CHAPTER II

LITERATURE REVIEW

Introduction

The Industrial Revolution changed Western Civilization from a rural society to an urban society in a few short decades. This transformation profoundly changed the nature and organization of the American family and the social institution of work. The industrial complex, a new social intervention, was a different form of workplace for vast numbers of individuals taken from their rural farms and placed in an environment of machinery. This work environmentally multiplied worker productivity, and also exposed them to new external events or conditions that affected or stimulated them, known as stressors or as the stress response. The industrial revolution made possible a widespread increase in the standard of living. The industrial worker was exposed to new dangers; amputations, burns, hazardous materials, noise, air and water pollution and many other accidental traumas. They were all combined with a different kind of hazard - STRESS.

A less obvious negative consequence of the new organization of work, the factory and assembly line was and is that the worker lost the autonomy he had under the guild system. He became a part of a hierarchical organization in which he was expected to do what he was told, often without understanding the function or value
of the task assigned because of the large growth in the division of labor. The line has its own pace, the individual was and is expected to keep up with its pace. The clock and line pace came to dominate most aspects of the worker's life, adding a new kind of pressure, time urgency. "Perhaps we shall one day look on much of the stress of modern day as a previously unrecognized externality of our mechanized means of production" (Mumford, 1967, p. 56).

Interest in occupational stress has become widespread in recent years. The large animal who wanted human for supper, for all intents and purposes is gone. Our cave ancestors faced stress every day as they left their dwellings and encountered the environment. The dangers of yesterday are gone. They have been replaced by new predators; work overload, nagging supervisors, time deadlines, the assembly line and time urgency, poorly designed jobs and other everyday stressors. These work and nonwork predators interact and create stress for the individual on and off the job.

A practical example of how the work predators create stress on the job; General Motors sold the division where I worked for twenty-five years, the Security Division. I could go with the new company, lose all my seniority and start over, or I could transfer back to the United Auto Workers Union (UAW). My seniority of twenty-nine years with General Motors left me with little room for choice; I would have to go back to the UAW. I was assigned a job on the assembly line, a very stressful job assignment, doing the same job, bending over at the waist and doing the same assignment sixty-seven times an hour. There is a drinking fountain fifty feet from my work station, but, I did not have the time to get a drink of water.
Occupational Stress

Much of the stress experienced by individuals in our industrialized society originates in organizations. Much of the stress that originates elsewhere affects our behavior and performance in these same organizations, be it the family, work or any other social institution.

Job stress has been estimated to cost American industry 150 billion dollars each year (Manuso, 1984). A survey by the Northwestern National Life Insurance Company found that 70 percent of the workers surveyed felt that job stress caused frequent health problems and made them less productive. One-third expected to experience job burnout in the very near future. Another one-third had seriously considered quitting their jobs during the past year because of job stress (Dewey, 1991). The proportion of workers who reported that their jobs were highly stressful (46%) doubled between 1985 and 1992 (Schore, 1993). A survey by the National Career Development Association in 1990 reported that 48 percent of the workers surveyed believed that job stress had significant impact on their lives, both on and off the job. One fourth of those surveyed reported stress on the job affected their off-the-job relationships. One-third stated they experienced conflict between work and family life. The compensation claims for job-related stress disabilities tripled between 1980 and 1986 (Grippa, 1986). Minter reported an insurance industry source as saying gradual mental stress accounts for 11 percent of all workers' compensation claims in the United States (Minter, 1991). The Metropolitan Life
Insurance Company estimated an average of one million workers are absent any given day largely due to stress disorders (Rosch, 1987). A study by the American Academy of Family Physicians found job stress was considered the greatest cause of poor health (1979).

The link between occupational stress and disease is a difficult one to prove; proving it is complicated by workers' characteristics and by stressors outside of work. There is evidence which supports the conclusion that occupational stress is related to illness and disease. This evidence falls into two categories: evidence of the physiological effects of occupational stress and evidence of disease state associated with occupational stress. Several studies have shown physiological arousal accompanies occupational stress (Baker, 1985; Hurrell, 1982). Airplane pilots have been found to have an elevated heart rate and military pilots elevated blood pressure during takeoff and landings (Smith, 1967; Roman, 1963). Pilots of planes landing on aircraft carriers were found to have increased levels of serum cholesterol while landing (Rubin, 1974). Talk to any pilot about why he flies, and most will answer, because of the HIGH. This is always taken two ways. Blue-collar jobs that are paced by machines have been found to be physiologically arousing (Frankenhauser, 1976). Jobs that involve a hurried pace and relative lack of control over that pace by the worker lead to increased heart and blood pressure rates (Chadwick, 1979; Glass, 1977). Increases in epinephrine, uric acid, serum cholesterol, glucose, and total blood lipids were found when day shift workers switched to another shift (Theorell, 1976).
The fact that business institutions are increasingly being held responsible for the physical and emotional health of their workers may cause them to take note when occupational stress contributes to the mental and physical negative health wellness of their employees, a practical as well as humane reason for being concerned with this stress. The longer a worker is exposed to a negative stressor the more serious the effect. The long term institutional effects of worker stress could be detrimental enough to encourage alterations in organizational strategies, in efforts to save the billions of dollars that may be lost annually as a result of the stress response. Determining the influence and variances of job related stressors both and social responsibility make the investigation of occupational stress a major area for investigation for the industrial community.

Occupational stress is the condition in which some factor, or combination of factors, at work interact with the worker to disrupt his psychological or physiological homeostasis. The factor or combined factors at work are generally called job stressors, and the disrupted homeostasis is often called job strain (Margolis and Kroes, 1974, p. 15).

The interaction of work factors and the worker has led this researcher to observe occupational stress as poor person-environmental fit, little regard for the individual and machine interface, "Ergonomics." Occupational strain is seen as any deviation from the worker's normal responses. As researchers, French et al., noted, there are two kinds of person-environment fit (French, 1974). The first is that fit between the worker and the work environment. This is the degree to which the worker's skills and abilities match the job requirements. The second type is the
degree to which the needs of the worker are supplied by the work environment. Whenever poor fit of either type occurs, increased anxiety, depression, low job satisfaction and other strains frequently result.

**Argyris Personality and Organizational Theory**

Argyris claims there is a lack of congruency between the needs of the individuals and the demands of the formal organization (Argyris, 1957). However, bureaucratic organizational structures force most employees to be passive, dependent, and subservient, frustrating employees who desire meaningful work, self-reliance and psychological growth. The result of such incompatibility between organization structure and member needs is lower organization effectiveness. Less human energy will be applied to productive efforts, and there will be lack of initiative in solving problems. Argyris postulates the human beings in our culture tend to develop from a state of dependence and passivity as infants to a state of increasing independence and activity as adults being capable of behaving in many different ways as an adult. They grow from having erratic, casual, shallow, quickly dropped interests as infants to having deeper interests as adults and from having a short-time perspective as infants to much longer-time perspectives as adults. From being in subordinate positions in the family and society as infants aspiring to occupy equal and/or superordinate positions relative to their peers. And they go from a lack of awareness of self as infants to an awareness of and control over self as adults (Argyris, 1959; Wenley, 1984).
Work situations coerce many workers to be dependent, subordinate, submissive, and to use only a few of their most superficial abilities. Such behavior may be observed on the assembly-line, where workers specifically rated in the following order the disliked characteristics of their job: mechanical pacing, repetitiveness, minimum skills (Walker, 1952). The mental demands of a majority of automobile or truck manufacturing assembly jobs request only surface attention. The work does not utilize mental faculties to any depth. Such dull working conditions tend to be frustrating and make the individual experience tension, psychological failure, and short-time perspectives. Individuals will learn to cope effectively, or will adapt to such conditions by one or more of the following activities (Argyris, 1959).

1. Leave situations (absenteeism, sick leave or turnover).
2. Climb the organizational ladder.
3. Become defensive, daydream, aggressive, file grievances, experience regression or projection, experience feelings of low sense of worth.
4. Become apathetic, disinterested, non-ego involved in the organization and its formal goals.
5. Create informal groups to sanction the defense reaction.
6. Formalize the informal groups in forms as union, or sub-groups within the formal union organization.
7. De-emphasize the importance of self-growth and emphasize the importance of money and other material rewards.
8. Accept the above ways of behavior as being proper in their life outside the organization.

Argyris believed the three major sets of variables associated with the formal organization structure are responsible for this type of adaptive or nonadaptive behavior. The first set of variables embraces the intense task specialization, the chain and unity of command and the concept of limited span of control, all of which denote formal organization. Directive leadership of close, authoritarian nature is the second factor. Managerial control (budget, incentive system, quality control, motion and time studies) form the third.

The degree of dependence, subordination that these three variables cause tend to increase as the individual moves through the chain of command, and as the organization takes on the characteristics of mass production (Argyris, 1957). This researcher can testify that in the institution of my twenty-nine years with General Motor this holds as true as it did when Argyris did his research in 1957.

Argyris recommended that an organization should have flexible roles, open communication, and reliance on self-direction. The kind of organization favored by this researcher would be one that would be achieved by the use of change programs such as sensitivity training, job enrichment and an abundance of organizational development.

**Herzberg, Two Factor Theory**

Herzberg and his associates have postulated two dimensions in job satisfaction.
One set accounts for satisfaction and another set is associated with dissatisfaction. According to Herzberg, both job satisfaction and motivation are dependent on job factors called satisfiers or motivators. Satisfiers are achievement, recognition, the work itself, responsibility, growth or development, factors that contribute to job satisfaction. The satisfiers or hygiene factors contribute to job dissatisfaction. They are: company policy and administration, supervision, interpersonal relationships, working conditions, salary, status and security. The opposite of job satisfaction is not job dissatisfaction, but rather no job satisfaction. The opposite of job dissatisfaction is not job satisfaction, but not job dissatisfaction (Herzberg, 1959).

Stress does not respect position or status. Stress on the job is a very common experience. Job stress may involve pressure, conflict, uncertainty and loss of sense of control over events. This condition can lead to a variety of symptoms both physical and mental/emotional, which become disagreeable both for those experiencing the negative stress and for the social institution with which the individual is interacting. Stress involves the total person, the private as well as the professional.

Job Stress and Job Satisfaction

Job stress and job satisfaction is an important area of study for the Medical Social Worker because of the humanitarian value of the profession, the concern about the client outcome, the economic impact of absenteeism and turnover, and the necessity of attracting competent individuals to the field of behavioral social work.
The many variables that have been studied in relation to job satisfaction can be categorized into three groups: job, work context and individual characteristics (Butler, 1990). Findings from Bulter research indicates that when the job is high on the five core characteristics of task variety, task identity, task significance, autonomy, feedback and when there are high growth needs, employees are more satisfied with their work.

A research study by Jayaratne and Chess (1986) looked at job satisfaction within the ranks of social workers. The data was collected from members of the National Association of Social Workers as part of a national survey on work stress and strain. The population was a sample of caseworkers and administrators. The total sample was 202 administrators and 356 caseworkers, all had bachelor degrees or higher. The study looked at the individual's perceptions of the work situation and was similar to what is called the "psychological environment". The questionnaire asked one question, "All in all, how satisfied would you say you are with your job?"

The seven facet indexes measured the dimension of challenge; comfort, financial rewards, promotional opportunities, role ambiguity, role conflict and work load. The results suggest that caseworkers were significantly more likely than administrators to report greater dissatisfaction with promotional opportunities and financial rewards. The finding made sense in that caseworkers are normally younger than administrators, they have been on the job a shorter period of time, and therefore are lower in the occupational hierarchy. The caseworkers reported a greater dissatisfaction with the amount they earned, and by implication, they perceived their
future earning potential also may be limited by virtue of the reduction of those positions in the administration ranks. The central concern the administrators voiced appeared to center around work load, job comfort, role conflict. They also reported a greater dissatisfaction on those dimensions than did the other group of caseworkers. The administrators seem to be more concerned with the nature of the job and less with career advancement (Jayaratne and Chess, 1986).

Gender Differences and Job Satisfaction

The gender differences between working men and working women is quite interesting in reference to job satisfaction. Women’s job satisfaction is an interesting topic because of the fundamental contrast between their objective rewards and subjective satisfaction. Despite what we know about the generally low quality of jobs most women hold in the United States economy, women in the aggregate are as satisfied as or more satisfied with their jobs than, men. The interesting question must be, why any group of disadvantaged workers, in this case women, would report being not only satisfied with their working conditions in absolute sense, but also more satisfied on the average than more advantaged workers, men. One answer to this question may be that occupational segregation by gender, pervasive in the U.S. labor market, continues to confine most working women to fewer that 30 of 400 occupational categories (Blau, 1987).

The Simon and Akabas 1993 research noted that women who take occupations in high-risk, male-dominated public services increase their chances of experiencing
conflict between the demands of the workplace and those of their families (Simon, 1993). Women who take these kinds of high-risk, male-dominated jobs lose some of the social support that they have previously relied on as stress buffers (House, 1981). Researchers have investigated the toll that hazardous jobs have taken on women. These researchers have looked at workload, the pace of work, the routine of work, the degree of an individual workers' control over the work process, environmental hazards of the workplace and rotating shifts (House, 1981; Lawson, 1987; Quick, 1987). Woman who are employed in such public sector jobs as police officers, soldiers, prison guards and fire fighters are expected to experience high levels of stress stimulus that accompany their daily responsibilities (Lawson, 1987; Peterson, 1982, VanMaanen, 1975; Yoder, 1983). In these types of occupations the reported stress levels are higher than the reported stress levels that are associated with occupations in less male-dominated occupations. Token status is a major source of stress for women minorities in any "skewed" work force, for example, one that consists of a majority of at least 85 percent men and no more than 15 percent women (Kanter, 1977). In 1991, only 10 percent of the police officers and less than 2 percent of the fire fighters were women (U.S. Bureau of Census, 1992). In 1987, 10 percent of the military offices and 10 percent of the enlisted personnel in the United States Arm Services were women (U.S. Department of Defense, 1988). Women are employed in 18 percent of all prisons and jail occupational type jobs in the United States (U.S. Bureau of Labor Statistics, 1985).
High-Risk Occupation and Stress

High-risk occupations carry with them many opportunities for a host of predictable stressors for all of their members, both male and female. There are three basic types of stress-producing stimuli that accompany dangerous occupations; events stressors, occupational stressors and organizational stressors (Hartsough, 1985). Event stressors include the personal losses and injuries which occur in hazardous physical work; the traumatic stimuli of horrible acts, sights, smells and sounds that a worker may frequently find in disasters, fires, scenes of crimes, war, and prisons; and the unavoidable failures and errors that take place when workers try to reduce violence and destruction in chaotic disastrous situations (Simon, 1993). A study linking catecholamine and job stress was conducted in 1978 by Dutton who compared a group of paramedics with a group of fire fighters. Although both groups had similar scores on the Schedule of Recent Life Events, the paramedics scored significantly higher than the fire fighters on a job stress questionnaire designed specifically for the study. The paramedics, also had significantly higher levels of epinephrine and norepinephrine on work days than on nonwork days (Dutton, 1978). The Dutton study did not posit a difference between males and females in levels of stress related to the job. This researcher would postulate the stress levels would not be different on the job, when the workers encountered the stress producing stimulus.
Women’s Job: Satisfaction or Stressor?

The studies which have treated women’s job satisfaction as problematic have found that many of the variables that predict job satisfaction for men: education, socioeconomic status, wages, labor force experience, tenure on current job and fringe benefits tend either to be insignificant or much weaker predictors for women (Sexton, 1977). These same researchers have concluded that women’s position in the family is influenced by their purpose for working, their perception of their working conditions, and includes family characteristics or sex-role attitudes on an ad hoc basis to equations predicting female job satisfaction (Andrisani and Shapiro, 1978).

The research on women’s job satisfaction suggests a correlation with a women’s family obligations that may influence job satisfaction. Since women often are primarily responsible for creating and maintaining families, the demands of their paid employment must coexist with their domestic responsibilities. One possible answer to the question of why women are satisfied with their position in the labor force is that their aspirations or expectations of achievements are lower; their obligations and responsibilities outside the labor force demand a considerable amount of their time and energy. The saying, "Man works from sun to sun, but women’s work is never done," has a lot of truth.

This line of reasoning relies very heavily on the traditional sex roles. Conventional researchers have assumed that women use work primarily to augment their domestic roles as housewives and mothers to provide extra income for family
essentials, to meet new people, and to alleviate the monotony of domestic labor without becoming burdened with too much additional responsibility. It is sometimes taken for granted that women's domestic roles claim first priority and that paid work is not a major source of life satisfaction. Women's work expectation values and needs hierarchy are then used both to justify women's lower earnings and to explain their higher rates of job satisfaction. One can legitimately claim that women not only limit their own earning potential through their work choices, aspirations and attitudes, but they unintentionally make these sacrifices to meet their domestic needs for flexible scheduling, extra income, and limited responsibility (Treiman and Terrell, 1975; Featherman and Hauser, 1976). In the book, Women and Work, Lewis says, it is our contention that most sources of stress from the home-work interface arise out of the social context, particularly as a consequence of gender role attitudes, which are internalized, and also reflected in organizational and state policies (Gutek, 1988, p. 140).

Evidence is mounting on the increase in "Superwomen" illnesses, stress induced by conditions of married and single mothers who bear much of the responsibility on the job and at home with little authority or control in either domain (Simon, 1993).

Rates of cardiovascular morbidity, cancer, miscarriages and mental depression are disproportionately high among married, working caucasian mothers in blue-collar households, in which gender roles remain more sharply differentiated. Consequently, in families where the responsibilities are least shared by husbands, the mortality rate of women remains constant with the general population. (Haynes, 1984; Haynes,
1987; Verbrugge, 1983). Working mothers of preschoolers appear to be particularly stressed and especially vulnerable to stress-related illness (Baker, 1985). Behavioral problems also have been found among token women workers in high-risk public service occupations. After entering such jobs, some women noted marked weight gain or loss, anorexia, bulimia, drug abuse, alcoholism, sexual difficulties, sleeping disorders and frequent arguments with mates (Morse, 1982; O'Farrell, 1982; Yoder, 1985). A common behavioral response is for the individual to quit her job (Simon, 1993). Attrition rates for women in high-risk occupation are high. Between 1980 and 1987, 35 percent of women, compared with 23 percent of men left before graduation from Annapolis (Schollaert, 1988). In a study by Yoder (1983), 50 percent of the women cadets compared with 40 percent of the male cadets were found to quit before they completed their studies at West Point (Yoder, 1983).

Self-Esteem, Role Theory and Stress

The Institute for Social Research at the University of Michigan has conducted many different studies on the effects of occupational stress. The research programs have examined the effects of the social environment and large organizations on individuals. These effects included job tension, poor job adjustment, high blood pressure, and high levels of cholesterol. Only a handful of studies have examined the effects of these stressors on the self-esteem of the individual. The subject of self-esteem and stress must be looked at if only briefly from an occupational stress and self-esteem viewpoint. In the occupational setting stress will be examined through
role theory, role ambiguity, role conflict and role overload and how these variable relate to the self-esteem of the individual and work, as a social institution.

Role Theory

Role Theory refers to behavior appropriate for certain occupational positions, rather than to the individuals who hold those positions. Roles are prescribed actions, works, and norms that have different sets of demands associated with them (Compton, 1979). For example, if one person attempts to fill more than one role, role conflict can occur when the requirements of two or more roles are incompatible (Hodgetts, 1988). In addition, role conflict may occur within a role. It occurs when an individual is forced to assume two roles, but the performance of one precludes the performance of the other. For example, in order to be effective, a supervisor believes that he needs to exercise a more informal leadership style. On the other hand his boss has just told him that top management wants supervisors to crack down on output, Shop Rules. He will be evaluated heavily on his ability to make the workers toe the line. His appraisal from his supervisor is the basis for his next raise. He knows which leadership style is best suited for his people to get the most out of them, but he also knows that if he does not do what his boss desires, he gets no raise.

Role Ambiguity

Role Ambiguity is the discrepancy between the amount of information an
individual has and the amount required to perform the role adequately (Kahn, 1974). Sometimes an individual does not fully understand what is expected because the description is either too general or too vague. When this occurs, role ambiguity can result. Most individuals deal with this problem by learning their responsibilities as they go along. Additionally, the further up the hierarchy the individual goes, the more likely role ambiguity becomes. Role ambiguity also refers to a lack of clarity about the objectives associated with the work role, about co-workers' expectations about the work role, and about the scope and responsibilities of the job. In a national survey that served as a model for most subsequent research, Kahn et al. (1964) reported that 35 percent of those 1,500 workers who responded stated they were unclear about their job responsibilities. This unclarity was a major source of stress for them in that they experienced lower job satisfaction, high job-related tension, greater feeling of futility and lower self-confidence.

In 1971, Caplan interviewed 205 administrators, engineers and scientists at the Goddard Space Flight Center about stress and strain on their jobs. Blood samples, blood pressure, and pulse rates were also taken to determine physiological strain (Caplan, 1971). Caplan found that role ambiguity was experienced by 60 percent of the workers. Caplan discovered that ambiguity was related to lack of job satisfaction and the feeling of job-related threat to emotional and physical health-wellness. The more ambiguity the person reported, the lower was the utilization of his intellectual and administrative skills. Individuals who see little opportunity for advancement because of role ambiguity may feel that any effort is futile.
A later study at the Kennedy Space Flight Center found that role ambiguity may be responsible for the personnel turnover and impaired worker efficiency that result in direct cost to the work organization (French and Caplan 1973). Role ambiguity, based on the Caplan and Kahn studies, appears to be widespread and produce psychological strain and dissatisfaction, under utilization of the individual's resources and feeling of not being able to cope within the organization.

Role ambiguity appears when aspects of the job and workplace are unclear. When this takes place, frustration and stress are likely to develop. Workers should know the criteria for career advancement, the priorities of the organization, and generally what is expected of them. There should be no surprises.

Role Conflict

Role conflict reflects a situation where the information available to the worker causes conflict. Kahn et al. (1964) define role conflict as the simultaneous occurrence of several sets of pressure so that compliance with one set would make compliance more difficult with the other. Taken to its extreme, compliance with one set of instruction makes compliance with the other set physically impossible. Conflict may result from the incompatibility of information from different members within the organization. Conflict can occur between different roles in an individual's life which may be within or outside the individual's jobs area. Lastly, conflict occurs when personal stands or values are violated by certain job or task demands. A practical example of this is an order from management to shade the truth in a report about an
investigation. A refusal brings an order from a member of Labor Relations directing you to do the same thing. Or when elected by colleague members to represent them in union/management negotiations, grievance and so forth, a member of management says, "A young man can go far in the company if he plays ball; you take care of me and I'll take care of you." Role conflict occurs, leading to the stress response.

Kahn et al. (1964) determined that people who had more role conflict had greater job-related tensions and lower job satisfaction. The type of position an individual holds is relative to his role senders, for example-those who define his job and make demands on him, and also determines his reaction to conflict. It is worse to receive conflicting messages from two superiors than from two people who are below you in the organizational hierarchy. For an example of this, a floor supervisor gives one order, but before it can be carried out a higher ranking supervisor gives a conflicting order. Thus the employee has two lawful orders from two different supervisors. The problem is that straightening out the problem takes time. In the mean time, high role conflict and stress occurs. The greater the power of the superiors sending the message, the greater the dissatisfaction and futility produced by the conflict. Persons subjected to high role conflict had poor interpersonal communication in that they trusted and respected members of their role sets less (Kahn, 1964). Positions requiring creativity in problem solving, tended to have more conflict than routine-type work. Supervisors and managers also experienced more conflict than non-supervisors.

Personality factors are also important in role conflict (Kahn et al., 1964).
They affect the expectations and pressures that role senders place on the person experiencing role conflict. Some individuals by their nature elicit strong and conflicting role pressures from their associates, while others perform their tasks in pressure-free ways. Personality factors produce different emotional reactions to stress by affecting the role conflict pressure and the individuals' reaction to it. Introverts, for example, being less social and more independent, enjoy interpersonal interaction less than extroverts and appear to experience role conflict more intensely and react with greater tension than non-anxiety prone individuals. Differences in personality lead to differences in techniques used to cope with stress. Those individuals who are type A personality will normally respond differently than type B personality to all of the stress responses and different stress producing stimuli.

Physiological strain is also a by-product of role conflict. Caplan discovered in his 1971 research study that over a two hour period, during which scientists, engineers, and administrators were at their jobs, their heart rates were strongly related to their subjective reports of role conflict (Caplan, 1971). Kraut in his research observed such physical symptoms of role conflict as insomnia, nervousness and sweaty palms (Kraut, 1965).

Role conflict does produce a variety of psychological strains such as job dissatisfaction, job-tension, sense of futility and lack of support (Luthans, 1992). These stressors vary with the personality of the worker, individual coping behaviors, position in the organization, and relationship with his fellow workers.
Role Overload

Interest in role overload was generated by research in role conflict (Luthans, 1992). Overload can be broken down into two categories: quantitative and qualitative overload. Quantitative overload refers only to the amount of the work to be done, regardless of its difficulty. Qualitative overload occurs when the work requires skills, abilities or knowledge beyond what the individual has. Quantitative overload is actually a continuum from having too little to do to having too much to do. Qualitative overload ranges from too easy to too difficult. Either extreme produces a poor man/machine interface. A good fit occurs when workload and job demands match the worker's abilities and motivation.

Qualitative and Quantitative Overload

Psychological effects of quantitative overload have been studies. Freidman, Rosenmann and Carroll (1958) discovered that just prior to April 15 every year, tax accountants had a higher level of serum cholesterol in their blood. Russell and Zohman (1958) studied one hundred young coronary patients and found that one fourth had been working two jobs, and nearly one half of those remaining had jobs which required sixty or more hours a week. Breslow and Buell (1960) discovered that workers under the age of 45 who are on the job more than 48 hours a week have twice the risk of death from heart attacks as other workers in the same age group. French and Caplan (1970) found that cigarette smoking increased significantly among
persons with more phone calls, office visits, and meeting per week than people with fewer obligations. Cigarette smoking is associated with many of the leading causes of death in the United States. It can be estimated that smoking may account for 25 percent of all deaths, directly or indirectly in the United States, and for 30 percent of all coronary heart disease deaths, and about 30 percent of all cancer deaths, including 85 percent of all lung cancer deaths (Rogers, 1991). Smokers have a 70 percent greater coronary heart disease mortality rate than nonsmokers (U.S. Department of Health, 1983). At every age limit, proportionately more smokers die annually than nonsmokers (Rogers, 1991).

Margolis, Kroes and Quinn examined quantitative overload in a national sample of 1496 working individuals in 1974. They observed overload to be related to: increased alcohol consumption, absenteeism, low motivation, lowered self-esteem and an absence of suggestion for improvements to their employers (Margolis, 1974).

Weiman’s research in 1977 examined the effects of responsibility for others, role conflict and role ambiguity in leading to physical disease. More than 1,500 workers had physical measures of stress taken in addition to completing a questionnaire measuring occupational stresses. Weiman’s results displayed the risk of disease to be greater when workers were either under or over stimulated. Weiman examined Selye’s hypothesis that both overstimulation and under stimulation are sources of stress, and are associated with higher levels of disease or risk. Weiman confirmed this hypothesis, observing a U-shaped relationship between stimulation (measurement by an index of work load, role conflict, task ambiguity and
responsibility) and an index of disease or risk, which included smoking, hypertriglyceridemia, hypercholesterolemia, atherosclerotic heart disease, essential hypertension, exogenous obesity and peptic ulcer. It is of interest that both overstimulation and under stimulation can result in an increase in stress related disorders and behaviors associated with health risk. Chesney and Feuerstein (1979) comment that research on the health of occupational groups, whose jobs are characterized by under stimulation, such as blue collar assembly line workers, would further establish this important U-shaped relationship between environment and disease (Chesney, 1979).

All levels of managers displayed the stressful effects of responsibility for others. In addition, lower level managers experienced stress specifically through role overload, role conflict and role ambiguity (Robinson, 1990). Lazarus and Folkman in their 1984 study concluded that psychological stress may be a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well being (Lazarus, 1984).

Qualitative and quantitative overload was examined by Grayson in his 1972 study on the relationship between peptic ulcers and Air Traffic Controllers who have excessive time pressures, life and death responsibility, lack of support and an overwhelming expectation of perfection from themselves, peers and almost everyone else involved directly or indirectly with their jobs (Grayson, 1972). Recent research in psychoneuroimmunology and psychoneurophysiology has elucidated potential
medicating mechanisms that link the psyche and soma, particularly the effect of stressful events in the evolution of physical illness (Schindler, 1991). In peptic disease, "catecholamine, corticosteroids, pepsinogen I and II, as well as direct vagal stimulation are viewed as mediators between stressful events and ulcer formation" (Schindler, 1991, p. 870). Schindler and Ramchandani (1991) looked at the individual's psychologic profile and their mechanisms of coping with stress, and how stress affected the individuals' predisposition, onset, course and management of peptic ulcer disease (Schindler, 1991). Studies of the association of stressful life events with ulcer formation and gastric hyperacidity generally indicate a positive correlation between the amount of stress or the patients perception of stressful events and ulcer formation (Feldman, 1986). In the research, chronic stress appears to play a more significant role than acute stress in the onset or relapse of peptic ulcer disease, as does poor ability to cope with stressful life events. (Gilligan, 1987; Walker, 1988). Chronic stress associated with status incongruity and lower educational or socioeconomic status increased the risk of peptic ulcer disease in men (Nasiry, 1983). In their 1986 study, Mason, Mosshal and Nairdoo, found a higher incidence of changes and stressful situations in the lives of slowly healing duodenal ulcer patients than in those who healed within 6 weeks (Mason, 1986). In summarizing their research article, Schindler and Ramchandani wrote,

Peptic ulcer disease provides an excellent model for the study of mind body interaction in the pathogenesis and course of an illness. Early psychodynamic explanations of the role of personality factors in the evolution of peptic ulcer disease have been supplemented in recent years by more scientifically based studies on the role of stress and

French, Tupper and Mueller (1965) used questionnaires, interviews and medical examinations in their research to gather data from a population sample of 122 professors and university administrators. They discovered that both qualitative and quantitative overloads were related to job tension and that overload was related to low self-esteem among administrators, but not among professors. The qualitative overload was related to the low self-esteem of the professors; but this did not hold true for the administrators. Having too much to do is more threatening to administrators than being able to do the job well, while the opposite is true for professors (French, 1965).

Job stress and strain in the work environment is caused by many different variables, among them is overload which often stems from role conflict, an experience that is fairly common in the work force. Quantitative and qualitative are associated with many different symptoms of physical and psychological strain among which are to name only a few: high cholesterol levels, increased heart rate, peptic ulcers, increased smoking, substance abuse, job dissatisfaction, job tension, lower self-esteem and cancer.

It is generally recognized that self-assessment and an optimistic assessment of one's abilities significantly contribute to success in the business and social environments. In discussing what happens to executives under stress, Marshall and Cooper (1979) observed that "the mental ill effects of stress, anxiety, lower self-esteem, depression, are intuitively credible and are frequently used as measures of
stress." (Marshall, 1979, p. 10) This is in keeping with the earlier concept of Rational Emotional Theory. It is not what happens to an individual that’s important, but rather how that individual perceives the interaction. McLean (1970), believed that awareness of what workers think they can do versus their actual performance can help reduce negative effects of the stress stimulus within the work organization. The social institution of work provides the individual worker with the material items necessary for survival, a purposeful activity, and meets the social needs through the companionship of other individuals in the work environment (Warshaw, 1979).

Self-Esteem

Self-esteem is another psychological need that is met by the work environment. A knowledge of one’s own identity, a recognition of the value of one’s abilities and the attainment of the rank to which one feels entitled, and self-actualization, which is the sense of satisfaction that derives from developing our abilities and the realization of what one may become in the future. A basis for work is the motivation to raise or maintain one’s own self-esteem in the eyes of others in the work environment (Pepitone, 1967). This is true for an individual with low self-esteem in a work situation where there is opportunity for loss or gain in perceived competence.

The individual may attempt to improve or defend himself against any further loss in self-esteem. Low self-esteem individuals allow their attitudes about themselves to be influenced by what others say about their performance.
(Cohen, 1959). (A illustration of this is a Mildly Brain Injured client who was employed as a car washer in a new car dealership. When the referral was received, the first order of business was to completely review all the medical records and the neuropsychological report. When the initial psychosocial evaluation was completed I knew the individual was employed far below his potential. The client was influenced by others in the work environment to the degree that he believed he could only wash cars and nothing more. He worked 10 to 12 hours a day. This individual after two years of cognitive behavioral therapy is now taking classes at a community college. His grade point average after 14 credits is 3.12. The intervention has generalized and the client is on his way to being all he can be.) Low self-esteem individuals, being externally regulated, tend to be overwhelmed in a work stress situation and show decline in performance, especially if learning new job skills is involved (Forbes, 1979).

The formation of self-esteem is one of the critical factors in understanding the relationship between human development and the interrelationship between the individual and the social institution with which he interacts. We must recognize self-esteem as manifesting itself in the adult career through having the confidence necessary to sustain attention to work, in the capacity to solve career problems and be assertive, in the ability to blend different work modes, and in the ability to approach work problems which emphasize personal strength while testing one's limits. This also holds true for every interaction between the individual and all social institutions of which there is an interactional relationship. In the institution of work,
the end effect is a gradual and continuous unfolding of competence which matches the rewards realized from work (Zaleznik, 1970).

The Stress Reactivity and Health

In a research study which examined the effects on workers' health who were notified of the closing of their plant, Kasl found that more illness was reported during the early periods than in the later periods of stabilization (Kasl, 1972). Married, blue collar workers, ages 35-60, with seniority of up to twenty years were studied for two years as they were going through the stages of anticipating job loss, plant shut-down, job termination, unemployment and re-employment. Kasl also found the men who were low on ego strength and described the job loss as being particularly stressful showed a slower return to normalcy.

The occupational environment provides the individual with a sense of identity, an opportunity to confirm and raise the individuals level of self-esteem and to test the limits of their abilities. High self-esteem individuals perform better under pressure, have more job satisfaction when involved in decision making processes and respond more positively to stressful situation than individuals with lower self-esteem. Individuals with low self-esteem tend to be overwhelmed by work related negative stressors and take longer to return to a stable life following job loss (Kasl, 1972).

When the psychological homeostasis is disrupted for any individual, in any situation, they have only two options, “Fight or Flight.” Fight must be defined as development of coping options, either being offensive or defensive in nature. Flight
is understood to mean just that, attacking in another direction. The fight or flight response is termed the stress reactivity. As stated above, it is described as increased muscle tension; increased heart rate, stroke volume and output; elevated blood pressure; increased neural excitability, less saliva in the mouth; increased sodium retention, increased perspiration, change in respiratory rate; increased serum glucose; increased release of hydrochloric acid in the stomach; change in brain waves; increased urination. The reaction prepares us for swift action when such a response is necessary. It is when we build up stress products that we do not use that stress becomes unhealthy. The longer our physiology varies from its baseline measures, DURATION, and the greater the variance from that baseline, DEGREE, the more likely we are to experience the ill effects of this stress reactivity. Of the two, duration and degree, duration is the more important.

Burnout

Burnout refers to a pattern of exhaustion one experiences when subjected to unavoidable pressures at the same time there do not appear to be available resources of satisfaction (Moss, 1981). Maslach has defined burnout as the loss of concern for the people with whom one is working, physical exhaustion, and characterized by an emotional exhaustion in which the professional no longer has any positive feelings, sympathy, or respect for clients or patients. (Maslach and Jackson, 1977) Cherniss (1980) suggests that burnout is a transactional process consisting of three stages. The first stage involves an imbalance between resources and demand (stress). The second
stage is the immediate, short-term emotional response to this imbalance, characterized by feelings of anxiety, tension, fatigue, and exhaustion. The third stage consists of a number of changes in attitude and mechanical fashion or cynical preoccupation with gratification of one's own needs (defensive coping). Burnout thus refers to a transactional process, a process consisting of job stress, worker strain, and psychological accommodation. It can be defined as a process in which a previously committed professional disengages from his or her work in response to stress and strain experienced on the job. The demonstrated changes in attitude and behavior associated with burnout provide a psychological escape and ensure that further stress will not be added to the strain already being experienced. Symptoms of the Burnout Syndrome in the early stages include a decline in efficiency in work performances, diminished interest in work, and a progressively lessened ability to maintain work performance in times of stress. Physical symptoms may include sleeplessness, weight loss, headaches, gastrointestinal disturbances, shortness of breath, exhaustion and fatigue. Behavioral symptoms may include diminished frustration tolerance, feelings of helplessness, increased irritability, and changing moods. Later stages of the burnout syndrome may include questioning of abilities of self, co-workers, and organization, increase in time spent working with dramatic decline in productivity, and increased rigidity in thinking with negativistic or cynical attitudes.

The individual no longer perceives activities in the work environment as challenging or interesting as they once were. Enthusiasm gradually declines. Prior adequate levels of cognitive functioning are reduced to dysfunctional patterns,
creating feelings of frustration and helplessness; tasks or situations with which an individual formerly easily coped become "too much." Decreased efficiency is evident in thought processing, for example, readily acquiring new knowledge, problem solving, short-term memory retention, and problems with attention and concentration, particularly in shifting from one stimuli to another. With prolonged stress, communication and speech abilities can become impaired. Word-finding often becomes problematic and it may become difficult for an individual to express oneself in a smooth, flowing manner. Rather than experience further stress of such shortcomings in interactions with others, the individuals may find it easier to seek escape. Burned out individuals are often cognizant of their lessened ability to function, particularly in settings which are important to their own welfare, and become increasingly alarmed and frustrated; yet, with little understanding of what is happening to them.

Much as the mind and body interact to maintain physiological homeostasis, it has been stated by researchers that there are reserves of deep adaptive energy (Selye, 1974). Individuals who constantly experience too high a stress level for their particular abilities and energy resource and who do not have sufficient recuperative time to replenish the adaptive energy supply which is consumed on a daily basis lose their responsiveness and resiliency. Both physical and mental energy becomes chronically lowered; without intervention the body can eventually succumb to serious physical consequences. The behavior and psychological effects of burnout can, thus, lead to devastating and irreversible effects on an individual’s psychological well-
being. Consequently, stress and burnout have become important managerial and public health concerns. Increased attention has been focused in recent years upon considering stress in professional training programs such as clinical psychology, management, organizational psychology, health administration, and occupational medicine. Stress which is not managed properly or long-term stress from which the individual cannot or does not choose to escape may result in the syndrome of burnout. A wide variety of ideas applied to the subject have provided the advantage of numerous methodologies useful in the study of burnout. Various techniques; other contributions have included more sophisticated assessment tools and statistical analysis, particularly from researchers who have considered burnout from the standpoint of job stress. In order to examine and deal effectively with stress and burnout, there obviously must exist diagnostic procedures and tools for examination of the level of incapacitation suffered by the individual.

Various measures of burnout have been proposed. Herbert J. Freudenberger, who first formally differentiated the phenomenon of burnout, proposed a list of ten questions which help an individual to recognize danger signals on the road to burnout. Secondly, he formed a list of attitudes that contribute to burnout; and finally, he presents the Burn-out Scale which determines if one is burning out. It consists of 15 items ranked on a scale of 1 to 5. Fruedenberger’s scale (1980) is a self-assessment tool and is unrelated to work settings. It is not intended as a research tool.

Pines, Aronson, and Kafry (1981) define burnout as identical to tedium in
terms of definition and symptomology but they believe it is unique to people who work with people in situations that are emotionally demanding. Their research on tedium resulted in the development of a tedium measure which assesses physical, emotional, and mental exhaustion, for example being physically exhausted, emotionally exhausted, and feeling disillusioned and resentful about people.

Stress and the Family

The social institution of the family must be looked at as both stressor and as a treatment. Family life is recognized by most individuals as the key element for emotional and social support in our society. Of all the formal organizations in our society, it is the family that is most likely to act as a buffer to absorb the stresses and strains experienced by its members. In no other social institution, can the individual who receives the impact of the daily frustration and hassles of life return home and be given love, understanding, sympathy and unlimited loyal support by its members. It is the family that most of us long to return to, after a hard day out in the world. In our society, we often assume the individual is the appropriate unit of analysis in understanding the response to stressors. Family characteristics may be the more important unit in predicting an individual's response to the stress stimulus. Why is it that some families respond well to the demands of stress and strain, while other families struggle and are not able to provide the family strength and organization called for by the problems encountered in or out of the family environment? Families react to both internal and external conditions as well as initiate action to
seek new levels of functioning (Andrew, 1980). Based on a general systems concept of "Wholeness", it can be conceived that as parts of the family system or the environmental change, the state of equilibrium of the ecosystem will be disrupted, calling for counterbalancing or changes in other part of the system. The ecosystem has three central organizing concepts: groups of persons who constitute the family, the surrounding environment, and the patterning of interaction and transaction between the social actors (Sprout, 1965).

The principle of wholeness can work in the reverse also; an individual may not be able to change unless others in the system change also. In the meantime, tension or stress is created within the system. Such stress, within limits, is a natural or necessary condition (Selye, 1974). It serves as a motivating or activating force to create change. Understanding these concepts of the family ecosystem can be useful in developing alternatives for coping and resource management to address the stress response.

We will discuss six mechanisms through which the institution of the family operates to shore up defenses and assist members in coping. The family is a collector and dissimulator of information about the world. Information is crucial to functioning in the world and avoiding the frustrations and aggravation of not knowing how the system operates. The family as a feedback guidance system. The family functions as a sounding board for the individual. The family as a source of ideology; to a large extent, values and attitudes are acquired during the earliest developmental years of life. Sometimes our values will conflict with those of our family. When
conflict with our values occur, the individuals need to compare their judgement on
the matter with others who share these same values. We need a reference or control
group, people we know and trust, that will provide such a function.

The family is a source of practical service and concrete aid providing loans
to buy our first home, to start our first business, to help out when things get tight.
We turn to the family when we celebrate a birth or grieve a death. Our family gives
us unconditional support.

The family as a haven for rest and recuperation. When things get tough, as
they sometimes will, when the road one is traveling seems all up hill, when the funds
are low and the debts are high, when one wants to smile, has to sigh, when care is
pressing one down a bit, go home to rally and rest but not to quit. The family
provides the best therapy: a permissive environment and supportive love ones. A
country and western song by The Confederate Railroad tells it all, "Jesus and Mama
always loved me." The family is a source and validator of identity. During times
of stress, the family can offer reassurance and bolster the individual in his resolution
(Caplan, 1976).

The most important concept in a healthy family is the sense of an integrated
whole. The healthy family is not a fragmented group or a congealed group. The
whole functions as the leader and the control group, both in supporting the family's
security and in inducing change. The healthy family will utilize constructive input
and handle negative feedback with power and comfort. The group is also therapist
to the individuals, rotating the security blanket and serving as goad when needed by
persons or subgroups within the family.

The healthy family is a three or four generational whole that is longitudinally integrated. I am my father's son, I am my son's father. My son is father to his son and so forth. The healthy family maintains a separation of the generations. Generations function in two separate role categories, my son is my son, but he is father to his son. We are both fathers, but I am his father. The power in a healthy family is flexible, with a casualness evolved through the freedom to express individual difference and to renegotiate role structure and role expectation and to reevaluate past experience. All my children know more about certain subjects than I, therefore I will listen to their expertise.

In a healthy family there is freedom of choice—in each individual's right to be himself. The individual may develop his own uniqueness with encouragement and little counterpressure. This also allows freedom for aloneness and belongingness is protected by the group.

The healthy family does not reify stress. It is one that continues to grow in spite of whatever troubles comes its way. The family is structured but is flexible in the face of trouble. The healthy family lives with the fact of environmental inconsistency and always seeks to expand its experiences.

Roles are defined by a panorama of conditions in the family; past history, present history, and the ideas about the future. The family roles are further defined by interaction with each family member, with the extended family and with the culture. The roles are also defined by the individual's own growth experiences.
Problems are solved in the healthy family by marshalling customs, family rules and norms, brainstorming and analysis of the problem. The healthy family will turn to the member with the most expertise in the area of concern and look to that individual for input.

The family life-cycle is a great model of evolution in a system, changing while simultaneously maintaining its integrity. As a Medical Social Worker, this researcher has discovered that life-cycle stress is cumulative within the system as a whole. For example, a father who sustained a mild brain injury in an auto accident has an emotional break that produces tension within the family and causes the other family members to experience depression, anxiety and burnout. Marital conflict between the husband and wife cause tension within the family as a whole, so the husband to relieve the negative stimulus within the family begins to isolate himself from the family gatherings. This creates further negative reaction within the family structure. Then through classical conditioning the spouse reinforces the negative behavior, which in turn produces more negative behavior and further negative stress within the family structure. The wife is in mid-life crisis and has a poor self-image, which causes more stress and anxiety on the family system. The husband feels guilty about his behavior, and has more emotional breaks due to his feeling guilty about putting his family through all the turmoil. The healthy family acknowledges the stress in all its members and does not concertize it in one of them. Another way to look at the family life-cycle is as serial impasses. The primary "we" of courtship is ruptured, the secondary "we" of living together emerges and develops stress.
stress is resolved by repression, by struggling through it in the open, or by various other means such as accidents or change of focus, and the we-ness is re-established and separation of the individuals is repeated, erupting and resolving.

The healthy family becomes increasingly strong as a group, therapeutic in its role to itself and its components, increasingly flexible and casual, and increasingly covert. The healthy family changes through identity crisis, self-doubt, illness, struggling with everyday stress producing stimuli. The culture think of a healthy family is one with lots of positive affect. We agree or we agree to disagree, on a positive note.

In comparison the dysfunctional family is characterized by a very limited sense of the whole. It is frequently true that the only person who believes in the spirit of the family, is the family scapegoat who may be either the outcast, the delinquent, or the member who is crazy or disorganized in some way that stresses the family, or the knight in shining armor, the socially overrated family hero, who is often a workaholic and whom the family utilizes to cover up its anxiety and to extol health. The schizophrenogenic family we think of as being dedicated to a state of chaos, this is the type of family that produces its own stress and offers little support to its members. This type of family can not adjust to moments of crisis and therefore the stress reactivity is prolonged. This is the type of family that produces conflict on its members.

Sociological research has discovered that the family life cycle is one of the most fruitful concepts in explaining and predicting variations in families over time.
In addition to descriptive studies of change in family structure, (Duvall, 1977), the life cycle concept was found to be an important tool in explaining variations in social and economic behavior of the family (Lansing, 1957). Changes in the form and composition of the family over time result in changing family requirements, economic resources or allocation of time for child care and other domestic activities; one can expect the amount of stress and/or level of functioning would be affected by these life-cycle stages. The expanding stages of the family cycle appear to be one of dynamic change in the direction of more problematic social functioning which may account for younger families needing more help from social institutions than more mature families (Geismar, 1969).

The family must be seen as a total system, and since the family is a system, change in one member of that system brings changes to others in the system and in the total relationships within that family system. The conceptualization of family life changes was used to identify those clusters of normative and non-normative life events which most families experiences during the early stages of the life cycle. When the family life cycle changes, as it always does, there is stress with the change. Hill and Rodgers in their 1964 study, look at the changing of the family system when members were added or departed, and found that at each change there was stress. Such changes inevitably forced rearrangements of the existing family network and implied at least a temporary period of some disorganization or disruption.

Early research of families and stress were descriptive, documenting the family's reaction to a single stressor after the event, which limited efforts to
determine the impact or interaction of the individuals within the family relationship. The classic studies of families under stress that related economic problems during the Depression and afterwards, were the framework for many of the positions and concepts of family stress theory developed in the last two decades (Angell, 1936; Cavan, 1938; Hill, 1949; Koos, 1946).

Two dimensions of family behavior, cohesion and adaptability, appears as the central concept in family stress theory (Burr, 1973). Angell, in an early study of how families cope with the Depression found family integration and adaptability to be the two most important variables (Angell, 1936). Integration refers to the level of organization in the family system that acts as the "bonds of coherence and unity running through the family life, of which common interests, affection and a sense of economic interdependence are perhaps the most prominent." (Angell, 1936, p. 15). Cohesiveness is the degree the family members function smoothly as a unit, and feel themselves to belong together more than if they were apart. Adaptability means the ability of the family to change its functioning in response to new demands, their flexibility in meeting difficulties or stress producing stimuli, the family member's readiness to adjust to developmental changes, and the manner in which the family members as a unit are able to make decisions.

Hill in his 1949 study accepted Angell's definition and used both integration and adaptability in cross-classification of family types to study how families dealt with war separation and reunion. In the United States military mobilization of 1990-1991 for Operation Desert Shield/Storm more than 645,000 individuals were sent to
the combat zone and more than 228,000 national guard and reserve forces were called to active duty (Black, 1993). The life stressor of the individuals (those called to duty as well as those they left behind) were hard to understand unless we have experienced a like situation. The stress on those individuals because of the crisis was predictable; earlier work had shown the way. Crisis differs from stress in that crisis is a change so acute, severe, and overwhelming that the family system is blocked, immobilized, and incapacitated (Boss, 1986). Not only is stress a factor when individuals leave for war and during the war, but also after the war.

Many stresses in our lives are subtle, but the war is really a crisis, something that presents itself so forcefully it’s hard to avoid it. All stress arises from change. The war has created a major change in most people’s lives (Rohan, 1991, p. 3).

Successful experience with crisis tests and strengthens a family, but defeat in crisis is punitive on family structure and morale (Hill, 1949).

As we examine and identify the collective contribution of variables related to family stress, the question must be asked, "How much and what kind of stressors, mediated by what personal/family social resources and family coping responses, will discriminate among ineffective and effective functioning of the family system as a unit?"

The earliest conceptual foundation for research addressing this question was Reuben Hill’s (1949) Family Crisis Model outlining a set of major variables and their relationship which have remained virtually unchanged for well over 30 years. Hill’s ABCX Model identified three variables that help to determine whether a given event
or situation becomes a crisis for any given family. The "A" factor is the stress event which makes the family vulnerable to some degree of "X", crisis. The extent of crisis depends on the intervening factors: "B", the family's crisis-meeting resources interacting with "C", the family's definition or perception of the events. Hill suggested that some families may lack crisis meeting resources (the "B" Factor), and have more stressors (the "A" Factor) as the family perceives them (the "C" Factor) as crisis (the "X" Factor).

McCubbin (1979) suggested that successful family stress management coping behaviors involve at least two major sets of family resources: the family must have or develop such internal resources as integration and adaptability in order to withstand the social and psychological stress to which it may be exposed. These resources have been documented in studies of family adjustment (Angell, 1936; Cavan, 1938; Koos, 1946; McCubbin, 1992; Moos, 1982). The next set the family must have or develop is a range of coping behaviors directed at strengthening its internal organization and functioning, and producing community social supports, and in some cases, at diverting, reducing or eliminating the source of the stress. In other words, the family must "Fight or Flee."

How important is the family support system to positive health wellness? Studies of family response to the Depression and the stresses of World War II illustrate that family integration, family adaptability, and marital adjustment were the strongest predictors of family adjustments to crisis (Drabek, 1984). Those married individuals have mortality rates lower than individuals of equal age who are single.
or widowed, and fully half of those experienced by individuals who are divorced has been well established (MacMahon, 1970). The protective effect of marriage is not limited to death. A study of 10,000 Israeli men found that when middle-aged men were subject to anxiety, the existence of a loving and supportive wife was sufficient to reduce the risk of angina pectoris by 50 percent (Madalie, 1976). While these observations can be interpreted in any number of ways, if they are taken as a whole, they support the notion that marital relationships do provide an important source of psychological support, possibly more so for men than women (Darcy, 1985).

Summary

Health professionals have long been aware of an association between stress and illness, the mortality patterns of adults in modern society demonstrates this association. The long term effects of prolonged stress on the individual can lead to biochemical alteration that are potential causes of disease and negative health wellness to the individual.

Health is defined as a state of complete physical, mental and social wellbeing, not merely the absence of disease and infirmity (World Health, 1947). Wellness is defined as an integrated, and dynamic level of functioning oriented towards maximizing potential, dependent upon self-responsibility. This is a lifestyle in which one strives to achieve the highest potential of well-being. This means that high levels of wellness are an ever-changing level of functioning. Wellness can be viewed as an expanded continuum of health functioning. Life is faced with creativity and
freshness. Living a wellness lifestyle has good potential for increasing longevity. This is not the main reason for a wellness lifestyle, but rather as Ardell believes, "the motive force behind wellness lifestyle near-term, attractive payoffs and benefits" (Ardell, 1985).

Health professionals have begun to integrate the mind-body relationship in the understanding of behavior and disease. This includes both the interfaces between the mind and body interface, the cognitive function and behavior, and on the interrelationship of behavior and illness. It is this interface that constitutes "Psychobiology." It is the understanding and appreciation of this interface which constitutes the soul of this dissertation.

Emotionality, non-emotionality, body awareness, the stress response and distress are psychological concepts that are applied to all disorders, physical or emotional. Without a complete understanding of the potential psychobiological determinants of the disease condition, it is very doubtful that we can know what to do when faced with conditions brought about by the stimulus known as stress. The holistic concept of health-wellness involves viewing an individual's health from every possible perspective, and working to achieve harmony and balance to create a whole, functioning person, to reach that state known as homeostasis.

Many variables are related to the health wellness concept. In recent years health professionals have come to recognize many other psychological factors that increase an individual's susceptibility to stress related diseases. For example, Coronary Heart Disease (CHD), which is the principle cause of death in the United
States, has been positively associated with occupational stress (House, 1979). CHD and other cardiovascular diseases have been linked to type "A" behavior patterns which are excessive drive, aggressiveness, ambition, involvement in competitive activities, frequent vocational deadlines and enhanced sense of time urgency (Jenkins, 1968). Chadwick established a direct correlation between hypertension and the Type "A" personality (Chadwick, 1980; Boone, 1991). The type "A" individual tries to accomplish too many things in too little time, displays free floating hostility (irritated by trivial matters), and exhibits signs of struggle against time and other people. Type "A" behavior is considered as a bona fide risk factor of heart disease by the American Heart Association and the National Heart, Lung and Blood Institute (Pittner, 1980; Sloan, 1991). The type "A" individual response to stress stimulus differs from type "B"'s response to the same stimulus. Type "B" individuals tend to be calmer than type "A". The difference to how a person reacts to the stress stimulus is based on the personality of the individual and the environment in which the interaction takes place. Holmes and Masuda (1974) stated that their research showed human beings do indeed get sick when they have to cope with many of the events of normal life. When people struggle with overwhelming life crises, they tend to get more serious diseases. The explanation they suggest is that the activity of coping can lower resistance to diseases, particularly when one's coping techniques are faulty, as when they lack relevance to the type of problem to be solved. If it takes too much effort to cope with the environment, people have less effort to spare for preventing disease.
The results from many of these studies demonstrate that the rating scale is a rough estimate of the relative potency of stressors among selected samples and subjects. Even between them, the results showed variations, validating the statement by Selye that "How you take it", is what determines whether one can adapt to the stress response. It is not only the major stressors of life that we must be aware of, the ones that greet us everyday, but we must be concerned with all the little things that affect us everyday, the little hassles.

Lazarus defined little hassles as "the frustrating and irritating incidents that occur in our everyday life" (Lazarus, 1981, p.59). He completed a study on the effects of daily hassles with a group of his colleagues at the University of California at Berkley. They discovered that daily hassles are more closely linked to and may have a greater effect on our moods and our health than the major misfortunes of life. They also kept track of the daily uplifts in the lives of the participants to see if pleasant moments can counter the negative hassles. To their surprise, they found that uplifts seemed to have different effects on men than women. It seems that the impact of hassles on physical and mental health depends a great deal on the frequency, duration and intensity. For that reason, the particular hassles cited by the participants were less important than their overall intensity and the individual reaction to them.

Lazarus and colleagues selected a sample of 100 individuals, 48 men and 52 women, to answer the hassles questionnaires. The group of subjects came from a larger survey population in Alameda County, California. The subjects were mainly caucasian, middle-aged, middle-class, and Protestant. The group gave the 10 most
frequent hassles and uplift in order of frequency as illustrated in table 1.

Table 1

<table>
<thead>
<tr>
<th>Hassles</th>
<th>Uplifts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concern about work</td>
<td>Relating well with spouse</td>
</tr>
<tr>
<td>Health of family members</td>
<td>Relating well with friends</td>
</tr>
<tr>
<td>Rising prices of common goods</td>
<td>Completing a task</td>
</tr>
<tr>
<td>Home maintenance</td>
<td>Feeling healthy</td>
</tr>
<tr>
<td>Too many things to do</td>
<td>Getting enough sleep</td>
</tr>
<tr>
<td>Misplacing or losing things</td>
<td>Eating out</td>
</tr>
<tr>
<td>Yard work</td>
<td>Meeting responsiblities</td>
</tr>
<tr>
<td>Property, investment or taxes</td>
<td>Visiting or phoning someone</td>
</tr>
<tr>
<td>Crime</td>
<td>Spending time with family</td>
</tr>
<tr>
<td>Physical apperance</td>
<td>Home pleasing to you</td>
</tr>
</tbody>
</table>

Lazarus believed this study illustrates that hassles turned out to be much better predictors of psychological and physical health than life events (Lazarus, 1981). Lazarus’ result also suggest that the effects which major life events do have may occur through the daily hassles they provoke; while the findings seem obvious to some, this study did mark another avenue in stress research.

Besides the influence of life events and little hassles on stress and health, a term used more and more frequently to describe the adverse effects of stress is “burnout.” There can be two types of burnout: individual burnout and organizational burnout. Moss, (1981) states persons prone to burnout have strong
needs for approval and heightened expectations of themselves. They rely on work as a primary means of enhancing their self-respect (Moss, 1981). The symptoms of individual burnout, as defined by Moss are:

1. Early stages
   a. Work Performance - efficiency declines, initiative dampens, interest in work diminishes, and progressively less able to maintain work performance in time of stress.
   b. Physical Condition - feels exhausted, fatigued, physically run down, headaches, gastrointestinal disturbances, weight loss, sleeplessness, and shortness of breath.
   c. Behavioral Symptoms - changing or dampened moods, quickness to anger and increasing irritability, diminished frustration tolerance, suspiciousness, feelings of helplessness, and increased levels of risk taking.

2. Later stages
   a. Attempts at self-medication (tranquilizers, alcohol).
   b. Increasing rigidity (thinking becomes closed, attitude becomes inflexible, negativistic or cynical).
   c. Abilities of self, coworkers, and organization are questioned.
   d. Time spent working increases, productivity declines.

Moss stated, "It is possible that in time of stress, social interaction within an organization can set in motion a destructive process that affects many individuals" (Moss, 1981, p. 115). The outcome of this destructive process on a group level has
been referred to by Hall, et al. (1979) as the Organizational Burnout Syndrome.

Indications of organization burnout, as defined by Moss (1981), are lowered moral and dissatisfaction expressed through group interaction such as absenteeism, job dissatisfaction, lack of initiative, frequent scapegoating, helplessness and hopelessness and general expressions of negativism concerning the role or function of the unit or organization.

Moss indicated that Hall, et al. (1979) encountered organizational burnout with frequency in different units in their hospital and it was particularly evident in high-stress units such as the medical or surgical intensive care units. They believe their observations can be extended to other professional groups. Business and industrial units going through a crisis can be considered high-stress units (Moss, 1981). It is thought that social support external to the work environment may minimize the effect of organizational burnout, or for that matter burnout in any sense.

Mental health professionals point to a number of personal factors that seem to be helpful in coping with stress. Among them are the sense of being in control of one's life, having a network of friends or family to provide what is called social supports, having personality factors such as flexibility and hopefulness, developing relaxation techniques and maintaining healthy exercise and diet routines.

The association between stressful events and illness suggest the importance of understanding the specific conditions under which stress is likely to result in illness. While considerable physiological research has demonstrated the health risk that can result from stress, an instructive research tradition has also demonstrated that lack of
sufficient exposure to environmental challenge can likewise be quite debilitating and potentially life threatening (Knapp, 1988; Ader, 1981; Bexton, 1954; Levine, 1957).

The body of research specifically focused on stressful life events has involved considerable variations in interpretation. Rahe, (1967), has asserted that any event, good or bad, for which an excess of adaptive energy must be given can lead to illness. Other researchers have suggested that only those events that individuals themselves interpret as being negative are likely to be harmful to the individuals' health.

While the literature generally accepted that stressful events play a role in causing illness, the causal connection is not now regarded as being as impressive as it once was. This may suggest that health and viability are influenced by a wide variety of psychosocial variables. Central to this avenue of thought is the evolutionary assumption that people have a genetically built-in need to balance deep internal feeling preferences, desires, and fantasies with practical external conditions to fit the two together with minimal stress and maximum satisfaction. This need for a sense that one is living as one should, or as one is meant to live, may be called the need for integrity or balance. When individuals fail to achieve this balance or this integrity, sickness and other life-threatening conditions can develop. From this perspective, stressful events would be undermining to health, primarily under conditions in which the events signal to the individual that they are outside the boundaries of integrity-balance.

Stress tends to lead to illness primarily under conditions in which the stressful
circumstance is seen as interfering with the possibility of leading life as people feel they would like to or ought to. An example of this might be when the individual experiences emotions of disintegrity. The other side of the coin might be the experience that is seen as equally stressful but is not so likely to lead to illness when it is interpreted as a natural part of pursuing what the individual sees as fulfilling. Again, it is not what happens that is important, but rather how the individual perceives what happens. If this concept is true, then this would imply that feeling of disintegrity is at least part of the evolutionary psychological mechanism through which illness triggering processes are set in motion.

If tension between career and interpersonal commitments does lead to illness, does it do so under all conditions, or only under certain definable conditions? Does this mean that tension causes illness primarily when it causes feeling of disintegrity? Therefore, is the health of individuals unaffected when an equal level of tension is expected without undermining the individual's sense of balance-integrity? If this is true, then is it possible to draw a conclusion that, for only a partial answer, stress can sometimes be supportive to health, while on other occasions, it can be harmful? It may raise the issue here that, the key issue would not be the stress itself, but rather the implications of stressful experience for the individual's sense of integrity. Experiencing the emotions of disintegrity is another way to express the concept of Rational Emotional Therapy, RET (Ellis, 1987): it is not what happens to an individual that is important, but rather how that individual responds to that stimulus.

To what extent is the life style synchronized with where the individual wants
to be? In other words, has the life style allowed one to live in satisfactory
congruence with personal characteristics? To what extent do employment, family
life, friendships, organizational connections and memberships and health, allow one
to be oneself? To be all one can be.
CHAPTER III

METHODOLOGY

Introduction

This chapter will describe the history of the design used, the questionnaires that were utilized and the sample population.

Stress Workshop Pilot Study, 1982

The original Stress Workshop Pilot Study was written in 1982 for a proposal which was submitted to the Director of the Medical Department at the General Motors Buick-Oldsmobile-Cadillac Orion Plant in Lake Orion, Michigan. The proposal outlined a Stress Information Workshop which was to be given to salaried employees of that plant. The purpose of the Stress Workshop was to give participants a clearer understanding of what stress is and how it related to everyday living. In the proposal, certain variables of stress would be identified through the Stress Control Test, Recognizing Signs of Stress, Stress Sign Chart and Symptoms of Stress and Related Diseases. The proposal was submitted to the Director of the Medical Department, who was transferred before the proposal could be implemented.

Three Stress Information Workshop programs have been given. The first was given to adult students of Oakland Community College in 1984. The second Stress
Information Workshop was given, under the sponsorship of the Executive Board of the United Plant Guard Workers of America, Local 116, Pontiac Michigan. A total population of fifty of a local membership of four hundred fifty members took part in the Stress Workshop. A pre-test and post test were given and used as baseline data. Participation was on a volunteer basis. The third Stress Workshop was given at G.M.I. Engineering and Management Institute in 1988.

**Stress Workshop, 1985**

The Stress Workshop was given at the local union hall on March 25, April 1 and April 3, 1985. A release of information was signed by each member who took part in the workshop so that the data could be kept for research. All measurements were taken pre, during and post with a maintenance follow-up built into the program. The physical measures were taken by a registered nurse. The measurements included blood pressure, heart rate, and temperature. The psychological measurements taken were three Hudsons Scales; Generalized Contentment Scale (GCS), the Index of Peer Relations Scale (IPR), and the Index of Family Relations Scale (IFR). Another form of measurement that was taken and used was the Systematic Units of Desensitization Scale (SUDS) which was to be used in conjunction with Stress Logs 1, 2, or 3. Theses SUDS scales and Stress Log measurements were to be kept by the individuals so they could identify their stressors, and be able to use the information they learned in the workshop to increase their coping behaviors.
Multiple-Point Measurement Overtime

All Hudson Scale measurements were of multiple-point and overtime. An advantage with multiple-point measurements overtime is that trends can be observed in a participant's progress, enabling treatment and or session changes to be made based on these feedback trends. The measurements provided an effective means of determining the efficiency of the Stress Workshop. The length of the test overtime tested the reliability: therefore, the longer the test in duration, over-time, the greater the reliability. These relevant measurements indicated an individual's progress in developing coping behaviors. The relevance of a measurement is determined by the potential areas of change expected as a result of the Stress Workshop intervention. Multiple confounding variables could and did interact on the sample population: therefore, a division was built between the theaters of the work environment and the home environment by employing the three different Hudson Scales. The measures used and with this type of measurement overtime showed validity because the traits being measured can be defined and the relationship between scores can be specified. Validity emphasizes the gathering of data from a variety of scores to provide support for the hypothesis (Ary, 1985).

Hudson Scales

The Hudson Scales were given once a week for three weeks for the pre-measurement, once before each of the two (3) hour sessions, and three times during
the follow-up session. The first session was only an introduction to the workshop and to form a relationship between the membership of the group. After completion of the measurements, they were collected after each session, tabulated and graphed, and used as feedback instruments for the individual in question at the end of the workshop. A subject recalling responses to test items was possible, but not likely to influence the results of this study because of the degree of the reliability built into the Hudson Scales. The test-retest reliability coefficient of the Hudson Scales in relationship to the individuals who took them indicated stability, even with differing scores showing movement trends. A decrease in scores on the Hudson Scales signifies an increase in contentment on the GCS and improvement on the IPR and IFS scales.

Walter Hudson designed the scales for use by therapists and researchers who are in need of reliable and valid measures of several important variables that define and influence the quality of personal and social functioning among individuals, couples, families and small groups.

Each of the scales is a paper-pencil, self-report questionnaire that was designed to measure the degree, severity or magnitude of a distinct and separate problem in personal and social functioning. Each scale has the same format and structure, and each one has 25 items. The particular length was selected by Hudson for three specific reasons: the scales are long enough to produce good reliabilities; they are short enough to be used in repeated administrations with the same client on a regular or periodic basis; and the use of 25 items leads to the construction of a very
simple scoring procedure. Each scale is scored in exactly the same manner. Only one scoring formula is needed and each scale is scored to have a score range for 0 to 100 where a low score indicates the relative absence of the problem being measured, and higher scores indicate the presence of a more severe problem. Each scale uses essentially the same set of instruction to improve ease of administration and to promote uniformity of client responses.

Another characteristic of the Hudson scales is that each one has a clinical cutting score of 30. That is, it is found that persons who obtain a score above 30 have a clinically significant problem in the area being measured, while those who score below 30 are generally free of such problems. The existence of such a score is important to both clinicians and researchers. It provides both a diagnostic benchmark and a criterion against which to judge the effectiveness of treatment (Hudson, 1982).

Generalized Contentment Scale

The Generalized Contentment Scale (GCS) measured Depression. The GCS is a 25-item scale that is designed to measure nonpsychotic depression. Scores above 30 indicate that the respondent has a clinically significant problem; scores below indicate the individual has no such problem. Generally, a low score over-time, or a downwards trend over-time displays an increasing contentment with the total environment and a decrease in depression. The GCS has a plus or minus of 5 points error in its measurement. The range is 0 to 100 with higher scores indicating more
depression. The GCS has a mean alpha of .92, indicating internal consistency, and has stability with a two-hour test-retest correlation of .94; the reliability of the GCS is excellent. The GCS has good concurrent validity, correlating in two different studies with the Beck Depression Inventory, .85 and .76 respectively. The other two samples used the Zung Depression Inventory and they were .92 and .81 respectively. The GCS had known group validity, discriminating between individuals judged to be clinically depressed and those individuals who were judged not to be depressed. The GCS has construct validity, in that it correlates poorly with a number of measures which it should not correlate, and correlating at high levels with several measures with which it should, for example, self-esteem, happiness and sense of identity (Corcoran, 1987).

Index of Peer Relations

The Index of Peer Relation (IPR) was designed to measure the degree, severity, or magnitude of a problem the client has in relationship with peers. It can be used as a global measure of peer relationship problems or the therapist can specify the peer reference group. The IPR can be used to measure a client's peer relationship problems with respect to more than one reference group (Hudson, 1982).

The IPR is a 25-item scale that measures the extent and magnitude of a problem that the individuals have with peers. Scores above 30 indicate the respondent has a clinically significant problem with his peers, below 30 indicate that there is not a problem. The IPR has a plus or minus of 5 points error in its
measurement. The IPR addressed the work environment and downward trends in the scores over-time displayed an increase in coping behaviors. The IPR range is 0 to a 100, with higher scores indicating presence of a problem. The IPR has a mean alpha of .94 which indicates internal consistency and a low Standard Error of Measurement of 4.44. The IPR has known-group validity, significantly distinguishing between individuals who judged themselves, and by their therapists as either having or not having peer relationship problems (Corcoran, 1987).

Index of Family Relations

The reliability and validity of the Index of Family Relations (IFR) scale were investigated in a clinical study of 120 persons who were seeking help with one or more personal or interpersonal relationship problems (Hudson, 1982). Each respondent completed the IFR, GCS, Zung, and Beck scales as a part of the research questionnaire. The Zung and Beck scales are measures of depression and these were included in order to use the data for partial validation of the GCS scale in a separate study. The factorial validity of the IFR scale was investigated by correlating each of its items with the total scores for the IFR, GCS, Zung, and Beck scales and with the clinical status of the clients. The correlations with the clinical criterion group status were used to determine whether the IFR items would do a good job of discrimination between the groups, and the findings are shown on Table 2. Examinations of the data shown strongly suggests that the IFR has excellent factorial validity since the items have higher correlations with the IFR total score than with
any of the other measures shown in Table 2 (Hudson, 1982).

Table 2
IFR Factorial Validity Data

<table>
<thead>
<tr>
<th>Item</th>
<th>IFR</th>
<th>GCS</th>
<th>Zung</th>
<th>Beck</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>79</td>
<td>.57</td>
<td>.62</td>
<td>.47</td>
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<td>2</td>
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Used with permission, Walter Hudson, 1994.

The Index of Family Relation (IFR) was designed to measure the degree, severity, or magnitude of a problem that family members have in their relationships with one another as perceived by the client. This scale permits a client to
characterize the severity of family relationship problems in a global fashion. It can be used productively with one client, or it can be used in conjoint therapy with two or more family members. The IFR can be used as a measure of the familial environment of the client (a rough index of the quality of family life for, and as perceived by the client), and it can be used in helping the client to deal with problems in relating to the family as a whole (Hudson, 1982).

The Index of Family Relation (IFR) allowed the respondent to characterize the severity of family problems in a global fashion and can be regarded as an overall measure of intrafamilial stress. Scores above 30 indicate the respondent has a clinically significant problem and scores below 30 indicate no such problem. The IFR measurement has a plus or minus 5 points of error. The IFR is a 25-item scale designed to measure the extent, severity or magnitude of problems that family members have within the family relationship. The range of the IFR is 0 to a 100, with higher scores indicating the evidence of family problems experienced by the individual. The IFR has a mean alpha of .95, indicating internal consistency, and a low Standard Error of Measurement of 3.65. The reliability is excellent. The IFR has both known-group and construct validity (Corcoran, 1987).

Structure and Scoring of the Hudson Scales

The Hudson scales are structured as a 25-item summated category partition scale wherein each item is scored according to the following five categories: 1 = rarely or none of the time; 2 = a little of the time; 3 = some of the time; 4 = a
good part of the time; and 5 = most or all of the time. For each scale, some of the
items are positively worded statements or descriptors, and others are negatively
worded to partially control for response set biases. All of the items were randomly
ordered within each scale. Each of the Hudson scales were constructed as a multi-
item scale, none was designed as multidimensional measure. Each was designed to
provide only a single-dimension characterization of the degree or magnitude of a
personal or social problem.

Since each of the Hudson scales is an undimensional measure of a personal
or social problem and since each was designed to measure the degree, severity, or
magnitude of such problems, the Hudson scales can be seen to function much like a
thermometer. They will provide information about the degree or magnitude of a
problem but they will not provide any information about the cause, source, type, or
origin of a problem.

Because each of the Hudson scales was designed to measure the degree or
magnitude of a personal or social problem, each scale is scored so that higher scores
represent more severe problems, and lower scores indicate the relative absence of
such problems.

An important feature of the Hudson scales is that each of them has the same
clinical cutting score of 30. That is, if a person scores above 30 on any of the
Hudson scales it is almost always found that the person has a clinically significant
problem in the area being measured while persons who score below 30 are generally
found to be free of such problems (Hudson, 1982).
The standard error of measurement or SEM for each of the Hudson scales is roughly five or six points. This means that if a client's score changes from one week to the next by plus or minus five or six points or less, one should regard such a change as inherent noise or error in the measurement scale and not as evidence of real change in the degree or severity of the problem (Hudson, 1982).

The Alpha Coefficient of the Hudson Scales

Coefficient alpha was chosen as the primary means of estimating the reliability for each of the scales because it has a number of highly desirable characteristics. It is an internal consistency measure of reliability that is based on all the interitem correlations for a particular scale, it is the mean of all possible split-half reliabilities, and it provides a direct estimate of the alternate form reliability that would be obtained if an equally good alternate form of a particular scale were available (Corcoran, 1982).

The Test-Retest Reliability of the Hudson Scales

The second major type of reliability estimate is test-retest reliability. Test-retest reliability is computed as the correlation between a set of scores obtained from a single scale on two separate occasions. It presumably represents the stability of a measurement device over time, but it requires the critical assumption of no change in the measure characteristic (except for variations due only to measurement error) from one occasion to the next. If the test interval is quite long, the likelihood is
increased for obtaining real change in the measured characteristic, and the effect of such change is one of producing an underestimate of the true reliability of the scale (Hudson, 1982).

Types of Validity

The most important types of validity are referred to as content, criterion, construct, and factorial validity. Any standardized measurement tool that is to be used for both clinical and scientific applications in the helping professions should be valid in terms of each of these types of validity.

Factorial validity is a way to partially examine the content validity of a scale. Factorial validity is investigated through the use of a special form of an analytic technique known as "factor analysis" that is reducible to a form of item analysis. Factorial validity is akin to both content and construct validity. It is a way of examining the items on the Hudson scales to determine whether they correlate with the things they are supposed to correlate with. More specifically, if an item on a particular scale is a valid measure of the construct that the scale is supposed to measure, the item should have a much higher correlation with that scale's total that with the total score for any other scale (Hudson, 1982).

Criterion Validity refers to the ability of a measurement tool to explain or account for some well-specified criterion. Criterion validity is usually assessed in terms of some type of correlation measure. If the observations on the measure to validate are taken at some point in time, T_1, and the observations with respect to the
criterion measure are taken at a later point in time, $T_2$, the correlation between the two measures is referred to as an index of predictive criterion validity. If the observations are taken at the same point in time with respect to the criterion measure and the measure that is to be validated, the correlation between the two measures is then referred to as an index of concurrent criterion validity (Ary, 1985).

In a study by Hudson, Hamada, Keech, and Harlan (1980) the GCS scale was correlated with the Beck and Zung depression scales. When the Beck scale was treated as the criterion, the GCS concurrent instrument validity was found to be .85 for a sample of 200 persons and .76 for another sample of 120 persons. When the Zung scale was used as criterion, the GCS concurrent instrument validity was found to be .92 and .81 for the two samples, respectively. In a study conducted at Western Michigan University, Byerly (1979) reports concurrent instrument validities for the GCS that range from .58 to .80 when the Beck scale is used a criterion measure, and the range was from .56 to .78 when using the Depression Adjective Checklist or DiscriminDACL as criterion (Hudson, 1982).

Discriminant Validity has been well established for each of the Hudson scales used. In all cases the known criterion groups were created by asking experienced therapists, most of whom were social workers and psychologists, to divide their clients into three groups: (1) those who definitely had a clinically significant problem in the area being studied; (2) those who were definitely free of a clinically significant problem in the area being investigated; and (3) those about whom the therapists were uncertain. The independent clinical diagnosis of experienced professional therapists
from among different settings were used as the basis for creating the known criterion
groups against which the discriminant validity of the scales would be evaluated.

After dividing the clients into the above three groups, clients in the two known
groups were asked to complete a research questionnaire package that contained the
particular Hudson scale that was being evaluated (Hudson, 1982).

After the clients completed the research questionnaire, the data were analyzed
by conduction a one-way analysis of variance in which the scale being evaluated was
treated as the dependent variable and membership in the criterion groups was treated
as the independent variable. The primary findings concerning the discriminant
validity of the scales where the point-biserial correlation between group membership
and the scale is treated as a coefficient of discriminant validity (Hudson, 1982).

Construct Validity refers to the ability of a measurement tool to measure the
specific construct it was designed to measure. It is very much consanguineous to
content validity. Content validity refers largely to the sampling of the construct
domain and the construction of a measurement tool while construct validity refers to
the performance of the device with respect to theoretical expectations (Ary, 1985).

Construct validity is defined as the ability of a measure to correlate well with
other variables that are theoretically highly related to the construct, but it also refers
to the ability of a measure to correlate poorly with yet other variables that are
theoretically unrelated to the construct. The first type of performance was called
convergent validity, and the second was referred to as discriminant validity. Thus,
convergent and discriminant validity are two different types of construct validity.
The first prediction was that each of the Hudson scales would correlate the lowest with a set of basic social background variables such as age, sex, ethnicity, marital status, family size, and so on. These low levels of predicted correlation were made because it was believed that the types of personal and interpersonal relationship problems that are measured by the Hudson scales actually have little to do with "who we are" as represented by background social characteristics. Because members of all social status groups are vulnerable to the problems represented by the Hudson scales, the correlations between the scales and a set of social status variables are very small. The social status variables will be referred to as Class I criterion variables when examining construct validity (Hudson, 1982).

The second prediction was that for each of the Hudson scales there are a number of variables that are expected to have only moderate correlations with the particular scale to be evaluated. This list of variables will vary somewhat from one scale to the next, and it is necessary to specify that list separately for each of the Hudson scales. These variables were obtained in most of the studies using a short self-report questionnaire called the Psycho-Social Screening Package or PSSP scale. In addition to measures taken from the PSSP, some of the Hudson scales were used as mid-range criterion variables. Variables that are expected to have only moderate correlations with the Hudson scales will be referred to as Class II criterion variables when examining the construct validity of the scales (Hudson, 1982).

The third prediction was that for each of the Hudson scales there would be a
group of variables that would have the highest correlation with the scales. Some of these were taken from the PSSP and some consist of other Hudson scales. This group of variables are referred to as Class III criterion variables when examining the construct validity of the scales.

The Hudson scales are not multidimensional scales; they do not contain multifactor measures of the constructs they were designed to measure; and the development of such factors will constitute an abuse of the scales that will enormously threaten their primary utility and severely mislead those who attempt to use multiple factors that are derived from the scales (Hudson, 1982).

The construct validity findings were summarized by averaging all the correlations between a specific scale and each of the Class I criterion variables, and the same was done with respect to the Class II and Class III criterion variables as indicated in Table 3.

Confidentiality

The physical measurements display changes in the persons' total physical life. The use of multi-point measurements over-time in both the physical and psychological areas of data were recorded. If this researcher noticed that any measurements were of concern to the individual a private session was held and a referral was made. Confidentiality and privacy of the individuals was maintained at all time in keeping with the Code of Ethics of the profession of Social Work. The workshop was to enhance and raise the knowledge base of those individuals who took part in the Stress
Workshop. Information and handouts were given to those individuals so that they could keep the material for further reference.

Table 3

Criterion Variables for the Hudson Scales Construct Validities

<table>
<thead>
<tr>
<th>Class I criterion variables for all Hudson scales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
</tr>
<tr>
<td>Sex</td>
</tr>
<tr>
<td>Ethnic status</td>
</tr>
<tr>
<td>Education</td>
</tr>
<tr>
<td>Income</td>
</tr>
<tr>
<td>Marital status</td>
</tr>
<tr>
<td>Family size</td>
</tr>
<tr>
<td>Class II criterion variables for the GCS scales</td>
</tr>
<tr>
<td>Zung depression scores</td>
</tr>
<tr>
<td>Beck depression scores</td>
</tr>
<tr>
<td>Clinical status</td>
</tr>
<tr>
<td>Depression - PSSP</td>
</tr>
<tr>
<td>Self-esteem - PSSP</td>
</tr>
<tr>
<td>Happiness - PSSP</td>
</tr>
<tr>
<td>Sense of identity - PSSP</td>
</tr>
<tr>
<td>Class III criterion variables for the IFR scale</td>
</tr>
<tr>
<td>Clinical status</td>
</tr>
<tr>
<td>IPA scores</td>
</tr>
<tr>
<td>Parent-child relationships - PSSP</td>
</tr>
<tr>
<td>Family relationships - PSSP</td>
</tr>
</tbody>
</table>

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General Motors Proposal, 1986

On February 24, 1986 an official proposal was submitted to Mr. Charles E. Watson, Director of Training and Development, Truck and Bus Operations, Pontiac Central Manufacturing and Assembly, General Motors Corporation. The proposal
was titled, Stress Information Workshop, Stress Management Techniques and Job Proficiency. The proposal was not acted upon by the company.

G.M.I. Engineering and Management Institute Pilot Study, 1988

The 1988 GMI Engineering and Management Institute pilot study was formulated as a learning tool for teaching Session Ten, Health Betterment/Stress Management. This researcher was involved in a field experience which offered a practical and realistic approach to the development and study of Personnel Administration. The goals of the internship were to develop course material and handouts, develop Midterm and Final Test construction, grade the Midterm and Final Examinations, and teach two graduate level sessions in the Personnel Administration course. This researcher taught Session Four, Job Design, and Session Ten, Health Wellness/Stress Management. The course was a taped video session sent to eighteen different learning centers in the states of California, Colorado, Delaware, Georgia, Iowa, Illinois, Indiana, Kentucky, Michigan, Missouri, New York, Ohio, Pennsylvania, Rhode Island, Tennessee, Texas, Virginia, Wisconsin, as well as to learning centers in Washington, D.C. and Canada.

The 1988 GMI pilot study used the same Hudson Scales as used in the 1985 Stress Workshop as described above with the addition of The Wright State Measurement of Burnout Questionnaire which was used in the 1988 pilot study. There were three different tests taken, two pre session Ten and one post session Ten.
The students were each sent three different communications. It was requested they complete the questionnaires and return them to the researcher (see Appendices). Each mailing included; the Wright State Measurement of Burnout Questionnaire, and the three Hudson Scales, GCS, IPR, IFR. The physical measurements were on the bottom of the GCS Hudson Scale. The measurements were Blood Pressure, Heart Rate and Temperature. The dates of the mailing were February 22, 1988, March 2, 1988 and March 23, 1988. Included in the mailing was information relating to stress and burnout.

The Wright State Measurement of Burnout Questionnaire

The Wright State Measurement of Burnout Questionnaire was and continues to be an experimental questionnaire. The validity is untested, but in the follow-up Duke Questionnaire, it appeared to have a high level of correlation with several measures with which it should. Because this does not answer the validity question, the questionnaire remains experimental. Internal consistency reliability was examined through coefficient alpha (Cronbach, 1951), a measure that is based on all of the interitem correlations within an instrument. Cronbach’s alpha is the most popular of the reliability estimates for measuring internal consistency which does not require the splitting or repeating of items (Carmines and Zeller, 1979). Cronbach’s alpha was computed for both the thirty item WSMB and the refined twenty-four item version. The estimate of reliability for twenty-four item WSMB was .85 and the estimate for
the thirty item was .80. Another method of assessing the reliability of an instrument is the split-halves method. The split-halves reliability coefficient for the twenty-four item WSMB was .93, and the thirty-item scale was computed to be .92, reflecting little difference in the two formats (Thornton, 1982).

The factor analysis consisted of an interactive principal components analysis followed by a varimax rotation. A minimum equivalence of one was used as the criterion by which the number of factors were chosen. On that basis, it was determined that individual items on the WSMB would factor on six components with 62 percent of the variability in the data being accounted for. The six factors, in order of factor loadings are: (1) Mental (Cognitive) Exhaustion, (2) Physical and Mental Vitality, (3) Loss of Interest, (4) Self Isolation, (5) Emotional Distancing, and (6) Role Ambiguity. Individuals scoring high on Factor 1, Mental (Cognitive) Exhaustion, would feel emotionally drained, overworked, burned out, frustrated, trapped, and at the end of their rope. Individuals scoring low on Factor 2, Physical and Mental Vitality, would feel fatigued when starting a new day, would feel the need for a long vacation, and would tend to not care about their co-workers. These individuals would not feel energetic and productive. The scoring for this factor is opposite that for the other five WSMB factors. That is, low scores on these factors denotes burnout while high scores on the other factors would indicate burnout. Respondents scoring high on Factor 3, Loss of Interest, would feel bored with the job, that he or she was no longer contributing and would feel they show an "I don't care" attitude about work. A high scorer on Factor 4, Self-Isolation, would feel that
working with people is stressful and is a strain. They are likely to feel that co-workers blame them for some of their problems. The person scoring high on Factor 5, Emotional Distancing, would feel callous toward people and would feel that they treat some co-workers like impersonal objects. A high scorer on Factor 6, Role Ambiguity, would not know what is expected of them and would not know what is required to advance on the job (Thornton, 1982).

A closer review of the analysis of the WSMB reveals that there are four very high Beck Depression Inventory (BDI) scores (clinically depressed). In each of the relationships where the BDI is significantly related to one of the WSMB variables, these four observations appear to be having a great deal of influence. This may mean that there exists a common threshold at which both depression and burnout is manifested. That is, it is somewhat difficult to measure levels of depression until a significant level (clinically depressed) is reached. Similarly, it may be that the correlation between the WSMB and depression only emerges after significant levels (a high threshold) of severity of burnout and depression have been reached.

These analyses of items focusing on individual stress and burnout have important implications for job assessment and organizational behavior. Maslach (1984) has stated that research on burnout is still in its infancy, and that there is much that we simply do not know about the phenomenon. She expresses concern about the rush into solutions before there is full understanding of the problem. This analyses point to the importance of differentiating between specific behaviors frequently associated with the phenomenon of burnout for example, depression, Type
A behaviors, stressful life events and the overall construct of burnout. An individual who is hard driving is not necessarily prone to burnout. Depression is not necessarily synonymous with the phenomenon; an individual can be suffering from burnout, yet have little or no depression. It is important, therefore, that basic assumptions about burnout be made cautiously; and careful attention be given to the complex networking of other variables which can influence the outcome of a stressful situation.

People vary considerably in how they are affected by potential stressors (Sarason, Levine, and Sarason, 1982). Several researchers (Jenkins, 1979; Johnson and Sarason, 1978: Rahe and Arthur, 1976) have pointed to the role of moderator variables. There are three broad categories of moderator variables: (1) relatively stable personal characteristics, such as internal-external locus of control; (2) prior experiences that influence how a person responds to stress; and (3) environmental factors such as social support. It appears that those who suffer lower levels of burnout seem to reflect certain common characteristics. Education levels are higher (BA, BS, or higher), they are married, participate in more outside activities (clubs), and were not currently attending schools. It would appear that a stable marriage with concurrent familial support may be a strong moderator in diminishing the effects of job stress. Coleman, Butcher, and Carson, (1984) have pointed out that individuals of lower socioeconomic status have fewer resources for dealing with stressors in their lives. The conditions under which socioeconomic individuals are reared tend not to enable them to develop coping skills needed in our increasingly complex society (Kohn, 1973). Given the relationship of education level and socioeconomic status,
it is not surprising that individuals with higher levels of education may have exhibited more adequate coping patterns to job stress, resulting in lower burnout scores than those with less education. Again, this finding must be interpreted with caution.

Analyses of validity, reliability, and the factors which contribute to the overall burnout score demonstrate that the WSMB is a promising instrument that possesses appropriate psychometric and practical characteristics for practice and research. Internal consistency reliability is quite adequate. The WSMB offers several practical advantages for clinicians and researchers. It is a moderately brief instrument and can be completed in a very short period of time. Therefore it can be administered easily at repeated intervals, an initial evaluation, over the course of treatment by professionals, during organization-specific implementation strategies, or at follow-up intervals without intruding unduly on the individual's time or that of the organization's. The WSMB is also especially appropriate for group testing situations in which a large number of employees need to be evaluated expeditiously, and a high rate of participation encouraged. This was evidenced by the large number of participation rate of subjects in the 1988 study.

The WSMB questionnaire was divided into five different sections. The first question requested the number of years in your present type of work. Answers ranged from less than one year to 21 years. The second question was the number of years in this type of work. Those responding ranged from less than one year to 21 years. The third question was work hours per week. Those responding ranged from 40 hours to 60 hours a week. The fourth question was jobs held in the last five
years. Those responding answered ranged from one to five jobs held in the last five years. The last question in section one was related to organization level: Level One, Executive, Director, Vice President; Level Two, Manager; Level Three, Senior Individual, Contributor; and lastly, Level Four, Middle or Entry Level. The range to this question was from one to four. The next 30 questions were divided into four sections. The 30 questions when answered by the respondent gave their burnout rate. The range of those answering was from 0 to 116. The higher the number, the more the individual was experiencing burnout. Burnout is defined as mental exhaustion. Mental exhaustion is characterized by the development of negative attitudes towards one's self, towards work, and towards life (Pines, 1981). The individual experiences burnout when they reach their adaptability limits.

The range of the answer for the Hudson Scales were GCS, 2 to 60; IPR, 2 to 60; and the IFR range was 1 to 66. The Systolic rate range for the sample population was from a low of 90 to a high of 150. The Diastolic rate range for the population was from a low of 50 to a high of 108. The range of Heart rate was 48 to a high of 100 and the temperature range was from 96.5 to 99.1.

The sample population was students in the Masters program in Manufacturing Management at GMI. There were 110 individuals in the program, 87 males and 23 females. Their ages ranged from 24 to 47. The individuals who answered all three questions, and returned the packages to the researcher were 52. Forty one individuals completed 2 questionnaire packages, and 6 individuals completed only one of the questionnaire packages. Eleven individuals who refused to participate, for a
total of 110 individuals. The individuals in the sample population were from 18 states, Washington D.C. and Canada. All had earned their undergraduate degrees and all were employed in manufacturing. The questionnaires were used to gather data to investigate the significance of a videotaped lecture dealing with new information. The study's major focus was to investigate if the new information would generalize to influence the coping behaviors of the individuals who took part in the study as compared with the 1985 workshop that was direct instruction. The results of the 1988 study were not computed until the research study was given formal consent by the Human Subjects Institutional Review Board of Western Michigan University in keeping with university protocol.

Research, 1993

The first mailing of the 1993 research questionnaire, the Duke Health Profile, was sent out to 110 individuals on March 23, 1993. The second mailing was on April 16, 1993 and was sent out to 67 individuals who had not answered the first mailing. Fifteen phone calls were made to individuals who had not answered the first two mailings. There was a total return of 87 individuals, with 23 individuals who did not answer or return the questionnaire. Three individuals could not be located, four refused to participate and one individual died; his mother answered the first mailing.
The Duke Health Profile

The Duke Health Profile (DHP) is a 17-item self-report measurement tool containing six health measures which includes; physical, mental, social, general, perceived health, and self-esteem. There are four dysfunctional measurements; anxiety, depression, pain and disability. This measurement tool was derived from a 63-item Duke (University North Carolina) Health Profile (DUHP).

Reliability and Validity of the Duke Health Profile

The reliability of the Duke Health Profile is supported by Cronbach’s alphas (0.35 to 0.78) and test-retest correlations (0.30 to 0.78). Clinical validity was supported in the original study that used the DHP by differences between the health scores of patients with clinically different health problems. In the original study using the shortened version of the DHP, convergent and discriminant validity were demonstrated by score correlations between the DHP and the Sickness Impact Profile, the Tennessee Self-Concept Scale and the Zung Self-Rating Depression Scale (Parkerson, 1990).

The DHP was developed in response to a need for a measure of the health outcomes that addresses basic health measurement issues and improves the potential for research, health promotion and clinical applicability (Parkerson, 1990). The shortened version of the DUHP, the DHP was used in this research because it exhibited reliability and validity for the constructs it was conceptualized to measure.
The questions on the DHP covered most of the elements considered by other researcher to be important for measuring health.

Fylkesnes and Forde concluded from their research that overall self-evaluation of health status is "not just a proxy measure of objective health status" (Fyldesnes, 1991, p. 141). In a twenty year longitudinal study conducted by Singer in mid-town Manhattan, it was found that self-rated health was a powerful predictor of mortality and health among adults between the ages of 20 and 59 years old (Singer, 1976). In a nine year longitudinal study in Alameda County California, Kaplan and Kamacho discovered that poor self-rating was associated with increased mortality rates for respondents over the age of twenty-nine (Kaplan, 1983). Mossey and Shapiro reported that respondents’ self-ratings of health outweighed the extensive health care utilization and medical history data available in predicting survival over a seven year period (Mossey, 1982). Idler and Angel believe that self-rating and self-assessments of health are good predictors of mortality and are inexpensive ways to measure the perceived health of an individual (Idler, 1990). An individual’s subjective perception appears to carry an independent ability to predict the individual’s survival over a period of as many as six to nine years (Idler, 1991).

Score Evaluation of the Duke Health Profile

The DHP is also short, user-friendly and easily self-administered because of the simplicity of the items. High scores for the health items indicate good health. High scores for the dysfunctional items and measures indicate poor health.
The Duke Health Profile Measurements

The principal measures developed for the DHP are based upon the three World Health Organization (WHO) dimensions; physical, mental and social health (Parkerson, 1990). The physical health measure includes three physical symptom items and two ambulation items. The range for the physical measure was from a low of 60 to a high of 100. The mental health measure includes one item that measures cognition, two items for emotional symptoms, and two items for personal self-esteem. The range for the mental health measure was from a low of 50 to a high of 100. The social health includes three items that measure self-concept regarding personal relationships with others and two items that quantify social activities. The range for the social health measures was from a low of 30 to a high of 100. The overall health scale, general health, includes all 15 items of the physical, mental, and social measures. The range for the general health measures was from a low of 53 to a high of 97. The perceived health measures is a separate one-item indicator of the extent to which the individual judges themselves to be basically healthy, according to their own criteria. The range for the perceived health measures was from a low of 50 to a high of 100. The self-esteem measure is a five-item sub-scale that combines the personal and social self-concept items from the mental and social health measures. The range for the self-esteem measures was from a low of 40 to a high of 100.
Dysfunctional Measures

The dysfunctional measures are broken down into four items. The anxiety dysfunction measures includes the six items of trouble sleeping, getting tired easily, difficulty concentrating, nervousness, not easy to get along with, and comfortable being around people. The range for the anxiety measures was from a low of 33 to a high of 117. The depression measure includes the five items of trouble sleeping, getting tired easily, difficulty concentrating, feeling depressed or sad, and giving up too easily.

The range for the depression measures was from a low of 30 to a high of 100. The pain measure consists of the single item, hurting or aching in any part of your body. The range for the pain measures was from a low of 0 to a high of 100. The disability measure item was not used in the final research because there were no respondents who answered this question indicating days of confinement.

Statistical Methods

The 1988 pilot study measures provides baseline data with which data from the 1993 study can be compared. This research study is concerned with determining the extent of relationship existing between variables. It enables one to measure the extent to which variations in one variable are associated with another. The magnitude of the relationship is determined through the use of the coefficient of correlation.

Item-remainder analyses were calculated in the original study for items in the
DHP physical health, mental health, and social health measures, using the Spearman rank-order correlation between the scores of the item being tested and the score of the remaining item scores for each measure. Cronbach's alpha was calculated for each of the seven multi-item measures. Spearman correlation was used for test-retest analyses, comparison of health scores and other variables, and comparison of the DHP scores with those of the other 1988 comparison instruments. The Bonferroni multiple comparison method was used for comparison of mean health scores by diagnostic category (Miller, 1981).

Summary

The DHP questionnaire is a second generation health status measure derived from the original 63-item DUHP. The shortened DHP is user friendly and easily completed. Further testing is needed, and will provide evidence for the usefulness of the DHP in future research, in health promotion and clinical practice. The items are generic rather than disease-specific, but they are intended to reflect changes in health of the sort that the researcher would expect from the health problems most commonly encountered in different environmental settings.

The Hudson Scales are a useful tool and have been used in the researchers clinical practice. They are user-friendly and easy to complete.

Together the measurement data from the research strongly suggest that both the DHP and the Hudson Scales should be useful in monitoring health as an outcome of medical intervention and health promotion.
CHAPTER IV

ANALYSIS AND INTERPRETATION OF THE DATA

This research study investigated eleven hypotheses, testing the relationship between individual scores in a Healthwellness pilot study in 1988 and the scores in a follow-up 1993 longitudinal study. The research issues examined in this study looked at the reliability and validity of the health measurements of the questionnaires used. The questionnaires used were The Duke Health Profile, The Wright State Measurement of Burnout Questionnaire, and the Hudson Scale Questionnaires.

To facilitate the reporting of the findings, this chapter is divided into sections addressing the eleven hypothesis tested. Each hypothesis will be stated, the statistical methods used explained, and the results obtained, cited. The data presented in this study is descriptive in nature, and is introduced in tabular form. The tables are numbered four (4) through twenty-one (21). The tables display each variable and the statistical significance if applicable to support or refute the hypothesis. An asterisk (\(*\)) signifies the correlation coefficients of the variables which are significant at the .05 level. A double asterisk (\(\**\)) after the number signifies the correlation coefficient of the variables and is significant at the .01 level.

As introduced in Chapter III, page 89, the 1988 questionnaires were given to the sample population to gather data to investigate the significance of a videotaped lecture dealing with new information. The pilot study's major focus was to
investigate if the new information would generalize to influence the coping behaviors of the individuals who took part in the study. It was postulated that the first and second test score, which were pre-test, would be different from the third test score, which was post-test and was taken after the intervention. The intervention was the Stress Workshop given between the second and third test measurement. The data in Table 4 displays the stability of the questionnaires over the testing period. The results in Table 4 also display test-retest reliability coefficient of the questionnaires used in the 1988 study. Test-retest reliability is the correlation between a set of scores obtained from a single scale on two separate occasions (Ary, 1985). Table 4 displays the correlation coefficient from four scales on three separate occasions. Therefore the test-retest reliability of the questionnaires represents the stability of measurement overtime, and displays a high reliability.

The validity question has also been answered in that the measurements discussed have measured what they were designed to measure. The validity concerns have been addressed in Chapter III, page 73 through 88 for the Hudson Scales. The Hudson Scales, GCS, IPR, IFR were designed to measure the severity or magnitude of problems that an individual has with (1) depression, (2) self-esteem, (3) intrafamilial stress, and (4) peer relationship. Each scale used in the 1988 study has a reliability of .90 or better, and they all have good content, concurrent, factorial, discriminant and construct validity. The Wright State Measurement of Burnout Questionnaire Validity was addressed in Chapter III, page 90.
Table 4

Mean, Standard Deviation and Correlation Coefficient for Burnout, Generalize Contentment Scale (GCS), Index of Peer Relations (IPR), and Index of Family Relations (IFR) on Test 1, 2, and 3, 1988. (N=50)

<table>
<thead>
<tr>
<th></th>
<th>Mean 1</th>
<th>Mean 2</th>
<th>Mean 3</th>
<th>SD-1</th>
<th>SD-2</th>
<th>SD-3</th>
<th>r</th>
<th>r</th>
<th>r</th>
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</thead>
<tbody>
<tr>
<td>Burnout</td>
<td>V-17</td>
<td>V-22</td>
<td>V-27</td>
<td>V-17</td>
<td>V-22</td>
<td>V-27</td>
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<td>BO-3</td>
<td>BO-1</td>
<td>BO-2</td>
<td>BO-3</td>
<td>V-22</td>
<td>V-27</td>
<td>V-27</td>
</tr>
<tr>
<td></td>
<td>49</td>
<td>48</td>
<td>47</td>
<td>19</td>
<td>23</td>
<td>22</td>
<td>.88*</td>
<td>.86*</td>
<td>.81*</td>
</tr>
<tr>
<td>Generalize Contentment Scale</td>
<td>GCS-1</td>
<td>GCS-2</td>
<td>GCS-3</td>
<td>GCS-1</td>
<td>GCS-2</td>
<td>GCS-3</td>
<td>V-29</td>
<td>V-30</td>
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<td>IPR-3</td>
<td>IPR-1</td>
<td>IPR-2</td>
<td>IPR-3</td>
<td>V-31</td>
<td>V-32</td>
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</tr>
<tr>
<td></td>
<td>20</td>
<td>21</td>
<td>20</td>
<td>13</td>
<td>13</td>
<td>12</td>
<td>.85*</td>
<td>.85*</td>
<td>.93*</td>
</tr>
<tr>
<td>Index of Family Relations</td>
<td>IFR-1</td>
<td>IFR-2</td>
<td>IFR-3</td>
<td>IFR-1</td>
<td>IFR-2</td>
<td>IFR-3</td>
<td>V-34</td>
<td>V-35</td>
<td>V-35</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>16</td>
<td>15</td>
<td>15</td>
<td>17</td>
<td>17</td>
<td>.83*</td>
<td>.93*</td>
<td>.83*</td>
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</table>

**Significant at the .05 level.

Hypothesis Number One

There would be a relationship between an individual’s generalized contentment scale (GCS) score and degree of job burnout.

The GCS measures nonpsychotic depression, and the range for this measurement was 2 to 60. All scores above 30 indicate a clinically significant problem. The GCS is scored by first reverse-scoring the items listed as 5, 8, 9, 11,
12, 13, 15, 16, 21, 22, 23, and 24. Then totaling these and the other item scores and subtracting 25. This gives a range of 0 to 100, with the higher scores indicating more depression.

The GCS measurement 1, 2, and 3 were Variables-28, 29, 30. On Variable-28, GCS-1, the first Hudson Scale measurement, those who scored below 30 were 56 individuals, 74 percent of the sample population of 76. Twenty individuals, 26 percent of the total sample population scored above 30 which indicates a problem with depression. These 20 individuals would be the target population that are identified as depressed.

The second Hudson Scale measurement, GCS-2, Variable 29 indicated 73 percent or 58 individuals scored below the 30 point, 27 percent or 18 individuals scored above the 30 point cutoff. The remaining Hudson measurement GCS-3, Variable-30, displays 76 percent of the sample or 64 individual scores were below 30, and 24 percent or 12 individuals were above the 30 cutoff point.

Each Hudson Scale used in the 1988 study has a reliability of .90 or better, and they all have good content, concurrent, factorial, discriminant and construct validity, as addressed in Chapter III. The initial purpose for the development of the Hudson Scales was for their use in single-subject, repeated measures designed to monitor and guide the course of treatment with individuals, couples, families and small groups (Hudson, 1982).

The Wright State Measurement of Burnout Questionnaire was designed to measure an individual's job related stress and burnout. The scores ranged from a low
of 0 to a high of 116. The higher the number, the more the individuals were experiencing burnout.

The overall burnout score is obtained by adding the items which contribute either positively and subtracting negative items from the burnout score. Possible minimum and maximum burnout scores can range from a -13 to +150. Items which add to the total burnout score include such items as feeling emotionally drained, bored, overworked, frustrated, trapped and fatigued when starting a new day. Items subtracting from the burnout score include such variables as feelings of competency at what the individual does, helping other people, having clearly defined goals, and feelings of accomplishment.

There were three Burnout measurements, the first measurement was Variables-17, Burnout-1, the second Burnout measurement was Variable-22, Burnout-2, and the third measurement for Burnout-3 was Variable-27. The mean and standard deviation for these Variables are reported in Table 5.

A Pearson product-moment coefficient of correlation was used to test Hypothesis One and to determine if there was a statistically significant relationship at the .05 or .01 level between the variables. Table 5 displays a correlation coefficient at the .01 level of significance; therefore this hypothesis is supported by the data. There is a relationship between individual’s generalized contentment scores and their degree of job burnout.
Table 5

Mean, Standard Deviation and Correlation Coefficient Between Generalize Contentment Scales and the Wright State Measurement of Burnout Questionnaire. (N=76)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean 1</th>
<th>Mean 2</th>
<th>SD-1</th>
<th>SD-2</th>
<th>r</th>
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</thead>
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<td>V-28, GCS-1</td>
<td>22.2</td>
<td>48.8</td>
<td>12</td>
<td>19.2</td>
<td>.72**</td>
</tr>
<tr>
<td>V-17, BO-1</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-29, GCS-2</td>
<td>22.6</td>
<td>48.8</td>
<td>13.8</td>
<td>19.2</td>
<td>.64**</td>
</tr>
<tr>
<td>V-17, BO-1</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-30, GCS-3</td>
<td>21.9</td>
<td>48.8</td>
<td>13.2</td>
<td>19.2</td>
<td>.59**</td>
</tr>
<tr>
<td>V-17, BO-1</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>V-22, BO-2</td>
<td>47.9</td>
<td>22.2</td>
<td>23.3</td>
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<td>.64**</td>
</tr>
<tr>
<td>V-28, GCS-1</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>V-22, BO-2</td>
<td>47.9</td>
<td>22.6</td>
<td>23.3</td>
<td>13.8</td>
<td>.65**</td>
</tr>
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<td></td>
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</tr>
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<td>V-30, GCS-3</td>
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<td>21.9</td>
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<td>.59**</td>
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<td>V-27, BO-3</td>
<td>46.8</td>
<td>22.2</td>
<td>22.1</td>
<td>12</td>
<td>.50**</td>
</tr>
<tr>
<td>V-28, GCS-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-27, BO-3</td>
<td>46.8</td>
<td>22.6</td>
<td>22.1</td>
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<td>.50**</td>
</tr>
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<td>V-29, GCS-2</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
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<td>V-27, BO-3</td>
<td>46.8</td>
<td>21.9</td>
<td>22.1</td>
<td>13.2</td>
<td>.61**</td>
</tr>
<tr>
<td>V-50, BO-1&amp;2</td>
<td>48.3</td>
<td>22.4</td>
<td>21.2</td>
<td>12.9</td>
<td>.71**</td>
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<td>V-51, GCS-1&amp;2</td>
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</tr>
</tbody>
</table>

**Significant at the .01 level.

Hypothesis Number Two

There would be a relationship between an individual's Index of Peer Relation Scale (IPR) score and their scores on the Wright State Measurement of Burnout...
Questionnaire.

The Index of Peer Relations Scale (IPR) was designed to measure the magnitude of a problem that the individual has with his peers. The range for this measurement was 2 to 60 with scores above 30 indicating a significant problem the individuals have with their peer group. The IPR is scored by first reverse-scoring the items listed as 1, 4, 7, 8, 11, 12, 15, 16, 17, 18, 21, 22, and totaling these and the other item scores. After totaling the scores, 25 points are subtracted which gives the total score. This gives a range of 0 to over a 100, with higher scores indicating more evidence or presence of a problem with peers.

The IPR measurement 1, 2, and 3 were Variables-31, 32, and 33. On Variable-31, IPR-1; the first measurement of this series, those individuals who scored below 30 were 57 individuals, 75 percent of the sample of 76. Those who scores were above the 30 points, indicating a problem with their peer group were the remaining 25 percent of the population, 19 individuals.

The second Hudson Scale measurement in this series was Variable-32, IPR-2, 79 percent of the sample population or 52 individuals scored below the 30 point cutoff. The remaining 24 individuals or 21 percent of the sample population scores were above the 30 point cutoff.

The third Hudson Scale measurement in this series was Variable-33, IPR-3 which showed that 82 percent of the sample population or 61 individuals scored below the 30 point cutoff and 14 percent or 11 individuals score above the 30 point cutoff. The mean, standard deviation and correlation coefficient of the Variables are
reported in Table 6.

The Wright State Measurement of Burnout Questionnaire and Variable-17, BO-1, Variable-22, BO-2 and Variable-27, BO-3 were outlined above in Hypothesis Number One and remain the same throughout this chapter. The mean, standard deviation and correlation coefficient of the Variables outlined in Hypothesis Two are presented in Table 6.

A Pearson product-moment coefficient of correlation was used to test Hypothesis Two and to determine if there was statistically significant relationship at the .05 or .01 level between the variables. Table 6 displays a correlation coefficient at the .01 level of significance, therefore this hypothesis is supported by the data. There is a relationship between an individual's scores on the Index of Peer Relation Scale and their score on the Wright State Measurement of Burnout Questionnaire.

Hypothesis Number Three

There would be a relationship between an individual's Index of Family Relations Scale (IFR) score and their scores on the Wright State Measurement of Burnout Questionnaire.

The Index of Family Relations (IFR) was designed to measure the extent, severity, or magnitude of problems that family members have in their relationship with one another. The IFR allows the respondents to characterize the severity of family problems and can be regarded as an overall measure of intrafamilial stress. The IFR has a cutting score of 30, as do the other Hudson Scales used in this
### Table 6
Mean, Standard Deviation and Correlation Coefficient Between Index of Peer Relations Scale and the Wright State Measurement of Burnout Questionnaire. (N=76)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean 1</th>
<th>Mean 2</th>
<th>SD-1</th>
<th>SD-2</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-31, IPR-1</td>
<td>20.1</td>
<td>48.8</td>
<td>13.2</td>
<td>19.3</td>
<td>.49**</td>
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<td>V-17, BO-1</td>
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<tr>
<td>V-32, IPR-2</td>
<td>20.8</td>
<td>47.9</td>
<td>12.8</td>
<td>23.3</td>
<td>.49**</td>
</tr>
<tr>
<td>V-22, BO-2</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>V-33, IPR-3</td>
<td>19.5</td>
<td>46.8</td>
<td>12.2</td>
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<td>.30**</td>
</tr>
<tr>
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</tr>
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<td></td>
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<td>V-17, BO-1</td>
<td>48.8</td>
<td>19.5</td>
<td>19.3</td>
<td>12.2</td>
<td>.47**</td>
</tr>
<tr>
<td>V-33, IPR-3</td>
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</tr>
<tr>
<td>V-22, BO-2</td>
<td>47.9</td>
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<td>23.3</td>
<td>13.3</td>
<td>.45**</td>
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<td>V-31, IPR-1</td>
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<tr>
<td>V-22, BO-2</td>
<td>47.9</td>
<td>19.5</td>
<td>23.3</td>
<td>12.2</td>
<td>.45**</td>
</tr>
<tr>
<td>V-33, IPR-3</td>
<td>46.8</td>
<td>20.8</td>
<td>22.1</td>
<td>12.8</td>
<td>.29**</td>
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<td>V-27, BO-3</td>
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<td>V-17, BO-1</td>
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<td>19.3</td>
<td>19.3</td>
<td>12.2</td>
<td>.51**</td>
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<tr>
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<td>.54**</td>
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<tr>
<td>V-50, BO-1&amp;2</td>
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</tr>
</tbody>
</table>

**Significant at the .01 level.

research. Scores above 30 indicate a clinically significant problem. Score below 30, plus or minus 5 points, indicate no such problem. The range for this measurement in the 1988 study was from a low of 1 to a high of 66. The IFR is scored by first
reverse-scoring the items listed as 1, 2, 4, 5, 8, 14, 15, 17, 18, 20, 21, 23, then totaling these and the other item scores, and subtracting 25. This gives a range of 0 to over 100 with the higher scores giving more evidence of the presence of family relationship problems and inter-family stress. Individuals who scored above the 30 point cutoff would be those who would be targeted for intervention and referral to a mental health professional. The IFR measurement variables were coded 1, 2, 3, and were Variables-34, 35 and 36. Variable-34, IFR-1 the first measurement of this series, the individuals who scored below 30 were 84.2 percent of the sample population of 76 and numbered 64 individuals, with the remaining 16 percent or 12 individuals showing a score above the 30 point cutoff.

The second Hudson Scale measurement in this series was Variable-35, IFR-2; which showed that 84 percent of the sample population score were below the 30 point cutoff. The remaining 17 percent of the population showed score above the 30 point cutoff.

The third Hudson Scale measurement in this series was Variable-36, IFR-3, which showed that 86 percent of the sample population scores were below the 30 point cutoff. The remaining 14 percent of the scores were above the 30 point cutoff that indicated intrafamilial stress. The mean, standard deviation and correlation coefficient of the Variables are reported in Table 7.

The Wright State Measurement of Burnout Questionnaire and Variable-17, BO-1, Variable-22, BO-2 and Variable-27, BO-3 were outlined above in Hypothesis Number One and remain the same throughout this chapter. The mean, standard
deviation and correlation coefficient of the Variables are reported in Table 7.

A Pearson product-moment coefficient of correlation was used to test Hypothesis Three and to determine if there was a statistically significant relationship at the .05 or .01 level between the variables. Table 7 shows a correlation coefficient at the .01 level of significance; therefore this hypothesis is supported by the data. There is a relationship between an individuals scores on the Index of Family Relation Scale and their score on the Wright State Measurement of Burnout Questionnaire.

Hypothesis Number Four

There would be a relationship between an individuals 1988 scores and their scores on the 1993 Duke Health Profile.

The 17 item Duke Health Profile described in this research was developed in response to the need for a measure of health outcomes that address basic health measurement issues and improves the potential for research, health promotion, and clinical applicability (Parkerson, 1990). The Duke exhibits reliability and validity for the constructs it was conceptualized to measure, as introduced in Chapter III, page 97. In the original Duke research, the reliability of the Duke Health Profile was supported by Cronbach’s alphas (0.55 to 0.78) and test-retest correlations between the DHP and the Sickness Impact Profile, the Tennessee Self-Concept and the Zung Self-Rating Depression Scale (Parkerson, 1990).

Convergent and discriminant validity for the Duke measures using the Hudson Scales for comparison are displayed in Tables 7,8,9,10, and 11. Since high scores
Table 7
Mean, Standard Deviation and Correlation Coefficient Between the Variables Index of Family Relations and the Wright State Measurement of Burnout Questionnaire, BO-1, BO-2, BO-3. (N=76)

<table>
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<th>Mean 2</th>
<th>SD-1</th>
<th>SD-2</th>
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<td>16.2</td>
<td>19.3</td>
<td>14.7</td>
<td>.42**</td>
</tr>
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<td></td>
<td></td>
</tr>
<tr>
<td>V-17, BO-1</td>
<td>48.8</td>
<td>16.2</td>
<td>19.3</td>
<td>14.7</td>
<td>.43**</td>
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</tr>
<tr>
<td>V-17, BO-1</td>
<td>48.8</td>
<td>15.8</td>
<td>19.3</td>
<td>17.4</td>
<td>.41**</td>
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</tr>
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<td>V-17, BO-1</td>
<td>48.8</td>
<td>15.3</td>
<td>19.3</td>
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<td>.41**</td>
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<td>V-22, BO-2</td>
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<td>.37**</td>
</tr>
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<td>V-22, BO-2</td>
<td>47.9</td>
<td>16.2</td>
<td>23.3</td>
<td>14.7</td>
<td>.37**</td>
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<td>V-35, IFR-2</td>
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<tr>
<td>V-22, BO-2</td>
<td>47.9</td>
<td>15.8</td>
<td>23.3</td>
<td>17.4</td>
<td>.45**</td>
</tr>
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<td>V-27, BO-3</td>
<td>46.8</td>
<td>15.8</td>
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<td>17.4</td>
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<td>16.0</td>
<td>21.2</td>
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<td>.46**</td>
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<td></td>
</tr>
</tbody>
</table>

**Significant at the .01 level.

indicate poor mental health on all of the Hudson Scales, negative correlations were expected between the Hudson scores and the Duke scores.

This researcher did not use the mean Item scores for each of the 17 items as
used in the original 1990 Parkerson, but used the 10 item scores. Further investigation will look at the inter-correlational of the 17 items Duke Questionnaire in future research.

In the original Duke Health Profile article of 1990, by Parkerson, patients from the two different studies, 323 from the 1981 study by Parkerson and 360 from the 1988 Broadhead study, for a total of 683 individuals, were compared and found to be similar. No statistically significant differences at the level of alpha = 0.05 were found between the characteristics of the two groups with regard to age, gender, race, marital status, living arrangements, employment status, education or their socioeconomic status. The combined group of 683 individuals had a mean age of 34.1 years and a standard deviation of 12.7 with age range from 18 years to 65 years. The population was predominantly female (76%) working full time (69.4%); slightly more than half were educated beyond the high-school level.

In this 1993 research, with a sample population of 87, the mean age was 37.5 and a standard deviation of 5.9, with the range of age from 29 to 52 years of age. The population was 78 percent male and 22 percent female. All of the sample population were employed full time and all were educated beyond the high-school level. The analogies between the two groups are displayed in Table 8.

The Physical Health measure includes three physical symptom items and two ambulation items. The Mental Health includes one item that measures cognition, two items for emotional symptoms, and two items for personal self-esteem. High score for the health items and measures indicate good health, whereas high scores for the
Table 8
Mean and Standard Deviation for the Original Duke Research and the 1993 Research

<table>
<thead>
<tr>
<th>Variable Labels</th>
<th>1993 Research (N=87)</th>
<th>Duke Research (N=683)</th>
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<td>Name</td>
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</tr>
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</tr>
<tr>
<td>V-3 Mental</td>
<td>84.8</td>
<td>13.4</td>
</tr>
<tr>
<td>V-4 Social</td>
<td>72.6</td>
<td>15.7</td>
</tr>
<tr>
<td>V-5 General</td>
<td>81.4</td>
<td>10.6</td>
</tr>
<tr>
<td>V-6 Perceived</td>
<td>93.4</td>
<td>17.0</td>
</tr>
<tr>
<td>V-7 Self-Esteem</td>
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<td>13.8</td>
</tr>
<tr>
<td>V-8 Anxiety</td>
<td>8.0</td>
<td>16.6</td>
</tr>
<tr>
<td>V-9 Depression</td>
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<td>14.2</td>
</tr>
<tr>
<td>V-10 Pain</td>
<td>26.0</td>
<td>32.2</td>
</tr>
<tr>
<td>V-11 Age</td>
<td>37.5</td>
<td>5.9</td>
</tr>
</tbody>
</table>

dysfunction items and measures indicate poor health. Since high scores indicate poor mental health on all the Hudson Scales, negative correlations were expected between the Hudson scores and the Duke scores. The Variables 51, 52 and 53 are a combined first and second Hudson Scale measurement of the 1988 study to produce Variable-51, GCS-1&2, Variable-52, IPR-1&2 and lastly Variable-53, IFR-1&2. The Variable-50, Burnout-1&2 is a combined total from the Wright State Measurement of Burnout Questionnaire, Variable-17, Burnout-1 and Variable-22, Burnout-2 to produce Variable-50.

A Pearson product-moment coefficient of correlation was used to test...
Hypothesis Four and to determine if there was a statistically significant relationship at the .05 or .01 level between the variables. Table 9 shows a correlation coefficient at the .05 level of significance for the variables Physical-2 and Variable-31, IPR-1. Table 9 also supports the hypothesis at the .01 level of significance. There would be a relationship between an individual's 1988 score and their scores on the 1993 Duke Questionnaire. The Social Health measure includes three items that measure self-concept regarding personal relationships with other people, and two items that quantify social activities. Table 10 proclaims the support for the hypothesis in that the hypothesis is supported by the correlation coefficient at the .01 levels of significance for the variables, Social, Variable-4 to Variable-28,29,30, which are GCS-1, 2 and 3. There is also a correlation coefficient for Social and Variable-51, GCS-1&2 at the 0.1 level of significance. The Variable-4, Social also demonstrates a correlation coefficient at the .01 level of significance for Variables-31 and 32 which are IPR-1 and IPR-2. The Social variable also exhibits a .01 level of significance for Variable-34 and 35 which are IFR-1 and IFR-2. Lastly for Variable-4, Social, the hypothesis is supported by the correlation coefficient for the Variable-52, IPR 1&2 and Variable 53, IFR-1&2.

A Pearson product-moment coefficient of correlation was used to test Hypothesis Four and to determine if there was a statistically significant relationship at the .05 or .01 level of significance between the variables. Table 10 communicates a correlation coefficient at the .05 and .01 level of significance for the Variables in question in Table 10. Therefore the hypothesis is further supported by the
### Table 9

Mean, Standard Deviation and Correlation Coefficient Between the Variables; Physical and Mental on the 1993 Duke, and IPR, GCS, IFR, on 1988 Questionnaires. (N=76)

<table>
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<tr>
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</tr>
<tr>
<td>V-3, Mental-3</td>
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<td>22.6</td>
<td>13.4</td>
<td>13.8</td>
<td>-.40**</td>
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*Significant at the .01 level.

The information found in Table 10.
Table 10

Mean, Standard Deviation and Correlation Coefficient Between the Variables; Social on the 1993 Duke, and the GCS, IPR, and the IFR on the 1988 Questionnaires. (N=76)

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<th>SD-2</th>
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<td>15.7</td>
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</table>

*Significant at the .05 level.
**Significant at the .01 level.

The General Health measure, Variable-5, is the overall health scale for the Duke questionnaire and includes all 15 items of the physical, mental, and social.
measures. These items provide an individual self-report of symptoms, concept, and capacity to perform that are indicators of health status in the positive sense of well-being.

In Parkerson's 1990 article both the DHP general health and perceived health scores correlated highly with the Tennessee Self-Concept Scale total self-esteem score, indicating close concordance between general and perceived health when self-esteem was used as the measure for comparison (Parkerson, 1990).

A Pearson product-moment coefficient of correlation was used to test Hypothesis Four and to determine if there was a statistically significant relationship at the .05 or .01 level of significance between the variables. Table 11 proclaims a correlation coefficient at the .01 level of significance for the variables in question in Table 11. Therefore Hypothesis Four is further supported by the information presented in Table 11.

The Variable of Perceived Health is a separate one item indicator of the extent to which the individuals judge themselves to be basically healthy, according to whatever guidelines they use as the criteria of health. In testing this section of the hypothesis, a Person product-moment coefficient of correlation was used to determine if there is a significant relationship between the variable of Perceived in the 1993 research and the variables of GCS, IPR and the IFR variable of the 1988 study.

Self-esteem is a five item sub-scale that combines the personal and social self-concept items from the mental and social health measures for the DHP Questionnaires.
Table 11

Mean, Standard Deviation and Correlation Coefficient Between the Variables; General-5 on the 1993 Duke, and the GCS, IPR, and the IFR on the 1988 Questionnaires. (N=76)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean 1</th>
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<th>SD-2</th>
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<td>V-28, GCS-1</td>
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<td>22.2</td>
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<td>12.1</td>
<td>-.32**</td>
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<td>V-5, General-5</td>
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<td>10.6</td>
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</tr>
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<td>V-29, GCS-2</td>
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<td>13.8</td>
<td>-.34**</td>
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</tr>
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<td></td>
<td>13.3</td>
<td>-.35**</td>
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<td>10.6</td>
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<td>12.8</td>
<td>-.30**</td>
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<td>10.6</td>
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</tr>
<tr>
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<td>16.9</td>
<td>-.33**</td>
</tr>
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<td>10.6</td>
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<tr>
<td>V-51, GCS-1&amp;2</td>
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<td>12.9</td>
<td>-.36**</td>
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</tbody>
</table>

**Significant at the .01 level.

Table 12 displays the results of this test and indicates a correlation coefficient at the .05 and .01 level of significance for the variables in question in Table 12. Therefore the hypothesis is further supported by the information in Table 12.
Table 12

Mean, Standard Deviation and Correlation Coefficient Between the Variables; Perceived-6 on the 1993 Duke Health Profile, and the GCS, IPR, and the IFR on the 1988 Questionnaires. (N=76)

<table>
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<tr>
<th>Variables</th>
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<td>V-6, Perceived</td>
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<td>20.2</td>
<td>17.0</td>
<td>13.3</td>
<td>-.24*</td>
</tr>
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<td>V-31, IPR-1</td>
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<tr>
<td>V-6, Perceived</td>
<td>93.4</td>
<td>15.8</td>
<td>17.0</td>
<td>17.4</td>
<td>-.34**</td>
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<td>V-6, Perceived</td>
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<td>22.4</td>
<td>17.0</td>
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<td>-.27*</td>
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</tbody>
</table>

*Significant at the .05 level.
**Significant at the .01 level.

As expected, the highest correlations were demonstrated between the Duke self-esteem measures score and the Hudson scores for each component and the total. This is partially the Hudson Scales measure how we view ourselves, and in turn we are what we think. Therefore the measurement of the variables that were displayed in Table 13 reinforces the support for the hypothesis.

A Pearson product-moment coefficient of correlation was used to test this section of Hypothesis Four and to determine if there was a statistically significant relationship at the .05 or .01 level of significance for the variable as outlined in the table. Table 13 demonstrates support for Hypothesis Four, there is a statistically significant relationship at the .05 and .01 level of significance for the variables.
<table>
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<td>V-52, IPR-1&amp;2</td>
<td>20.5</td>
<td>13.0</td>
<td>-.34**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-7, Self-Esteem-7</td>
<td>83.7</td>
<td>13.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-53, IFR-1&amp;2</td>
<td>16.0</td>
<td>16.0</td>
<td>-.32**</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at the .05 level.
**Significant at the .01 level.
Dysfunction items and measures were selected on the basis of face validity after items selection had been completed for the health measures on the original DHP test questionnaire. The Anxiety measure on the 1993 DHP questionnaire included the following six items: trouble sleeping, getting tired easily, difficulty concentrating, nervousness, not easy to get along with and discomfort being around people. These test questions are similar to the five out of the total 18 symptoms items listed as diagnostic criteria for generalized anxiety disorder by the Diagnosis and Statistical Manual of Mental Disorders (DSM-III-R).

The depression measure includes the following five items: trouble sleeping, getting tired easily, difficulty concentrating, feeling depressed or sad, and giving up too easily. Two of these items are from the physical health scale and three items are from the mental health scale. These measurement lines are conceptually similar to four out of a possible nine items found on the DSM-III-R criteria for clinical depression.

The Hudson Scale, GCS measures the concept of Depression, and was expected to be significant in testing this section of the hypothesis. Construct validity was determined by the DHP scores that were correlated with those on similar constructs of the three other measures from the 1988 study. The research measurements were compared in Table 14.

In testing this section of Hypothesis Four, a Pearson product-moment coefficient of correlation was used to determine if there was a significant relationship between the variables. The variables that were measured were Anxiety and
Depression of the DHP 1993 research and the GCS, IPR of the 1988 study. Table 14 introduces additional support for Hypothesis Four.

Table 14

Mean, Standard Deviation and Correlation Coefficient Between the Variables; Anxiety and Depression on the 1993 Duke Health Profile Questionnaire and the GCS and IPR on the 1988 Study Questionnaires. (N=76)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean 1</th>
<th>Mean 2</th>
<th>SD-1</th>
<th>SD-2</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-8, Anxiety-8</td>
<td>8</td>
<td>22.2</td>
<td>16.6</td>
<td>12.1</td>
<td>-.24*</td>
</tr>
<tr>
<td>V-28, GCS-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-8, Anxiety-8</td>
<td>8</td>
<td>22.2</td>
<td>16.6</td>
<td>13.8</td>
<td>-.32**</td>
</tr>
<tr>
<td>V-29, GCS-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-8, Anxiety-8</td>
<td>8</td>
<td>21.9</td>
<td>16.6</td>
<td>13.2</td>
<td>-.36*</td>
</tr>
<tr>
<td>V-30, GCS-3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-8, Anxiety-8</td>
<td>8</td>
<td>20.2</td>
<td>16.6</td>
<td>13.3</td>
<td>-.31**</td>
</tr>
<tr>
<td>V-31, IPR-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-8, Anxiety-8</td>
<td>8</td>
<td>22.4</td>
<td>16.6</td>
<td>12.9</td>
<td>-.29*</td>
</tr>
<tr>
<td>V-51, GCS-1&amp;2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-8, Anxiety-8</td>
<td>8</td>
<td>20.5</td>
<td>16.6</td>
<td>13.0</td>
<td>-.24*</td>
</tr>
<tr>
<td>V-52, IPR-1&amp;2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-9, Depression-9</td>
<td>14</td>
<td>22.5</td>
<td>14.2</td>
<td>12.1</td>
<td>-.30**</td>
</tr>
<tr>
<td>V-28, GCS-1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-9, Depression-9</td>
<td>14</td>
<td>22.6</td>
<td>14.2</td>
<td>13.8</td>
<td>-.28*</td>
</tr>
<tr>
<td>V-29, GCS-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-9, Depression-9</td>
<td>14</td>
<td>21.9</td>
<td>14.2</td>
<td>13.2</td>
<td>-.45**</td>
</tr>
<tr>
<td>V-30, GCS-3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-9, Depression-9</td>
<td>14</td>
<td>22.4</td>
<td>14.2</td>
<td>12.9</td>
<td>-.34**</td>
</tr>
<tr>
<td>V-51, GCS-1&amp;2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at the .05 level.
**Significant at the .01 level.
There is a statistically significant relationship at the .05 and .01 level of significance for the variables in Table 14. Hypothesis Four is supported and therefore accepted.

Hypothesis Number Five

There will be a relationship between the individual’s age and score. The older the individual, the lower the score.

The data does not support the hypothesis. There is no significant relationship observed between any of the variables that would support the hypothesis. Therefore, the hypothesis is rejected. Based on the data, there was no significant difference in the variable of Age and overall scores, however, the data displays an expected correlation coefficient between the variables treated in Table 15. It was expected the younger individuals would have less time in; years in present work, years employed in this type of work and more hours worked per week than their older counterpart.

In the Parkerson’s 1990 article, he used a combined group of 683 individuals who had a mean age of 34.1 years and a standard deviation of 12.7 years and range from 18 years to 65 years. In this 1993 research, with a sample population of 87, the mean age was 37.5 and a standard deviation of 5.9 years, with the range of age from 29 to 52 years of age.

A Pearson product-moment coefficient of correlation was used to test the hypothesis and to determine if there was a statistically significant relationship at the .05 or .01 level of significance between the variables. The data does not support the hypothesis, therefore the hypothesis is rejected.
Mean, Standard Deviation and Correlation Coefficient Between the Variables; Age, Variable-11 on the 1993 Duke Questionnaire and the Variables; Years in Present Work, BO1-A, BO2-A and BO3-A and Years Employed in This Type of Work, BO1-B, BO2-B, BO3-B and Hours Worked per Week, BO3-A and BO3-B on the 1988 Study Questionnaires. (N=76)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean 1</th>
<th>Mean 2</th>
<th>SD-1</th>
<th>SD-2</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-11, Age-11</td>
<td>37.5</td>
<td>36.1*</td>
<td>5.9</td>
<td>45.2*</td>
<td>.26*</td>
</tr>
<tr>
<td>V-13, BO1-A</td>
<td>37.5</td>
<td>60.2*</td>
<td>5.9</td>
<td>63.5*</td>
<td>.53**</td>
</tr>
<tr>
<td>V-11, Age-11</td>
<td>46.7*</td>
<td>7.1</td>
<td>5.9</td>
<td>.27*</td>
<td></td>
</tr>
<tr>
<td>V-15, BO1-C</td>
<td>37.5</td>
<td>44.1*</td>
<td>5.9</td>
<td>52.7*</td>
<td>.27*</td>
</tr>
<tr>
<td>V-11, Age-11</td>
<td>37.5</td>
<td>64.7*</td>
<td>5.9</td>
<td>53.8*</td>
<td>.55**</td>
</tr>
<tr>
<td>V-19, BO2-B</td>
<td>37.5</td>
<td>46.5*</td>
<td>5.9</td>
<td>6.7</td>
<td>.24*</td>
</tr>
<tr>
<td>V-11, Age-11</td>
<td>37.5</td>
<td>34.5*</td>
<td>5.9</td>
<td>38.6*</td>
<td>.30*</td>
</tr>
<tr>
<td>V-23, BO3-A</td>
<td>37.5</td>
<td>70.7*</td>
<td>5.9</td>
<td>55.2*</td>
<td>.63**</td>
</tr>
</tbody>
</table>

* Decimal point must be moved one space to the left to represent the correct numeral meaning to Standard Deviation and Mean scores (2)
* Significant at the .05 level.
** Significant at the .01 level.

Hypothesis Number Six

There will be a relationship between the organizational level of an individual
and their scores in the 1988 and 1993 study. The higher the organizational level, the lower the scores. The lower the organization level, the higher the score.

Table 16

Mean, Standard Deviation and Correlation Coefficient Between the Variables; Organizational Level and Age, BO1-B, BO1-C, BO1-D and BO-1. (N=76)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean 1</th>
<th>Mean 2</th>
<th>SD-1</th>
<th>SD-2</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-49, Organization</td>
<td>3.36</td>
<td>37.5</td>
<td>.814</td>
<td>5.9</td>
<td>-.44**</td>
</tr>
<tr>
<td>V-11, Age-11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-49, Organization</td>
<td>3.36</td>
<td>60.2</td>
<td>.814</td>
<td>53.5*</td>
<td>-.39**</td>
</tr>
<tr>
<td>V-14, BO1-Bb</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-49, Organization</td>
<td>3.36</td>
<td>46.7</td>
<td>.814</td>
<td>7.1</td>
<td>-.45**</td>
</tr>
<tr>
<td>V-15, BO1-Cb</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-49, Organization</td>
<td>3.36</td>
<td>2.1</td>
<td>.814</td>
<td>.9</td>
<td>-.35**</td>
</tr>
<tr>
<td>V-16, BO1-Dd</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-49, Organization</td>
<td>3.36</td>
<td>48.8</td>
<td>.814</td>
<td>19.3</td>
<td>-.31**</td>
</tr>
<tr>
<td>V-17, BO-1e</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*a Decimal point must be moved one space to the left to represent the correct numeral meaning to Standard Deviation and Mean scores (2)

b BO1-B indicates Years employed in this type of work
c BO1-C indicates Hours worked per week
d BO1-D indicates Jobs held in last five years
e BO-1 Burnout-1

**Significant at the .01 level.

A Pearson product-moment coefficient correlation was used to test the hypothesis, and to determine if there was a statistically significant correlation.
coefficient between the variables. The lack of significant correlation coefficient of the variables does not support the hypothesis. Therefore, the hypothesis is rejected.

Although not statistically significant to support the hypothesis, there is a statistically significant correlation coefficient between different variables that would support the variable of age to organization level and other work related activities as outlined in Table 16. It was anticipated the younger individuals would have less time in years employed in this type of work, hours worked per week and jobs held in the last five years. The burnout variable in reference to organization level deserves further investigation to determine what impact each has on the other, and which is the independent and which is the dependent variable.

Hypothesis Number Seven

The longer an individual is in his present work, the higher the Wright State Measurement of Burnout Questionnaire scores.

In testing this hypothesis, a Pearson product-moment coefficient of correlation was used to determine if there is a significant relationship between the variables of Burnout and Years in present work. Table 17 communicates support for the positive correlation between the variables at the .01 and .05 level of significance. Therefore, this hypothesis is accepted.

Hypothesis Number Eight

There will be a relationship between gender and the scores on all the different
Table 17

Mean, Standard Deviation and Correlation Coefficient Between the Variables; BO1-A, Years in Present Work, BO1, Burnout-1, BO2-A, Years in Present Type of Work, BO2, Burnout-2. (N=76)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean 1</th>
<th>Mean 2</th>
<th>SD-1</th>
<th>SD-2</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-13, BO1-A</td>
<td>36.1</td>
<td>48.8</td>
<td>45.2a</td>
<td>19.3</td>
<td>.26*</td>
</tr>
<tr>
<td>V-17, BO1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-13, BO1-A</td>
<td>36.1</td>
<td>45.2a</td>
<td>48.8</td>
<td>19.3</td>
<td>.29*</td>
</tr>
<tr>
<td>V-22, BO2</td>
<td>47.9</td>
<td></td>
<td></td>
<td>23.3</td>
<td></td>
</tr>
<tr>
<td>V-17, BO1</td>
<td>48.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-18, BO2-A</td>
<td>48.1a</td>
<td>52.7a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-22, BO2</td>
<td>47.9</td>
<td></td>
<td></td>
<td>23.3</td>
<td>.37**</td>
</tr>
</tbody>
</table>

a The decimal point must be moved one space to the left to represent the correct numeral meaning of the Standard Deviation score.

*Significant at the .05 level.

**Significant at the .01 level.

In Parkerson's 1990 article, the population was 76 percent female and 24 percent male. The female population was 76.6 percent white, 61.25 percent married living with their families and 80.95 percent working full time. The DHP reported the physical health scores correlated higher with younger age ($r = +0.20$), and male gender ($r = +0.12$). Mental health was not related to age, evidence suggested that the scores were better in the male population ($r = +0.13$) and the married population ($r = +0.15$). Anxiety and depression were greater for females ($r = +0.10$ and $+0.15$) respectively for anxiety and depression. Pain levels were higher in the old
(r = +0.13), but the research did not check for a difference between male and female population.

In this 1993 research the population was predominantly male, 78.9 percent, working full time, and studying toward their Master Degree. The remaining 21.1 percent were females working full time and studying for their Master Degree. This sample population had engineering and management backgrounds.

Given the large number of males in the sample population and the small number of females in the study, I am unable to support or reject the hypothesis by the data. Because of the uneven distribution of males to females in the sample population, a correlated matrix could not be computed for this hypothesis. Therefore Hypothesis Number Eight is rejected and is not supported by the data. However, Table 18 exhibits correlation coefficients at the .01 level of significance for the variables of Gender and Pain, Gender and Hours worked per week, and between Gender and Jobs held in the last 5 years. This will warrant further investigation in future research.

Hypothesis Number Nine

There will be a relationship between Physical and Mental scores on the Duke Health Profile.

In testing this hypothesis, a Pearson product-moment coefficient of correlation was used to determine if there is a significant relationship between the variables of
Table 18

Mean, Standard Deviation and Correlation Coefficient Between the Variables; Gender and Pain from the 1993 DHP and the Wright State Measurement of Burnout Questionnaire Variables of BO1-C, Hours Worked per Week and BO2-D, Jobs Held in Last Five Years. (N=76)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean 1</th>
<th>Mean 2</th>
<th>SD-1</th>
<th>SD-2</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-12, Gender-12</td>
<td>1.2</td>
<td>.41</td>
<td></td>
<td></td>
<td>.41*</td>
</tr>
<tr>
<td>V-10, Pain-10</td>
<td>26</td>
<td></td>
<td>32.2</td>
<td>.41</td>
<td></td>
</tr>
<tr>
<td>V-12, Gender-12</td>
<td>1.2</td>
<td>.41</td>
<td></td>
<td>7.1</td>
<td>-.25*</td>
</tr>
<tr>
<td>V-15, BO1-C</td>
<td>46.7</td>
<td></td>
<td></td>
<td>.25</td>
<td></td>
</tr>
<tr>
<td>V-12, Gender-12</td>
<td>1.2</td>
<td>.41</td>
<td></td>
<td>.98</td>
<td>.23*</td>
</tr>
<tr>
<td>V-21, BO2-D</td>
<td>2.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at the .05 level.

Physical and Mental. The Physical health measure included three physical symptom items and two ambulation items in the questionnaire, therefore the number of items measured in the original questionnaire was five. The items measured were numbered questions; 8, 9, 10, 11, and 12. The mean for the Physical, Variable-2 was 87.2 and the standard deviation was 13.2. The Mental health included one item that measured cognition, two items for emotional symptoms, and two items for personal self-esteem, therefore the number of items measured in the original questionnaire was five. The items measured were questions 1, 4, 5, 13, and 14. The mean for the Mental health variable was 84.8 with a standard deviation of 13.4. Table 19, proclaims support for the positive correlation between the variables at the .05 level of significance. Hypothesis Nine is supported.
Table 19

Mean, Standard Deviation and Correlation Coefficient for the Variables of Physical and Mental From the 1993 Duke Health Profile Research Study. (N=76)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean 1</th>
<th>Mean 2</th>
<th>SD-1</th>
<th>SD-2</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-2, Physical-2</td>
<td>87.2</td>
<td></td>
<td>13.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-3, Mental-3</td>
<td></td>
<td>84.8</td>
<td></td>
<td>13.4</td>
<td>.35*</td>
</tr>
</tbody>
</table>

*Significant at the .05 level.

Hypothesis Number Ten

There would be a relationship between individual scores on the Mental and Perceived Health scores on the 1993 Duke Health Profile Questionnaire.

The Mental Health included one item that measured cognition, two items for emotional symptoms, and two items for personal self-esteem, therefore, the number of items measured in the original question was five. The items measured were numbered questions 1, 4, 5, 13, and 14. The mean for the Mental Variable-3 was 84.8 with a standard deviation of 13.4.

The Perceived Health measured is a separate one-line indicator of the extent to which the individual judged themselves to be "basically" healthy, according to whatever implicit criteria that person may have used to judge themselves. The mean for Perceived Health, Variable-6 was 93.4 with a standard deviation of 17.

A Pearson Product-moment coefficient of correlation was used to determine if there is a significant relationship between the variables of Mental and Perceived
Health on the Duke Health Profile Research study of 1993. Table 18 displays support for the hypothesis at the .01 level of significance. Therefore, Hypothesis Ten is supported by the data as indicated in Table 20.

Table 20

Mean, Standard Deviation and Correlation Coefficient for the Variables of Mental and Perceived Health From the 1993 Duke Health Profile Questionnaire. (N=76)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean 1</th>
<th>Mean 2</th>
<th>SD-1</th>
<th>SD-2</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-3, Mental</td>
<td>84.8</td>
<td></td>
<td>13.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-6, Perceived</td>
<td>93.4</td>
<td></td>
<td>17.0</td>
<td></td>
<td>.26**</td>
</tr>
</tbody>
</table>

Hypothesis Number Eleven

There will be an inter-correlational relationship between variables on the 1993 Duke Health Profile Questionnaire.

This researcher did not use the mean item scores for each of the 17 items as used in the original 1990 Parkerson research, but used the 10 item scores. Further investigation will look at the inter-correlation of the 17 item Duke Questionnaire in future research.

The General Health measure was developed for the original DHP study as the aggregate of physical, mental, and social health measure to indicate overall wellbeing. The 15 items measured for this variable were questions numbered 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, and 16 on the DHP Questionnaire. The
overall score was the measurement used in the 1993 research. The range value was from a low of 47 to a high of 97.

The Physical Health measure included three physical symptom items and two ambulation items in the questionnaire, therefore, the number of items measured in the original questionnaire was five. The range for this measurement was from a low of 40 to a high of 100. This was discussed and outlined in Hypothesis Number Nine as was the Mental Health issue. High scores indicate good health.

The Social Health measure includes three items that measure self-concept regarding personal relationship with other people and two items that quantify social activities. The five items measured for this variable were questions numbered 2, 6, 7, 15, and 16 on the DHP Questionnaire. These items when added together give us the number for the Social Health measurement. The range value for this measurement was from a low of 40 to a high of 100. The correlation among the Duke scores was positive for physical, mental, and social health. This was expected in that the original DHP questionnaire also show a positive correlation among these variables. It was expected in the sample population that there would be a high correlation between the variables of Social and Self-Esteem, Anxiety, and Depression. This will be addressed in future research.

Self-Esteem is a five item sub-scale that combined the personal and social self-concept items from the mental and social health measures. The five items measured for this variable were questions numbered 1, 2, 4, 6, and 7 on the DHP Questionnaire. These items when added together gives us the number for the Self-
Esteem measurement. Items that were considered to be direct indicators of self-esteem were used in the original Duke study to develop a separate measure of self-esteem, even though they were included in the three basic health measures. The range value for this measurement was from a low of 40 to a high of 100. High scores indicate good health.

Items that indicated dysfunction were selected for measures of anxiety, depression, pain and disability. The anxiety measurement is a collection of scores from the items numbered 2, 5, 7, 10, 12, and 14, when added together, give us the score for our Anxiety measurement. These items are conceptually similar to five of the 18 symptoms listed as diagnostic criteria for generalized anxiety disorders by the Diagnosis and Statistical Manual of Mental Disorders (DSM-III-R). Except for the single disability item, the dysfunction items are health items with reversed scoring to allow high scores to indicate poor health. The range of scores for this variable was from a low of 33 to a high of 117 in the 1993 DHP Questionnaire.

Depression is a measure which includes the scores from the five items of questions numbered 4, 5, 10, 12, and 13 on the DHP questionnaire. The depression final score is also derived from two items from the physical health scale and three items from the mental health scale. These items are conceptually similar to four of the nine DSM-III-R criteria for major clinical depression. The range value from the 1993 DHP Questionnaire was from a low of 30 to a high of 100. High scores indicate poor health.

The pain measurement consists of a single item, question number 11, "hurting.
Table 21
Mean, Standard Deviation and Correlation Coefficient Between the Variables on the 1993 Duke Health Profile Questionnaire. (N=76)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean 1</th>
<th>Mean 2</th>
<th>SD-1</th>
<th>SD-2</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>V-5, General</td>
<td>81.4</td>
<td></td>
<td>10.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-2, Physical</td>
<td></td>
<td>87.2</td>
<td></td>
<td>13.2</td>
<td>.65**</td>
</tr>
<tr>
<td>V-5, General</td>
<td>81.4</td>
<td></td>
<td>10.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-3, Mental</td>
<td></td>
<td>84.8</td>
<td></td>
<td>13.4</td>
<td>.68**</td>
</tr>
<tr>
<td>V-5, General</td>
<td>81.4</td>
<td></td>
<td>10.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-4, Social</td>
<td></td>
<td>72.6</td>
<td></td>
<td>15.7</td>
<td>.72**</td>
</tr>
<tr>
<td>V-5, General</td>
<td>81.4</td>
<td></td>
<td>10.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-7, Self-Esteem</td>
<td></td>
<td>83.7</td>
<td></td>
<td>13.8</td>
<td>.64**</td>
</tr>
<tr>
<td>V-5, General</td>
<td>81.4</td>
<td></td>
<td>10.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-8, Anxiety</td>
<td></td>
<td>8</td>
<td></td>
<td>16.6</td>
<td>.81**</td>
</tr>
<tr>
<td>V-5, General</td>
<td>81.4</td>
<td></td>
<td>10.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-9, Depression</td>
<td></td>
<td>14</td>
<td></td>
<td>14.2</td>
<td>.68**</td>
</tr>
<tr>
<td>V-5, General</td>
<td>81.4</td>
<td></td>
<td>10.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-10, Pain</td>
<td></td>
<td>26</td>
<td></td>
<td>32.2</td>
<td>-.39**</td>
</tr>
<tr>
<td>V-5, General</td>
<td>81.4</td>
<td></td>
<td>10.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V-11, Age</td>
<td></td>
<td>37.5</td>
<td></td>
<td>5.9</td>
<td>-.26*</td>
</tr>
</tbody>
</table>

* Significant at the .05 level
** Significant at the .01 level

The pain measurement consists of a single item, question number 11, "hurting or aching in any part of your body." Though this one item is included as part of the physical health dimension, separate scoring with opposite polarity is provided as a measurement of dysfunction because of the importance of the variable of pain. The range value of the pain variable was from a low of 0, to a high of 100.
There were 55 percent or 42 individuals who scored zero, 36 percent or 27 individuals scored 50, and there were 7 individuals or 9 percent of the sample population who scored 100 pain measurement. The variable of pain was also addressed in Hypothesis Number Eight and Table 18. High scores indicate poor health.

The measurement of age, variable 11 was addressed in Hypothesis Five and Six, Tables 15 and 16. Age is an important variable in that the older an individual becomes the more likely the individual will experience some form of negative Healthwellness. The longer an individual lives, the more likely the individual will come into contact with many different forms of harmful virus, and other factors that contribute to either poor health or death.

A Pearson product-moment coefficient of correlation was used to test this hypothesis to determine if there was a statistically significant relationship at the .05 or .01 level of significance. Based on the data in Table 21, the hypothesis is supported at the .05 and .01 levels of significance.

Summary

The data from the present study strongly suggests the Duke Health Profile Questionnaire, Wright State Measurement of Burnout Questionnaire and the Hudson Scales, GCS, IPR and IFR are all useful tools for diagnosis and monitoring the Healthwellness of those who take these forms of measurement questionnaires. The Reliability and Validity of the measurement questionnaires used display they do what
they were designed to do.

In this chapter, the findings were reported and interpreted. The purpose of this research data was to determine whether or not a relationship existed between variables. Various statistical procedures were used to test the hypothesis. Each hypothesis was presented and accepted-supported or rejected on the basis of the statistical results. Hypothesis Number One was supported based on the significance of the data. Hypothesis Number Two was supported based on the statistical significance between the numerous variables. Hypothesis Number Three was also supported based upon the correlation coefficient of the Variables, and the supporting data. Hypothesis Number Four was supported by the data and the significant relationship of the variables tested. Hypothesis Number Five was rejected based on the data and the absence of a significant relationship between the variables tested. Hypothesis Number Six was also rejected based upon the lack of a significant relationship between the variables in the hypothesis. Hypothesis Number Seven was accepted as a result of the correlation coefficient of the variables tested in the hypothesis. Hypothesis Number Eight was rejected due to the inability to compute the data due to the imbalance in the sample population. Hypothesis Numbers Nine, Ten and Eleven were supported by the data; therefore the evidence supports hypothesis nine, ten and eleven. All three hypotheses were accepted.

A general summary and conclusion based on these findings, along with recommendation, are presented in Chapter V.
CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary

The research issues investigated in this study concerned the reliability and validity of the health measurements of the questionnaires used in the Duke Research, the 1988 GMI Study, and the 1993 Research. The research issue targeted was sensitive to perceived changes in the health of the target population over the five year period. The self-report questionnaires targeted both the physical and mental health perception of the population. This study investigated the possible relationship between stress-related stimuli and current health related concerns over the five year period. The core of this dissertation was directed at understanding and appreciating the interface of the mind-body relationship. This includes both the interfaces and interaction between the mind and body, the cognitive function and behavior, and the interrelationship of behavior and illness.

The data from the 1993 research study strongly suggest the Duke Health Profile (DHP), the Wright State Measurement of Burnout Questionnaire (WSMB), and the three Hudson Scales; Generalize Contentment Scale (GCS), the Index of Peer Relations Scale (IPR), and the Index of Family Relation Scale (IFR) are all useful tools for diagnosis and monitoring the healthwellness of those who take these forms.
of measurement.

The DHP is short, user-friendly and easily self-administered. It was used in this research because it exhibits reliability and validity for the constructs it was conceptualized to measure. The items are generic rather than disease-specific, but are intended to reflect changes in health of the sort that this researcher would expect from the health problems most commonly encountered in different environmental settings. The scoring process is unostentatious.

The Wright State Measurement of Burnout Questionnaire is an experimental questionnaire and appears to have a high level of correlation with several measures with which it should correlate. It is user-friendly, short and administered easily at repeated intervals. Analysis of validity, reliability, and the factors which contribute to the overall burnout score demonstrate that the WSMB is a promising instrument that possesses appropriate psychometric and practical characteristics for clinical practice and research. The scoring process in unpretentious.

The Hudson Scales are long enough to produce good reliabilities. They are short enough, and are easy to administer on a regular or periodic basis. The use of 25 items leads to the construction of a very unsophisticated scoring procedure. Each scale is scored in exactly the same manner for ease, and only one scoring formula is needed. Each scale uses the same set of instructions to improve ease of administration and to promote uniformity of individual responses.

Reliability is computed as the correlation between a set of scores obtained from a single scale on two separate occasions (Ary, 1985). The reliability of a
measuring instrument is the degree of consistency with which it measures. If the test interval is long, as with this five year longitudinal study, the likelihood is increased for obtaining reliability of the instruments used in the research. The instruments used were: the Duke Health Profile, the Wright State Measurement of Burnout Questionnaire and the Hudson Scales. All have a high degree of stability and reliability, and presumably represent the stability of the measurement device over time.

The validity question is concerned with the extent to which an instrument measures what one thinks it is measuring (Ary, 1985). Validity refers to the extent of correspondence between the measurement of a variable and the intended meaning of that variable (Jayaratne, 1979). A valid measurement device is one which measures what we think it is designed to measure. The Duke Health Profile, the Wright State Measurement of Burnout Questionnaire and the Hudson Scales display a high degree of validity.

As postulated in Chapter I, "How can lay people be persuaded to make the changes in behavior implicit in most efforts to achieve better health levels, particularly in those instances where health risks are undramatic and not immediately apparent?"

First the professional has to help the individual identify the apparent health risk. This can be accomplished using questionnaires, as in this research. Once the apparent risks have been brought to the attention of the individuals and they can envision the health risks, then the association between the events and illness may be
suggested. Increasing their understanding of the specific conditions under which their behavior is likely to result in illness and of what they can do about the health risk is the next step.

The holistic concept of healthwellness involves viewing an individual's health from every possible perspective, and working to achieve harmony and balance to create a whole, functioning individual, so that the person can reach the state known as homeostasis. When the "Triangle of the Homeostasis" is disrupted for any reason, the equilibrium is interrupted and the psychological interaction leads to neuroendocrine changes, which in turn induces physiologic abnormalities that eventually lead to pathologic changes (Henry, 1982). The influence of psychosocial elements that cause an imbalance or disruption of the body's homeostasis will stimulate the secretion of corticosteroid, which is considered to be the mechanism of stress-induced modulation of immunity and related disease. If the stress response continues for an extended period of time, then the individual is more likely than the general population to develop some form of pathological health concerns.

This research has discovered the presence of certain individuals who displayed scores that were identified as deviant from the norm. This is the population that will be addressed with a follow-up letter identifying their score in comparison with the others who were involved in the research study. This researcher will attempt to work with those individuals who displayed higher-than-average scores, and to raise their knowledge and maturity levels so they may make informed decisions that will affect their long term positive healthwellness. All individuals who requested feedback when
they returned their questionnaire will be forwarded a communication explaining their individual scores in comparison with the scores of others in the sample population who were involved in the 1993 research.

Many variables are helpful in developing additional coping factors that promote positive healthwellness and reduce the stress response. Among the many different factors that individuals may develop to help themselves are the sense of being in control on one's life, of having a network of friends or family to provide what is called social supports, of having personality factors such as flexibility and hopefulness, of developing relaxation techniques and of maintaining health exercise and diet routines.

The association between stressful events and illness suggest the importance of understanding the specific conditions under which stress is likely to result in illness. Stress occurs when there is a perceived excess of environmental demands on an individual's perceived unacceptable consequences (McGrath, 1970). The Health Belief Model (HBM) as outlined in Kelly's 1991 article proposed that much of health behavior can be explained by the four principal factors: (1) perceived susceptibility or risk, meaning essentially how vulnerable or susceptible an individual feels to a given condition or problem in the future, (2) perceived severity of the condition or problem, should it occur, (3) perceived benefits of taking a particular health action, and (4) perceived barriers or obstacles to taking the action (Kelly, 1991).

Health and viability are influenced by a multitude of variables, both psychosocial and environmental. The interrelationships among genetic, endocrine,
neurologic and immune systems and behavioral and emotional factors all contribute to our health and viability. Individuals all have a genetically built-in need to balance deep internal feelings, dreams and desires with practical external conditions to fit the two together with minimal stress and maximum satisfaction. This need to sense that one is living as one should, or as one is supposed to live, is referred to as the need for integrity or balance. When, from the perspective of the individual, this balance is not reached, sickness and or other life-threatening conditions can develop. The negative stimulus would be undermining to the health of the individual primarily under conditions in which the event or events signal that they are outside the boundaries of integrity. Stress tends to lead to illness when it is viewed as interfering with the possibility of leading life as the individual feels life should be lived. Stress is not a matter of what is external to the individual, but rather a balance between the external demands made by the environment, or the stress stimulus, and the resources of the individual to cope with the demands. Personality factors produce different emotional reactions to stress by affecting our past coping behaviors, our source of ideology, values, attitudes, norms and our internal resource which we draw on to "fight or flee." The adaptability we develop in order to withstand the social and psychological stress of life to which we are exposed everyday is sometimes the difference between the "fight or flee" of survival. When individual's struggle with what they consider to be an overwhelming life crisis, they tend to get more frequent illness than if they perceived the situation to be within their control. If developing coping behavior takes too much energy, and all the individuals energy is devoted to
a situation, less effort is directed at preventing the disease process. The experience is viewed as equally stressful but is not so likely to lead to illness when it is interpreted as a natural part of pursuing what the individual sees as fulfilling. The problem occurs when the individual believes that disintegrality or the balance of homeostasis has been disrupted. The perception of imbalance or disruption is at least part of the evolutionary psychological mechanism through which illness and disease triggering processes are set in motion.

Conclusion

The association between stressful events of everyday living and the onset of the disease process suggests the importance of understanding the specific relationship under which stress is likely to result in illness. A balance between the external demands made by the environment, or the stress stimulus, and the resources of the individual to cope with these demands may make the difference between onset of illness and the individual experiencing the "Spice of Life." It all depends on the individual perception of the stress producing stimulus. Stress occurs if there is a lack of fit between the environmental pressures and the individual's capacity to respond to those pressures.

This research investigated the interrelationship of the different variables that could effect the onset of illness and disease. The literature reviewed in Chapter II. related to the conceptual framework that was outlined in Chapter I. The most important issue is for the individuals to be able to identify times when they are under
the negative stress stimulus, and when they are experiencing the onset of imbalance or disruption of the body's homeostasis. The review of the literature suggests unless the stress response leads to feeling of disintegrity, it is not likely to lead to illness. It is the perception the individual has of the situation that is the difference between the "Spice of Life" and the "Kiss of Death."

Eleven hypotheses were investigated testing the relationship between individual scores in a healthwellness pilot study in 1988 and the scores in a follow up 1993 longitudinal study. The research issues examined in this study investigated the reliability and validity of the health measurements; The Duke Health Profile, The Wright State Measurement of Burnout Questionnaire and the Hudson Scales. The research issues targeted were sensitive to perceived changes in health of the population over time. The questionnaires of the population focused on health functions versus general health perceptions. The research investigated the different health related variables over time in a five year Longitudinal Healthwellness Analysis.

Summary of the Research Findings

The findings outlined in Table 2 display that there is no difference between the pre-test and the post-test in the pilot study in 1988. It was postulated that the first and second test scores which were pre-test, would be different from the third test score which was post-test and taken after the intervention of the stress workshop, Session Ten, Health Betterment/Stress Management. The intervention was the Stress
Workshop that was given between the second and third test measurement. The three test scores displayed the stability of the questionnaires over the testing period. The results in Table 2 display test-retest reliability coefficient of the questionnaires used in the 1988 study.

Hypothesis Number One

There would be a relationship between an individual's Generalized Contentment Scale (GCS) and the degree of job burnout.

A Pearson product-moment coefficient of correlation was used to test the hypothesis. The information in Table 5, page 107, displays a correlation coefficient at the .01 level of significance between the variables tested. This supports the hypothesis.

The GCS measures the degree of non-clinical depression, and the WSMB measures the degree of Burnout. Burnout is a pattern of exhaustion the individual experiences when subjected to pressures they perceive as beyond their ability. The imbalance of the individual's system is characterized by feelings of anxiety, tension, fatigue and exhaustion, indicating stress.

The target population of 20 individuals would be above the 30 point cutoff on the GCS and display non-clinical depression on the first Hudson Scale measurement, GCS-1, Variable 28. The second GCS measurement, GCS-2, Variable 29, displayed 18 individuals scored above the 30 point cutoff. The last Hudson measurement, GCS-3, Variable 30, discovered 12 individuals were above the 30 point cutoff. The
WSMB does not have an official cutoff point to inform when the Burnout rate is reached, but a score above the mean of three standard deviation may signal Burnout (Thornton, 1982). Due to the experimental design of the WSMB an official Burnout rate has not been established. However, there were 15 individuals on the first Burnout Scale, BO-1, Variable 17 who scored above the Mean to a degree that would signal burnout concerns. On BO-2, Variable 22, there were 11 individuals whose scores signaled burnout, and on the last burnout scale, BO-3, Variable 27, there were 5 individuals whose scores indicated burnout.

**Hypothesis Number Two**

There would be a relationship between an individual’s Index of Peer Relation Scale (IPR) score and scores on the Wright State Measurement of Burnout Questionnaire.

A Pearson product-moment coefficient of correlations was used to test the hypothesis. The information in Table 6, page 110, displays a correlation coefficient at the .01 level of significance between the variables tested, a level that supports the hypothesis.

The Index of Peer Relations Scale (IPR) was designed to measure the magnitude of a problem that the individual has with peers. The range for this measurement on the 1988 study was from a low of 2 to a high of 60. Those individuals who scored above the 30 point cutoff indicated a significant problem with peers. On the first measurement of this series, IPR-1, Variable 31, 25 percent of the
population or 19 individuals, indicated a problem with their group. The second Hudson Scale measurement, IPR-2, Variable 32, indicated that 21 percent of the sample population of 24 individuals scores were above the 30 point cutoff. The third Hudson Scale measurement, IPR-3, Variable 33 indicated that 14 percent or 11 individuals of the sample population scored above the cutoff point.

The WSMB does not have an official cutoff point to inform when the Burnout rate is reached, but a score above the mean of three standard deviation may signal burnout (Thornton, 1982). Due to the experimental design of the WSMB an official burnout rate has not been established. However, there were 15 individuals on the first Burnout Scale, BO-1, Variable 17, who scored above the mean to a degree that would signal burnout concerns. BO-2, Variable 22 displayed 11 individuals whose scores would signal burnout, while on BO-3, Variable 27, there were 5 individuals whose scores indicated burnout.

**Hypothesis Number Three**

There would be a relationship between an individual's Index of Family Relations (IFR) score and scores on the Wright State Measurement of Burnout Questionnaire.

A Person product-moment coefficient of correlation was used to test the hypothesis. The information in Table 7, page 113 displays a Correlation Coefficient at the .01 level of significance between the variables tested. This supports the hypothesis.
The Index of Family Relations (IFR) was designed to measure the extent, severity or magnitude of problems that family members have in their relationship with one another. The IFR allows the respondent to characterize the severity of family problems, and can be regarded as an overall measure of intrafamilial stress. The IFR has a cutting score of 30, with scores above the 30 point limit indicating a clinically significant problem. The range for this measurement in the 1988 study was from a low of 1 to a high of 66. The first Hudson Scale measurement in this series, IFR-1, Variable 34 indicated that 12 individuals or 16 percent of the population scored above the 30 point cutoff limit. The second Hudson Scale measurement in this series, IFR-2, Variable 35 showed that 17 percent of the sample scored above the 30 point cutoff. The third Hudson Scale evidenced 14 percent of the sample population scored above the 30 point designated limit.

The WSMB does not have an official cutoff point to inform when the burnout rate is reached, but a score above the mean of three Standard Deviation may signal Burnout (Thornton, 1982). Due to the experimental design of the WSMB an official rate has not been established. However, there were 15 individuals on the first Burnout Scale, BO-1, Variable 17 who scored above the Mean to such a degree that would signal burnout concerns. BO-2, Variable 22 indicated that 11 individuals scores would signal burnout. BO-3, Variable 27 indicated that 5 individuals scores indicated burnout.
Hypothesis Number Four

There would be a relationship between an individuals 1988 scores and their scores on the 1993 Duke Health Profile.

A Pearson product-moment coefficient of correlations was used to test the hypothesis. The information in Tables 9 through 14, pages 117 through 124 displays a Correlation Coefficient at the .01 and .05 levels of significance between the variables tested. This supports the hypothesis.

The Duke Health Profile (DHP) is a 17 item, generic, self administered questionnaire containing six health measures; physical, mental, social, general, perceived health, and self-esteem. It also measures four dysfunctional measurements; anxiety, depression, pain and disability.

High scores for the health items and measures indicate good health, whereas high scores for the dysfunctional items and measures indicate poor health. The cutoff point that was used to establish a point of reference to report the individual scores was calculated at two standard deviations below the mean on the six health measures and two standard deviations above the mean on the dysfunctional measurements. These measurements were used to provide feedback information to the individuals who requested their score be returned to them on a general summary sheet. This General Summary request was at the bottom of the Release of Information form, and was returned to the researcher when the individual returned their Duke Health Profile questionnaire.
High scores for the health items and measures indicate good health. Fourteen individuals scored below the cutoff point on the physical health measurement, Variable 2. There were 15 individuals who scored below the cutoff point on the mental health measurement, Variable 3. The Social health measurement, Variable 4 showed that 37 individuals were below the cutoff point which signifies a possible problem area. There were 12 individuals whose scores were below the designated limits on Variable 5, the General health measurement. There were 13 individuals whose scores were below the limits of the cutoff point on the Perceived health measurement, Variable 6. Lastly, there were 19 individuals who scored below the designated cutoff point limit on Variable 7, Self-Esteem of the health measurement.

High scores for the dysfunctional items and measures indicate poor health. There were 40 individuals who scored above the cutoff point limit on Variable-8, Anxiety, the dysfunctional measurement. There were 31 individuals whose scores were above the designated limit on Variable 9, Depression. There were 6 individuals who scored above the acceptable designated point limitation on the dysfunctional measurement of Pain, Variable 10.

The Mean and Standard Deviation for the original Duke Research and the 1993 Research is presented on page 115. The analogues between the two groups are exhibited in Table 8, page 115.

The Hudson Scales and the Wright State Measurement of Burnout Questionnaires were addressed in the above three hypothesis, and remain the same throughout this presentation. Therefore they will not be re-capped.
Anyone who scored above or below the designated limits on any of the measurements or questionnaires will be advised that one or two scores do not tell the whole story. If, however the same individual displays a pattern of questionable scores on a number of different measurements, then this concern will be addressed in a different manner.

**Hypothesis Number Five**

There will be relationship between the individual’s age and score. The older the individual, the lower the score.

A Pearson product-moment of correlation was used to test this hypothesis, and to determine if there was a statistically significant relationship at the .05 or .01 level of significance between the variables tested. The data does not support the hypothesis, therefore this hypothesis was rejected. However, the data displays an expected correlation coefficient between the variables shown in Table 15, page 126. It was expected the younger individuals would have less time in years in present work, years employed in this type of work, and more hours worked per week than their older counterparts.

**Hypothesis Number Six**

There will be a relationship between the organizational level of an individual and their scores on the 1988 and 1993 study. The lower the organizational level, the higher the score.
A Pearson product-moment coefficient correlation was used to test the hypothesis, and to determine if there was a statistically significant correlation coefficient between the variables. The lack of significant correlation coefficient of the variables does not support the hypothesis. Therefore this hypothesis was rejected.

The data displays an expected correlation coefficient between the variables, displayed in Table 15, page 126. The data displays an expected correlation coefficient between the variables displayed in Table 16, page 127. Although not statistically significant to support Hypothesis Six, there is a statistically significant correlation coefficient between different variables that would support the Variable of Age to Organizational Level and other work related activities. It was anticipated the younger individuals would have less time in years employed in this type of work, hours worked per week and jobs held in the last five years on the Wright State Measurement of Burnout.

**Hypothesis Number Seven**

The longer an individual is in his present work, the higher the Wright State Measurement of Burnout questionnaire score.

A Pearson product-moment coefficient correlation was used to determine if there was a significant relationship between the Variables of Burnout and Years in present work. Table 17, page 129, communicates support for the positive correlation between the variables at the .01 and .05 level of significance. Hypothesis Seven was accepted. This requires further investigation in future research.
Hypothesis Number Eight

There will be a relationship between gender and the score on all the different measurements both in 1988 and 1993. Female scores will be lower than male scores. Due to the uneven distribution of males to females in the sample population, a correlated matrix could not be computed for this hypothesis. However, Table 18, page 131, exhibits correlation coefficient at the .01 level of significance for the variables of Gender and Pain, Gender and Hours worked per week, and between Gender and Jobs held in the last 5 years. This will warrant further investigation in future research.

Hypothesis Number Nine

There will be a relationship between physical and mental scores on the Duke Health Profile.

A Pearson product-moment coefficient correlation was used to determine if there was a significant relationship between the physical and mental scores. Table 19, page 132, demonstrates support for the positive correlations between the variables at the .05 level of significance. This hypothesis was accepted.

In the original Duke Health Profile study, there was a positive correlation between the variables of physical and mental health. Item-remainder convergent correlations were higher for physical health items (0.37-0.45) and mental health items (0.35-0.45) than for the social health items (0.26-0.34). All were statistically
significant at the .01 level (Parkerson, 1990).

**Hypothesis Number Ten**

There would be a relationship between individual scores on the mental and Perceived health scores on the 1993 Duke Health Profile questionnaire.

A Pearson product-moment coefficient correlation was used to determine if there was a significant relationship between the variables of mental and perceived health. The data located in Table 20, page 133, supports the hypothesis. The correlation between the variables of mental and perceived health in the 1993 research was also supported in the 1990 Parkerson article, "perceived health correlated with general health, the mean of physical, mental, and social health, with a standard deviation of +0.39" (Parkerson, 1990).

**Hypothesis Number Eleven**

There will be an inter-correlational relationship between variables on the 1993 Duke Health Profile Questionnaire.

A Pearson product-moment coefficient correlation was used to test this hypothesis and determine if there was a statistically significant relationship between the variables at the .05 or .01 level of significance. Based on the data presented in Table 21, page 136, the hypothesis is supported at the .05 and .01 levels of significance. Further investigation is warranted and will look at the inter-correlation of the 17 item Duke Health Profile Questionnaire. This research only investigates
the 10-item Duke Health Profile Questionnaire.

Recommendations

1. Future research must investigate the inter-correlation of the 17 item, 1993 Duke Health Profile Questionnaire.

2. The Burnout variable in reference to Organizational level deserves further investigation to determine what impact each has on the other, which is the Independent and which is the Dependent variable.

3. Further research is warranted in the question of gender and pain, gender and hours worked per week, and gender and jobs held in the last 5 years.

4. Additional information should be requested from the sample population for socio-economic status, marital status, educational status, job status, and family medical history.

5. Personal Locus of Control, both internal and external questionnaires should investigate the personality variables that affect individuals and their health wellness. This should include both prior experiences that influence how the individual responds to stress and environmental factors such as social supports as well as the coping behaviors of the individual.

6. A follow-up longitudinal study with the same population in another 5, 10 and 15 years is warranted.

7. Further research to investigate the relationship of Occupational stress and the employee's healthwellness. A practical as well as humane reason for being
concerned with stress is that depression costs our society and business over $43.7 billion a year, more than half of which is paid by the American business community (NASW, 1994).

8. Examine and identify the collective contribution of variables related to family stress. Investigate how much and what kind of stressors, medicated by what personal/family social resources and family coping responses will discriminate among ineffective and effective functioning of the family system as a unit.

9. Investigate if tension between career and interpersonal commitments leads to illness. Does it do so under all conditions or only under certain definable conditions?

10. Investigate if tension causes illness primarily when it causes feelings of disintegrity.

11. Investigate whether the health of individuals is unaffected when an equal level of tension is expected without undermining the individuals sense of balance or integrity.

12. Investigate to what extent does employment, family life, friendships, organizational connections and memberships, and health allow individuals to be themselves, to be all they may be, to reach their fullest potential.

13. Investigate the mind-body relationship with the assumptions that all disease are multifactorial and that stress and the body interact.

14. Investigate how psychosocial interactions cause neuroendocrine responses and physical changes.
15. Investigate how acute and chronic stress affect medical disorders and psychiatric states.

16. Investigate the correlation between stress and illness.

17. Conduct a replication study to investigate if the information and research findings will generalize to other target populations.
Appendix A

Stress Information Workshop; Stress Management Techniques and Job Proficiency,
February 24, 1986
STRESS INFORMATION WORKSHOP

STRESS MANAGEMENT TECHNIQUES
and
JOB PROFICIENCY

TRAINING AND DEVELOPMENT
TRUCK & BUS OPERATIONS
PONTIAC CENTRAL MANUFACTURING & ASSEMBLY
GENERAL MOTORS CORPORATION

MR. CHARLES E. WATSON

Written and Presented by:
Howard A. White, M.S.W.
February 24, 1986
PROPOSAL TO:

MR. CHARLES E. WATSON
TRAINING AND DEVELOPMENT
TRUCK & BUS OPERATIONS
PONTIAC CENTRAL MANUFACTURING & ASSEMBLY
GENERAL MOTORS CORPORATION

STRESS INFORMATION WORKSHOP
STRESS MANAGEMENT TECHNIQUES
AND
JOB PROFICIENCY

Written and Presented by:
Howard A. White, M.S.W.
Date: March 21, 1986
The Stress Information Workshop program is designed as a developmental experience utilizing the behavioral approach.

The purpose of a Stress Workshop is to give participants a clearer understanding of what stress is and how it related to everyday living. In the workshop, certain variables of stress are identified through the Stress Control Test, Recognizing Signs of Stress, Stress Sign Chart and the Symptoms of Stress and Related Diseases.

The workshop identifies and verbalizes the physical and cognitive characteristics of the stress response. Also described to individuals is how to do an assessment of stress, including a functional analysis of the target behavior. After the problem, "Stress Response," is identified, skills will be demonstrated verbally and with handouts on how to problem-solve, support others in problem-solving and seek other support systems. In Section 4, which is the treatment section, handouts will be distributed clearly explaining everything.

The Stress Workshop is to inform people about stress and how to manage it. At the onset of the program and prior to each section, measurements are taken. The physical measurements are blood pressure, heart rate and temperature. For psychological data, the three Hudson Scales are used. All measurements are pre, during and post, and all are multipoint.

OBJECTIVES

At the conclusion of the program, participants will be able to:

- clearly understand what stress is and how stress relates to everyday living;
- verbalize the physical and cognitive characteristics of the stress response;

...
demonstrate the ability to do an assessment of stress, including a functional analysis of the target behavior—stress;

identify problems in association with the stress stimulus and demonstrate the ability to problem-solve and support others in problem-solving;

explore alternative behaviors aimed at decreasing stress in the environmental setting;

exhibit the ability to utilize at least one of the five presented relaxation responses.

This Stress Management Workshop has been developed and presented by the author to adult students of Oakland Community College. Under the sponsorship of the Executive Board of United Plant Guard Workers of America, Local 116, the Workshop has also been presented to the Union's members. A screenplay on stress has been written and approved for cablevision, Channel 3, which was taped in October and will be released in 1986.

There is consensus in the research area that work stress has deleterious affects on the individual worker and on his/her job performance. The writer hypothesized that workers who score high on the stress measurement scales used in the pilot workshop would be more likely to report feelings of anxiety, depression, irritability and somatic complaints. They would also be more likely to report less satisfaction with their jobs and possess lower self-esteem compared to workers who scored low on the three Hudson Scales used.

The literature on work and family consistently demonstrates a strong positive relationship between work satisfaction and quality of family life. I believe it is desirable to gather information on the degree of marital satisfaction among workers and anticipate that those workers reporting high levels of stress would also report less satisfaction with their marriages. This is not to imply that there would be a causal connection in this instance, but rather that there would be a negative association between the level of experienced stress and the level of satisfaction with the marriage. The Hudson Scale Index of Marriage Satisfaction would measure this topic.
Information on Stress Workshop, a Pilot Study - Program Overview

HYPOTHESIS

If Stress Management coping techniques are learned and put to use, there will be an increase in adaptive behaviors associated with occupational productivity, personal satisfaction and self-awareness.

METHODOLOGY

For the purpose of this pilot study, a random sample will be used from the population of salaried employees at General Motors Truck & Bus. The Workshop will be administered by the author in cooperation with GM Truck & Bus Personnel and Medical Departments. The first step in obtaining the random sample will be to assign each employee a distinct identification number. A table of random numbers will then be utilized to select the specific identification number identifying each employee to be included in the sample. A cover letter and questionnaire will then be distributed and those who return it will participate in a Workshop. The Stress Workshop will be offered during work hours so the response percentage should be high.

Permission will be obtained from the Plant Manager for the use of any related records of individuals involved in the sample. Total confidentiality will be of the utmost importance and will be observed at all times. Medical records will be one form of measurement taken on the physical side using blood pressure, heart rate and temperature. All measurements will be taken pre, during and post, with a maintenance program built into the program.

Psychological measurements to be taken are the SUDS (Systematic Units of Desensitization) Scale, to be recorded on the Stress Log 1, 2 or 3. Also three Hudson Scales known as the Generalized Contentment Scale (GCS), the Index of Peer Relations Scale (IPR), and the Index of Family Relations (IFR) will be used.

An advantage with multiple point measurements over time is that trends can be observed in a participant's progress enabling treatment and/or session changes to be made based on these trends. The measurement will provide an effective
Information on Stress Workshop, a Pilot Study - Program Overview

means to determine the efficiency of the Stress Workshop. The length of the test over time will test the reliability. The longer the test in duration over time, the greater the reliability. Also, by using physical and psychological measurement, we increase the reliability. These relevant measurements will show individuals' progress. The relevance of a measurement is determined by the potential areas of change expected as a result of the Stress Workshop intervention. There are multiple confounding variables present that could interact on the sample population; therefore, a division will be built between the theaters of the work environment and home environment by employing the three different Hudson Scales. The GCS is a measurement of the individual's total environment. A low score over time, or a downward trend over time shows increased contentment with the total. The IPR would address the work environment and the IFR would show trends in the interaction in the individual's family. A decrease in scores on the IPR and IFR shows improvement in peer and family relations. The physical measurement will show changes in the person's total life. With multiple point measurements, over time both physical and psychological areas of data will be recorded. With this type of measurement over time, validity can be shown because the traits being measured can be defined and the relationships between scores can be specified. Validity emphasizes the gathering of data from a variety of scores to provide support for the hypothesis.

The Hudson Scales will be given once a week for two weeks for the pre-measurement, once before each of the two four-hour sessions, and three times during the follow-up sessions.

After completion each week, the data will be collected, tabulated and graphed to be used for feedback purposes (after Workshop sessions are given). The probability of a subject recalling responses to test items is possible, but any influence on the results is highly unlikely because of the degree of reliability built into the Hudson Scales. The test-retest reliability coefficient of the Hudson Scales in relationship to the individuals who take them will show stability, even with differing scores showing movement trends. A decrease in scores signifies an increase in contentment on the GCS and an improvement in relations on the IPR and the IFR. The physical measurements will display trends in coping strategies learned and used.

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ANALYSIS OF DATA

The data from this study will be organized into a complete report to show General Motors Truck & Bus Management the positive affects of the independent variable, the Stress Workshop, upon the dependent variable, job proficiency and their interacting effects. The goal of the report will be to demonstrate the positive results of the Stress Workshop in graphic form to support the hypothesis through the use of charts.

The statistical procedure to be used is the Pearson product-moment correlation coefficient because it is defined as the measure or the index of the relationship between two variables. This procedure could be used to calculate any significance between the independent variable (Stress Workshop) and the dependent variable (Job Proficiency). The reason for applying this method is that there is substantial evidence that a systematic relationship will exist between two or more variables, and the observed frequencies and the expected frequencies can be measured by this means.

SIGNIFICANCE OF THE STUDY

Implications and Applications

The author hopes to use the data from this study to increase General Motors' plant level management awareness of the relationship between stressors, coping techniques learned and used, and job proficiency. The potential application of this knowledge will indicate to General Motors' management the need for additional programs and training sessions to improve the occupational environment and increase the employees' effectiveness and efficiency.

BUDGET AND TIME SCHEDULE

Basic data collection and tabulation will be completed during normal working hours and all needed computer time will be supplied by the group within the Personnel Department, in which the author is employed. If the Stress...
Workshop, for some reason, cannot be given during working hours, the sessions will be scheduled to meet a compromise in the schedules of the author and the participants. As of this writing, hundreds of hours have been invested in the Stress Workshop program and it has been administered twice before, by the author, as a pilot study. The most time-consuming portion of the Workshop, the recording of data, will be expedited with the use of a computer. The total pilot program would consist of one one-hour introduction session and two four-hour workshop sessions, with the follow-up and maintenance program requiring an additional one hour of time for the author per participant.
STRESS INFORMATION WORKSHOP

SECTION #1

Introduction
A. Handout - Information and Measurement

1. Hudson Scales
   a. Generalized Contentment Scale (GCS)
   b. Index of Peer Relations (IPR)
   c. Index of Family Relations (IFR)

2. In regard to stress, are you aware of the following?
3. How much do you know about "Burnout Syndrome"?
4. The Life Change Index
5. Type A-B Personality Questionnaire
   a. Score Process
   b. Type A-B Personality Characteristics
6. Stress Process Model

B. Introduction session and explanation of all material stated above.

SECTION #2

Framework For Assessment
A. Handout, Information and Measurement

1. Hudson Scales
   a. GCS
   b. IPR
   c. IFR

2. Stress Control Test
3. Behavior Modification Form
4. Recognizing Signs of Stress
5. Stress Sign Chart
6. Symptoms of Stress/Diseases Related to Stress
7. Major Causes of Distress

dgh
Stress Information Workshop

B. Framework For Assessment Section
1. Definition of Stress
2. Characteristics of Stress
3. Assessments
4. Explanation and Discussion of all Handout Material

SECTION #3
Preventing and Managing Stress in the Environment
A. Handout, Information and Measurements
1. Hudson Scales
   a. GCS
   b. IPR
   c. IFR
2. Problem-solving
3. Supporting Others in Problem-solving
4. Seeking Other Support Systems
5. How to Eliminate Unpleasant Emotions
6. A-B-C Theory of Emotional Disturbance

B. My introduction and explanation of "Preventing and Managing Stress in the Environment." Discussion of all handout material.

SECTION #4
Treatment and Relaxation Training
A. Handout, Information and Measurements
1. Hudson Scales
   a. GCS
   b. IPR
   c. IFR
2. Training Yourself in Deep Muscle Relaxation
3. How to Relax Through Meditation

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Stress Information Workshop

4. How to Bring Forth the Relaxation Response
5. Autogenic Phrases
6. Signs of Relaxation

B. My introduction and explanation on all material in this section.

1. Example

   How to use "cue control," or pairing of the Image and Relaxation. I will give an example of this mode of intervention.

SECTION #5

Maintenance Program

Handout: Potential Problems, Suggestions on Coping With Stress and Personal Planning.
<table>
<thead>
<tr>
<th>DATE AND TIME</th>
<th>SITUATION</th>
<th>FEELING</th>
</tr>
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<table>
<thead>
<tr>
<th>DATE AND TIME</th>
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<th>FEELINGS</th>
<th>TENSION</th>
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<tr>
<th>DATE AND TIME</th>
<th>SITUATION</th>
<th>FEELINGS</th>
<th>TENSION LEVEL (1-10-)</th>
<th>PHYSICAL CUES</th>
</tr>
</thead>
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STRESS INFORMATION WORKSHOP
WE CAN HELP YOU COPE

OCCUPATION FRUSTRATION

LOSS AND DEPRESSION

FAMILY STRESS

ROLE CHANGES

Seeking Cures For Modern Anxiety
SPONSORED BY
U.P.G.W.A. LOCAL 116 EXECUTIVE BOARD

For details contact your local chairperson or call
373-0774, leave name and number

PRESENTED BY HOWARD A. WHITE M.S.W.
Appendix B

First Pre-Measurement Research Questionnaire - 1988
February 22, 1988

TO: Graduate Students in MGT-632 Human Resources Management

Please complete the enclosed forms and mail back within 24 hours. Include name and date. All data collected will be completely confidential. The information from this data will be used for educational purposes only; no name or other information will be shared with anyone.

Go to your Medical Department (First Aid) on the day you fill out the questionnaires and have your blood pressure, heart rate and temperature taken and recorded on the bottom of the Hudson, Generalized Contentment Scale (GCS).

You will be receiving three separate packets, mailed on different dates. Enclosed in each package to be completed and returned to me is:

1. Wright State Measure of Burnout Questionnaire
2. Generalized Contentment Scale
3. Index of Peer Relations
4. Index of Family Relations

In this mailing, two additional questionnaires are to be completed and kept for your records, as well as to view with Session 10. These are:

1. How much do you know about Burnout-Syndrome?
2. Stress Control

If additional feedback is requested other than from the tapes, feel free to contact me at 762-7964. There will be two sets of pre-measurements before Session 10 and one after Session 10. The post-measurement will be mailed out with the final exam.

Sincerely,

Howard A. White
Management Department

/s

Enclosures
Session 10

HEALTH-WELLNESS

March 16, 1988
STRESS!
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OCCUPATION FRUSTRATION
LOSS AND DEPRESSION
FAMILY STRESS
ROLE CHANGES

Seeking Cures for Modern Anxiety
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Human Resources Management/Personnel Administration
Course MGT - 632

For details contact Prof. Howard A. White
(313) 762-7959
on Mondays and Tuesdays
Wright State Measure of Burnout
Questionnaire

Number of years in your present job?
Number of years employed in this type work?
Hours per week that you work?
Jobs held in the last five years?

Strength of feeling: 0 Very mild 1 Moderate 2 Very strong

Please note the strength of feeling regarding each statement below:

AT WORK I FEEL THAT, I:

1. have clearly defined goals.
2. treat some coworkers like impersonal objects.
3. help other people.
4. don't know what's expected of me.
5. accomplish worthwhile things.
6. deal calmly with emotional situations.
7. have an "I don't care" attitude.
8. don't know what it takes to get ahead.
9. put in my time, but I'm not really contributing.
10. may become emotionally hardened by this job.

AT WORK I FEEL THAT I AM:

11. overworked.
12. emotionally drained.
13. burned out.
14. bored.
15. frustrated.
16. trapped.
17. competent at what I do.
18. somewhat callous toward people.
19. at the "end of my rope."

AT WORK I FEEL THAT:

20. working with people is really a strain.
21. coworkers blame me for some of their problems.
22. things I would like to change are beyond my control.
23. working with people is stressful.
24. people help me get through the day.

FREQUENCY: Never A few Once A few Every
yr or less times a month a times a week a day

Using the scale above, please rate the frequency for each statement below:

AT WORK I FEEL THAT, I:

25. deal effectively with my coworker's problems.
26. need a long vacation.
27. am energetic.
28. don't care what happens to my coworkers.
29. "used up" at the end of the day.
30. fatigued when I start a new day.
(Please complete in a safe and relaxed environment.)

GENERALIZED CONTENTMENT SCALE (GCS)

Name __________________________ Date ______________

This questionnaire is designed to measure the degree of contentment that you feel about your life and surroundings. It is not a test, so there are no right or wrong answers. Answer each item as carefully and accurately as you can by placing a number beside each one as follows:

1 Rarely or none of the time  4 Good part of the time
2 A little of the time         5 Most or all of the time
3 Sometime

Please begin.

__ 1. I feel powerless to do anything about my life.
__ 2. I feel blue.
__ 3. I am restless and can't keep still.
__ 4. I have crying spells.
__ 5. It is easy for me to relax.
__ 6. I have a hard time getting started on things that I need to do.
__ 7. I do not sleep well at night.
__ 8. When things get tough, I feel there is always someone I can turn to.
__ 9. I feel that the future looks bright to me.
__ 10. I feel downhearted.
__ 11. I feel that I am needed.
__ 12. I feel that I am appreciated by others.
__ 13. I enjoy being active and busy.
__ 14. I feel that others would be better off without me.
__ 15. I enjoy being with other people.
__ 16. I feel it is easy for me to make decisions.
__ 17. I feel downtrodden.
__ 18. I am irritable.
__ 19. I get upset easily.
__ 20. I feel that I don't deserve to have a good time.
__ 21. I have a full life.
__ 22. I feel that people really care about me.
__ 23. I have a great deal of fun.
__ 24. I feel great in the morning.
__ 25. I feel that my situation is hopeless.

Blood Pressure  Heart Rate  Temperature

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This questionnaire is designed to measure the way you feel about the people you work, play, or associate with most of the time; your peer group. It is not a test so there are no right or wrong answers. Answer each item as carefully and as accurately as you can by placing a number beside each one as follows:

1 Rarely or none of the time
2 A little of the time
3 Some of the time
4 A good part of the time
5 Most or all of the time

Please begin.

1. I get along very well with my peers.
2. My peers act like they don't care about me.
3. My peers treat me badly.
4. My peers really seem to respect me.
5. I don't feel like I am "part of the group".
6. My peers are a bunch of snobs.
7. My peers really understand me.
8. My peers seem to like me very much.
9. I really feel "left out" of my peer group.
10. I hate my present peer group.
11. My peers seem to like having me around.
12. I really like my present peer group.
13. I really feel like I am disliked by my peers.
14. I wish I had a different peer group.
15. My peers are very nice to me.
16. My peers seem to look up to me.
17. My peers think I am important to them.
18. My peers are a real source of pleasure to me.
19. My peers don't seem to even notice me.
20. I wish I were not part of this peer group.
21. My peers regard my ideas and opinions very highly.
22. I feel like I am an important member of my peer group.
23. I can't stand to be around my peer group.
24. My peers seem to look down on me.
25. My peers really do not interest me.
(Please complete in a safe, relaxed environment.)

INDEX OF FAMILY RELATIONS (IFR)

Name ______________________________ Date ______________________________

This questionnaire is designed to measure the way you feel about your family as a whole. It is not a test, so there are no right or wrong answers. Answer each item as carefully and accurately as you can by placing a number beside each one as follows:

1. Rarely or none of the time
2. A little of the time
3. Some of the time
4. A good part of the time
5. Most or all of the time

Please begin.

1. The members of my family really care about each other.
2. I think my family is terrific.
3. My family gets on my nerves.
4. I really enjoy my family.
5. I can really depend on my family.
6. I really do not care to be around my family.
7. I wish I was not part of this family.
8. I get along well with my family.
9. Members of my family argue too much.
10. There is no sense of closeness in my family.
11. I feel like a stranger in my family.
12. My family does not understand me.
13. There is too much hatred in my family.
14. Members of my family are really good to one another.
15. My family is well respected by those who know us.
16. There seems to be a lot of friction in my family.
17. There is a lot of live in my family.
18. Members of my family get along well together.
19. Life in my family is generally unpleasant.
20. My family is a great joy to me.
21. I feel proud of my family.
22. Other families seem to get along better than ours.
23. My family is a real source of comfort to me.
24. I feel left out of my family.
25. My family is an unhappy one.
How Much Do You Know About Burnout Syndrome?

Life is so full of stress today that a new word - burnout - describes one effect it has. What do you know about burnout?

True False

_ _ _ _ 1. Burnout always comes from what society does to people; it comes from outside and destroys the individual.

_ _ _ _ 2. All of us are equally open to burnout under certain stress situations.

_ _ _ _ 3. Given enough stress on the job, burnout will occur.

_ _ _ _ 4. Stress is always negative and destructive.

_ _ _ _ 5. Men are at greater risk of burnout than women.

_ _ _ _ 6. Overindulgence is one sign of burnout.

_ _ _ _ 7. Homemakers rarely experience severe stress so they never suffer from burnout.
<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>Check yes or no beside each item.</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>1. I eat one hot, balanced meal per day.</td>
</tr>
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<td></td>
<td></td>
<td>2. I get seven-eight hours sleep at least four days per week.</td>
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<td></td>
<td></td>
<td>3. I give and receive affection regularly.</td>
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<td>4. I have at least one relative within 50 miles whom I can rely on.</td>
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<tr>
<td></td>
<td></td>
<td>5. I exercise to the point of exertion about twice per week.</td>
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<tr>
<td></td>
<td></td>
<td>6. I smoke less than one pack of cigarettes per day.</td>
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<tr>
<td></td>
<td></td>
<td>7. I do not drink alcohol to excess.</td>
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<tr>
<td></td>
<td></td>
<td>8. I am appropriate weight for my height.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>9. I have an income adequate to meet basic expenses.</td>
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<tr>
<td></td>
<td></td>
<td>10. I regularly attend church.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11. I regularly attend club or social activities.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12. I have a network of friends with whom I am acquainted.</td>
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<td></td>
<td></td>
<td>13. I have one or more friends to confide in about personal matters.</td>
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<td>14. I am in good health (including eyesight, hearing, teeth).</td>
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<td></td>
<td></td>
<td>15. I'm able to speak openly about my feelings when angry or worried.</td>
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<td></td>
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<td>16. I have regular conversations with the people I live with about domestic issues -- that is, chores, money, daily living issues.</td>
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<tr>
<td></td>
<td></td>
<td>17. I do something for fun at least once per week.</td>
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<td></td>
<td></td>
<td>18. I am able to organize my time effectively.</td>
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<td></td>
<td>19. I drink less than three cups of coffee (or tea or cola drinks) per day.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20. I take adequate quiet time for myself each day.</td>
</tr>
</tbody>
</table>
Appendix C

Second Pre-Measurement Research Questionnaire - 1988
March 2, 1988

TO: Graduate Students in MGT-632, Human Resources Management

Second communication mailing and form completion request.

Please complete the enclosed forms and mail back within 24 hours. Include name and date. All data collected will be completely confidential. As indicated in the first communication of February 12, 1988, information from this data will be used for educational purposes only. No name or other information will be shared with anyone.

Go to your Medical Department (First Aid) on the day you fill out the questionnaires and have your blood pressure, heart rate, and temperature taken and recorded on the bottom of the "Hudson," Generalized Contentment Scale (GCS).

This is the second, of three packets, mailed on different dates. Enclosed in each package to be completed and returned to me is:

1. Wright State Measure of Burnout Questionnaire
2. "Hudson," Generalized Contentment Scale
3. "Hudson," Index of Peer Relations
4. "Hudson," Index of Family Relations

In this second mailing, three additional handouts are included:

1. The Life Change Index, to be completed and retained for review with Session 10 tape.
2. Type A-B Personality Questionnaire
   A. Score Process
   B. Type A & B Personality Characteristics to be completed and retained for review with Session 10 tape.

If additional feedback is needed other than from the tapes, please feel free to contact me at 762-7964. This mailing will complete the pre-measurement before Session 10 with one additional post-measurement after Session 10. The post-measurement will be mailed out with your final exam.

Sincerely,

[Signature]

Howard A. White
Management Department

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(313) 762-9500

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Session 10

HEALTH WELLNESS
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OCCUPATION FRUSTRATION
LOSS AND DEPRESSION
FAMILY STRESS
ROLE CHANGES

Seeking Cures for Modern Anxiety
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Human Resources Management/Personnel Administration
Course MGT - 632
For details contact Prof. Howard A. White
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on Mondays and Tuesdays

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FIGURE 1

Wright State Measure of Burnout

Questionnaire

Number of years in your present job?
Number of years employed in this type work?
Hours per week that you work?

Jobs held in the last five years?


Strength of feeling: 0 1 2 3 4 5 6 7

No Very mild Moderate Very strong

Please note the strength of feeling regarding each statement below:

AT WORK I FEEL THAT, I:
1. ______ have clearly defined goals.
2. ______ treat some coworkers like impersonal objects.
3. ______ help other people.
4. ______ don't know what's expected of me.
5. ______ accomplish worthwhile things.
6. ______ deal calmly with emotional situations.
7. ______ have an "I don't care" attitude.
8. ______ don't know what it takes to get ahead.
9. ______ put in my time, but I'm not really contributing.
10. ______ may become emotionally hardened by this job.

AT WORK I FEEL THAT I AM:
11. ______ overworked.
12. ______ emotionally drained.
13. ______ burned out.
14. ______ bored.
15. ______ frustrated.
16. ______ trapped.
17. ______ competent at what I do.
18. ______ somewhat callous toward people.
19. ______ at the "end of my rope."

AT WORK I FEEL THAT:
20. ______ working with people is really a strain.
21. ______ coworkers blame me for some of their problems.
22. ______ things I would like to change are beyond my control.
23. ______ working with people is stressful.
24. ______ people help me get through the day.

FREQUENCY: Never A few Once A few Once A few Every
times a times a times a times a times a day
yr or less month month week week

Using the scale above, please rate the frequency for each statement below:

AT WORK I FEEL THAT, I:
25. ______ deal effectively with my coworker's problems.
26. ______ need a long vacation.
27. ______ am energetic.
28. ______ don't care what happens to my coworkers.
29. ______ "used up" at the end of the day.
30. ______ fatigued when I start a new day.
(Please complete in a safe and relaxed environment.)

GENERALIZED CONTENTMENT SCALE (GCS)

Name ____________________ Date ____________________

This questionnaire is designed to measure the degree of contentment that you feel about your life and surroundings. It is not a test, so there are no right or wrong answers. Answer each item as carefully and accurately as you can by placing a number beside each one as follows:

1 Rarely or none of the time 4 Good part of the time
2 A little of the time 5 Most or all of the time
3 Sometime

Please begin.

1. I feel powerless to do anything about my life.
2. I feel blue.
3. I am restless and can't keep still.
4. I have crying spells.
5. It is easy for me to relax.
6. I have a hard time getting started on things that I need to do.
7. I do not sleep well at night.
8. When things get tough, I feel there is always someone I can turn to.
9. I feel that the future looks bright to me.
10. I feel downhearted.
11. I feel that I am needed.
12. I feel that I am appreciated by others.
13. I enjoy being active and busy.
14. I feel that others would be better off without me.
15. I enjoy being with other people.
16. I feel it is easy for me to make decisions.
17. I feel downtrodden.
18. I am irritable.
19. I get upset easily.
20. I feel that I don't deserve to have a good time.
21. I have a full life.
22. I feel that people really care about me.
23. I have a great deal of fun.
24. I feel great in the morning.
25. I feel that my situation is hopeless.

Blood Pressure __________ Heart Rate _______ Temperature _______
(Please complete in a safe and relaxed environment.)

INDEX OF PEER RELATIONS (IPR)

Name ___________________ Date ___________________

This questionnaire is designed to measure the way you feel about the people you work, play, or associate with most of the time; your peer group. It is not a test so there are no right or wrong answers. Answer each item as carefully and as accurately as you can by placing a number beside each one as follows:

1 Rarely or none of the time  4 A good part of the time
2 A little of the time        5 Most or all of the time
3 Some of the time

Please begin.

1. I get along very well with my peers.
2. My peers act like they don't care about me.
3. My peers treat me badly.
4. My peers really seem to respect me.
5. I don't feel like I am "part of the group".
6. My peers are a bunch of snobs.
7. My peers really understand me.
8. My peers seem to like me very much.
9. I really feel "left out" of my peer group.
10. I hate my present peer group.
11. My peers seem to like having me around.
12. I really like my present peer group.
13. I really feel like I am disliked by my peers.
14. I wish I had a different peer group.
15. My peers are very nice to me.
16. My peers seem to look up to me.
17. My peers think I am important to them.
18. My peers are a real source of pleasure to me.
19. My peers don't seem to even notice me.
20. I wish I were not part of this peer group.
21. My peers regard my ideas and opinions very highly.
22. I feel like I am an important member of my peer group.
23. I can't stand to be around my peer group.
24. My peers seem to look down on me.
25. My peers really do not interest me.

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(Please complete in a safe, relaxed environment.)

INDEX OF FAMILY RELATIONS (IFR)

Name ___________________________ Date ___________________________

This questionnaire is designed to measure the way you feel about your family as a whole. It is not a test, so there are no right or wrong answers. Answer each item as carefully and accurately as you can by placing a number beside each one as follows:

1 Rarely or none of the time 4 A good part of the time
2 A little of the time 5 Most or all of the time
3 Some of the time

Please begin.

1. The members of my family really care about each other.
2. I think my family is terrific.
3. My family gets on my nerves.
4. I really enjoy my family.
5. I can really depend on my family.
6. I really do not care to be around my family.
7. I wish I was not part of this family.
8. I get along well with my family.
9. Members of my family argue too much.
10. There is no sense of closeness in my family.
11. I feel like a stranger in my family.
12. My family does not understand me.
13. There is too much hatred in my family.
14. Members of my family are really good to one another.
15. My family is well respected by those who know us.
16. There seems to be a lot of friction in my family.
17. There is a lot of life in my family.
18. Members of my family get along well together.
19. Life in my family is generally unpleasant.
20. My family is a great joy to me.
21. I feel proud of my family.
22. Other families seem to get along better than ours.
23. My family is a real source of comfort to me.
24. I feel left out of my family.
25. My family is an unhappy one.
THE LIFE CHANGE INDEX

TAKE A MOMENT TO READ OVER THE LIST AND RECORD THE WEIGHTED VALUE OF EACH CHANGE THAT HAS OCCURRED IN YOUR LIFE WITHIN THE LAST YEAR. WHEN YOU COMPLETE THE SCALE, WE WILL DISCUSS HOW YOUR SCORE MAY BE A PREDICTOR OF FUTURE CHANGES IN YOUR HEALTH STATUS.

**Life Event** | **Mean Value**
--- | ---
1. Death of spouse | 100
2. Divorce | 73
3. Marital separation from mate | 65
4. Detention in jail or other institution | 63
5. Death of a close family member | 63
6. Major personal injury or illness | 53
7. Marriage | 50
8. Being fired at work | 47
9. Marital reconciliation with mate | 45
10. Retirement from work | 45
11. Major change in the health or behavior of a family member | 44
12. Pregnancy | 40
13. Sexual difficulties | 39
14. Gaining a new family member (e.g., through birth, adoption, or older person moving in) | 39
15. Major business readjustment (e.g., merger, reorganization, or bankruptcy) | 39
16. Major change in financial state (e.g., becoming much worse off or much better off than usual) | 38
17. Death of a close friend | 37
18. Changing to a different line of work | 36
19. Major change in the number of arguments with spouse (e.g., either many more or fewer than usual regarding child rearing or personal habits) | 35
<table>
<thead>
<tr>
<th>No.</th>
<th>Event Description</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.</td>
<td>Taking on a mortgage greater than $10,000 (e.g., purchasing a home or business)</td>
<td>31</td>
</tr>
<tr>
<td>21.</td>
<td>Foreclosure on a mortgage or loan</td>
<td>30</td>
</tr>
<tr>
<td>22.</td>
<td>Major change in responsibilities at work (e.g., promotion, demotion, lateral transfer)</td>
<td>29</td>
</tr>
<tr>
<td>23.</td>
<td>Son or daughter leaving home (e.g., marriage or attending college)</td>
<td>29</td>
</tr>
<tr>
<td>24.</td>
<td>In-law troubles</td>
<td>29</td>
</tr>
<tr>
<td>25.</td>
<td>Outstanding personal achievement</td>
<td>28</td>
</tr>
<tr>
<td>26.</td>
<td>Wife beginning or ceasing work outside the home</td>
<td>26</td>
</tr>
<tr>
<td>27.</td>
<td>Beginning or ceasing formal schooling</td>
<td>26</td>
</tr>
<tr>
<td>28.</td>
<td>Major change in living conditions (e.g., building a new home, remodeling, or deterioration of home or neighborhood)</td>
<td>25</td>
</tr>
<tr>
<td>29.</td>
<td>Revision of personal habits (dress, manners, associations, etc.)</td>
<td>24</td>
</tr>
<tr>
<td>30.</td>
<td>Troubles with the boss</td>
<td>23</td>
</tr>
<tr>
<td>31.</td>
<td>Major change in working hours or conditions</td>
<td>20</td>
</tr>
<tr>
<td>32.</td>
<td>Change in residence</td>
<td>20</td>
</tr>
<tr>
<td>33.</td>
<td>Changing to a new school</td>
<td>20</td>
</tr>
<tr>
<td>34.</td>
<td>Major change in usual type and/or amount or recreation</td>
<td>19</td>
</tr>
<tr>
<td>35.</td>
<td>Major change in church activities (e.g., many more or fewer than usual)</td>
<td>19</td>
</tr>
<tr>
<td>36.</td>
<td>Major change in social activities (e.g., clubs, dancing, movies, or visiting)</td>
<td>18</td>
</tr>
<tr>
<td>37.</td>
<td>Taking on a mortgage or loan less than $10,000 (e.g., purchasing a car, TV, or freezer)</td>
<td>17</td>
</tr>
<tr>
<td>38.</td>
<td>Major change in sleeping habits (much more or less sleep or very different sleeping hours)</td>
<td>16</td>
</tr>
<tr>
<td>39.</td>
<td>Major change in number of family get-togethers (e.g., many more or fewer than usual)</td>
<td>15</td>
</tr>
<tr>
<td>40.</td>
<td>Major change in eating habits (much greater or lesser food intake or very different meal hours or surroundings)</td>
<td>15</td>
</tr>
<tr>
<td>41.</td>
<td>Vacation</td>
<td>13</td>
</tr>
<tr>
<td>42.</td>
<td>Christmas</td>
<td>12</td>
</tr>
<tr>
<td>43.</td>
<td>Minor violations of the law (e.g., traffic tickets, jaywalking, or disturbing the peace)</td>
<td>11</td>
</tr>
</tbody>
</table>
The statements below apply to day-to-day living. Using a scale of one to five, indicate the degree to which each statement applies to you.

1 - Never  2 - Rarely  3 - Sometimes  4 - Frequently  5 - Always

1. I want to be the best at everything I do.
2. I get annoyed in traffic jams.
3. I become impatient when waiting in line.
4. I find myself getting angry if kept waiting for an appointment.
5. I like to drive my car very fast.
6. I get angry with co-workers who are inefficient.
7. I find I try harder than others to accomplish things.
8. I seem to put more effort into my job than other people.
9. I get irritable when others don’t take their job seriously.
10. I am determined to win when playing a game with friends.
11. I enjoy intense competition.
12. When playing a game with a child, I will purposely let him win.
13. I move, walk, talk and eat rapidly.
14. I feel impatient because most things happen too slowly.
15. I think about business constantly.
16. I feel guilty when I relax and take it easy.
17. I challenge people about their thoughts or ideas.
18. I seem to have little spare time.
19. I do my work faster and more efficiently than my co-workers.
20. I enjoy discussing my achievements.
21. I become angry, easily, with my spouse or friends.
22. I find that I am quiet or subdued.
23. I appear more aggressive than others.
24. I let others know it when I am angry.
25. I find I have sufficient time in which to finish my work.
26. I become confused when too many things happen at once.
27. I wish I had help to get things done.
28. I rely only on myself to get things done.
29. Relaxing seems to infringe on my work time.
30. I skip meals to get things done.
31. I do extra work to impress others.
32. I seem to race against the clock to save time.
33. I lose my temper under pressure.
34. I make mistakes because I feel rushed into things without thinking about them through completely.
SCORE PROCESS

B Type Personality Range 34 - 67
A Type Personality Range 104 - 170
AB Type Personality Range 104
TYPE A & B PERSONALITY CHARACTERISTICS

Type A Characteristics
- Highly competitive
- Extremely achievement oriented
- Aggressive
- Hostile
- Impatient
- Time urgent
- Can't enjoy the present
- Focus on winning more goals
- Visible restlessness
- Hard worker
- Perfectionist
- Seldom out sick
- On time for appointments
- Strives for other's respect rather than their appreciation
- Extroverted
- Does things rapidly
- Hurries the ends of sentences
- Polyphasic thought or performance
- Feels guilty about relaxing
- Schedules more and more in less and less time
- Difficulty listening to others
- Plays it safe
- Lives in past
- Serious
- Compulsive
- Driven by "do your best"
- Seeks self-worth by being competitive

Type B Characteristics
- Easy going manner
- Patient
- Not preoccupied with achievement
- Not driven by the clock
- Less competitive than A's
- Good listener
- Casual
- Does things one at a time
- Slow, deliberate talker
- Doesn't feel rushed
- Does tasks at a leisurely pace
- Enjoys the present
- Likes to relax
- Risk taker
- Lives in the now
- Alive
- Fun loving
- Non-compulsive
- Driven by "do the task"
- Accepts self by being self
Appendix D

STRESS!
WE CAN HELP YOU COPE

Seeking Cures for Modern Anxiety
SPONSORED BY
GM.I: ENGINEERING and MANAGEMENT INSTITUTE
Human Resources Management/Personnel Administration
Course MGT - 632

For details contact Prof. Howard A. White
(313) 762-7854
on Mondays and Tuesdays
Section 1
- How Much Do You Know About Burnout
- Stress Control Test
- The Life Change Index
- Type A-B Personality Questionnaire
  (a) Score Process
  (b) Type A-B Personality Characteristics
- Stress Process Model

Section 2
- Framework for Assessment
- Recognizing Signs of Stress
- Stress Sign Chart
- Symptoms of Stress/Diseases Related to Stress
- Major Causes of Distress

Section 3
- Problem Solving
- Supporting Others in Problem Solving
- Seeking Other Support Systems
  (a) Definitions of Cognitive Distortions
  (b) How to Eliminate Unpleasant Emotions

Section 4
- Training Yourself in Deep Muscle Relaxation
- How to Relax Through Meditation
- Autogenic Phrases
- Signs of Relaxation

Section 5
- Suggestions on Coping With Stress
- Personal Planning
- Stress Log 1
- Stress Log 2
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress Log 3</td>
<td>10.21</td>
</tr>
<tr>
<td>Behavior Modification Form</td>
<td>10.22</td>
</tr>
<tr>
<td>18 Ways to a Stress-Free Life</td>
<td>10.23</td>
</tr>
<tr>
<td>Stress Relationship Chart</td>
<td>10.24</td>
</tr>
</tbody>
</table>
How Much Do You Know About Burnout Syndrome?

Stress Control Test

The Life Change Index

Type A-B Personality Questionnaires
  (a) Score Process
  (b) Type A-B Personality Characteristics

Stress Process Model

Coping Strategies
HOW MUCH DO YOU KNOW ABOUT BURNOUT SYNDROME?

LIFE IS SO FULL OF STRESS TODAY THAT A NEW WORD - BURNOUT - DESCRIBES THE EFFECT IT HAS. WHAT DO YOU KNOW ABOUT BURNOUT?

1. BURNOUT ALWAYS COMES FROM WHAT SOCIETY DOES TO PEOPLE; IT COMES FROM OUTSIDE AND DESTRUCTS THE INDIVIDUAL. TRUE ( ) FALSE ( )

2. ALL OF US ARE EQUALLY OPEN TO BURNOUT UNDER CERTAIN STRESS SITUATIONS. TRUE ( ) FALSE ( )

3. GIVEN ENOUGH STRESS ON THE JOB, BURNOUT WILL OCCUR. TRUE ( ) FALSE ( )

4. STRESS IS ALWAYS NEGATIVE AND DESTRUCTIVE. TRUE ( ) FALSE ( )

5. MEN ARE AT GREATER RISK OF BURNOUT THAN WOMEN. TRUE ( ) FALSE ( )

6. OVERINDULGENCE IS ONE SIGN OF BURNOUT. TRUE ( ) FALSE ( )

7. HOMEMAKERS RARELY EXPERIENCE SEVERE STRESS SO THEY NEVER SUFFER FROM BURNOUT. TRUE ( ) FALSE ( )
ANSWERS

1. FALSE  Burnout, that sense of physical and emotional exhaustion that leaves a person unable to feel or care, is more apt to come from inside, from within the individual, rather than from outside forces.

2. FALSE  Burnout can be a cop-out. People in very stressful jobs don't necessarily develop the burnout symptoms. Part of how well people survive and adjust to high-tension, high-risk jobs depends on their ability to relax outside the job.

3. FALSE  If a person in a high-stress position is using his or her talent to the full, and if rewarded and acknowledged that person wouldn't burn out.

4. FALSE  Without some stress life would be very boring. Burnout is a reality but the options of modern life create interesting tensions. People have any number of choices, but whenever a person makes a change, it creates fear. It also provides variety and can mean growth.
5. **FALSE**. According to studies, women are at greater risk of burnout than men. Surprisingly, those at the least risk are people who own and run their own business. People who feel they have more control over their lives, even though they may have a great deal of worry and tension, are less apt to suffer from burnout.

6. **TRUE**. Some people try to escape from excess tension and anxiety by over-indulgence. They may use alcohol, food, sex, gambling, or almost any activity and this, in turn, can become an addiction. When negative, frustrating experiences become the norm in a person's life, he or she may try to block out these problems by overindulgence.

7. **FALSE**. Homemakers do experience stress, just as high-powered executives, blue-collar workers and artists do. An expert on stress management found homemakers were at the greatest risk of burn-out. They're often burdened by overload, a primary cause of burnout.
Burnout, a stressful condition or stimulus that a person has been living with for too long.

Some of the strain in their lives comes from inevitable life events--a death, an illness, a divorce, a major shift in work or living environment, a serious loss of function or status, or other external occurrences which cause prolonged disruption in the way they feel or do things. Sometimes the burnout occurs because they have simply been trying to do too much--either because they have too much to do or because they enjoy the feeling of working against deadlines or on dangerous or exciting tasks.

Whatever the reason, they have been burning up "adaptation energy" much faster than it can be replaced!

No one reaches the exhausted state of burnout all at once. The condition builds up over time and tends to get worse, as people get into energy-wasting habits and further demanding situations. In its early stages, the road to burnout is farily well hidden from oneself and others--especially for people who start out with good resources and creative adaptibility. During the period of adaptation, people tend to feel quite normal. They may then load their lives with challenges, leaving little leeway for things that may reasonably be expected to go wrong. At some time, the load reaches its maximum, and it may take only a relatively minor setback to cause an overwhelming physical or emotional let-down.

They simply do not realize that they are over-doing--particularly when the strain continues over time. Exhaustion can occur with very little warning, and the "burnt out" individuals may experience a sudden, overwhelming onset of hopelessness, depression, fatigue, irritability, and cynicism. If they do not recognize these as signals to slow down and pace their activities more reasonably, they may get into chronic cycles of "ups" and "downs," which tend to keep their adaptation resources at a marginal level.
One of the real dangers of burnout is that it can be life-threatening. As Johnny Carson has said before on the Tonight Show, “Death is nature’s way of telling the body to slow down.” The feeling of hopelessness which accompanies the condition can seriously affect one’s ability to judge the seriousness of any situation and may lead to carelessness while driving or operating machinery, or even to suicide. Another danger derives from the fact that the individual may be too “down” to plan for realistic relief—he or she may make fairly drastic alterations in career or relationships, which may merely make things worse. In addition, someone who has been in this condition of physical and psychological exhaustion over a long period of time may have convinced possible supporters and resources of the hopelessness of the situation: burnout victims can be quite unpleasant to deal with. They can seem both demanding and ungrateful—and others tend to back away after unappreciated attempts to assist.
BURNOUT -- WHAT TO DO ABOUT IT?

It is fairly easy to get significant relief from some very small changes. In the short run, you may be able to regain important energy reserves, by simply taking some time out, by taking better care of your physical needs, or by letting go of some of the less important things you are doing. However, it is important to realize that the relief will be only temporary if you then return to your old habits.

In the long run, it will be necessary to make permanent changes in the patterns of your life--setting priorities based on your long-term goals and the things that really matter to you. You may need to give up some responsibilities before you take on new challenges.

If you are experiencing burnout, you are likely to feel less enthusiastic than you can be, to be irritable, to find it hard to get involved, or to keep your mind on what you should be doing. You may be a "wet blanket" when interacting with others and may be showing a negative attitude when others think up things that might be fun or that might solve some problems. You may be sleeping too much or too little, losing your temper more than you think you should, forgetting things, or generally believing that you are not acting or feeling like yourself. Life may seem too hard to be worthwhile. You may be trying to overcome these difficulties with chemical assistance: however, caffeine, tobacco, alcohol, prescription or non-prescription drugs cannot bring back the energy reserves you need. These may help you forget your discomfort for a short time or give you a brief lift--but they do so by drawing on your already depleted reserves.

You seriously need some form of renewal of physical or mental resources. However, this requires long-term commitment to change, and for a while, any changes are likely to draw further on your scarce energies. A necessary first step is a careful re-evaluation of your total stress load. A second step is some nondisruptive
reduction in your load. A third step is to make some small kinds of habit changes that are likely to require simple improvements, without creating further difficulties. Later, you may learn to monitor your life-time stress load on a more permanent basis--reading the signs of over-doing, in time to prevent a recurrence.

Be able to recognize the signs of "burnout" when they occur again in your life. Get in the habit of effective personal planning, you may find it helpful to spend some time with professional counseling. A medical checkup is also a good idea.
THE SELF-TEST IN THE STRESS PRIMER FROM BOSTON UNIVERSITY PUBLISHED IN THE CURRENT ISSUE OF BOSTONIA, TITLE "COPING RESOURCES".

IT IS PUBLISHED HERE WITH PERMISSION FROM PSYCHOLOGIST LYLE MILLER.

THE FOLLOWING ARE SOME FACTORS THAT HAVE BEEN FOUND TO ENHANCE YOUR ABILITY TO DEAL WITH STRESS. A COMMON ASPECT OF EACH ITEM IS "BE GOOD TO YOURSELF".

CHECK YES OR NO BESIDE EACH ITEM

1. YES  NO I EAT ONE HOT, BALANCED MEAL PER DAY.
2. YES  NO I GET SEVEN-EIGHT HOURS SLEEP AT LEAST FOUR DAYS PER WEEK.
3. YES  NO I GIVE AND RECEIVE AFFECTION REGULARLY.
4. YES  NO I HAVE AT LEAST ONE RELATIVE WITHIN 50 MILES WHOM I CAN RELY ON.
5. YES  NO I EXERCISE TO THE POINT OF EXERTION ABOUT TWICE PER WEEK.
6. YES  NO I SMOKE LESS THAN ONE PACK OF CIGARETTES PER DAY.
7. YES  NO I DO NOT DRINK ALCOHOL TO EXCESS.
8. YES  NO I HAVE AN INCOME ADEQUATE TO MEET BASIC EXPENSES.
9. YES  NO I AM APPROPRIATE WEIGHT FOR MY HEIGHT.
10. YES  NO I REGULARLY ATTEND CHURCH.
11. YES  NO I REGULARLY ATTEND CLUB OR SOCIAL ACTIVITIES.
12. YES  NO I HAVE A NETWORK OF FRIENDS WITH WHOM I AM ACQUAINTED.
13. YES  NO I HAVE ONE OR MORE FRIENDS TO CONFIDE IN ABOUT PERSONAL MATT.
14. YES  NO I AM IN GOOD HEALTH (INCLUDING EYESIGHT, HEARING, TEETH.)
15. YES  NO I'M ABLE TO SPEAK OPENLY ABOUT MY FEELINGS WHEN ANGRY OR WOR.
16. YES  NO I HAVE REGULAR CONVERSATIONS WITH THE PEOPLE I LIVE WITH ABOUT DOMESTIC ISSUES — THAT IS, CHORES, MONEY, DAILY LIVING ISSU.
17. YES  NO I DO SOMETHING FOR FUN AT LEAST ONCE PER WEEK.
18. YES  NO I AM ABLE TO ORGANIZE MY TIME EFFECTIVELY.
19. YES  NO I DRINK LESS THAN THREE CUPS OF COFFEE (OR TEA OR COLA DRINK) PER DAY.
20. YES  NO I TAKE ADEQUATE QUIET TIME FOR MYSELF EACH DAY.

COUNT THE NUMBER OF YES ANSWERS. THEY SHOULD ALL BE YES. THE MORE YES ANSWERS A PERSON HAS, THE LESS VULNERABLE TO STRESS A PERSON IS.

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INTRODUCTION

This workshop will be a setting in which to present the idea that you, the consumer, should assume primary responsibility for health maintenance, and to introduce you to strategies or ideas that develop health behavioral activities which encourage health and resist disease.

Our workshop goal is to give you a basic understanding of stress and the relationship between psychological factors and physical health. Also, expose you to a range of stress management and relaxation techniques that could later be used in stress management.

At the dawn of human history one of our ancestors stepped out of his dwelling to get food; suddenly he sees a large animal coming his way. His muscles tense, his heart pounds, his breath comes rapidly as he locks eyes with an animal, who wants him, for supper. These responses served our ancestors well; that extra burst of adrenaline got their muscles primed, their attention focused and their nerves ready for a sudden "fight or flight". We are not our ancestors, but the modern jungle is no less stressful. The scene of panic over a deadline, a tight airplane connection, a reckless driver on your tail are the new beasts that can set your heart racing, your teeth grinding, the sweat streaming.

The evolution of the human species has been a history of change and crisis. Our ancestors endured the harsh realities of unpredictable weather conditions, predatory animals, and a continuous chain of natural and man made disasters. Throughout our history, survival has often depended upon the ability to act and react quickly to mobilize all of one's resources to cope with life's events.
OUR LIVES TODAY ARE DRAMATICALLY DIFFERENT FROM THOSE OF OUR ANCESTORS. WE HAVE MODERN EQUIPMENT AND IN MANY WAYS WE ARE MORE PROTECTED FROM THE DANGERS THAT WERE ONCE BOTH COMMONPLACE AND UNAVOIDABLE. YET, OUR LIVES OFTEN DO NOT RUN AS SMOOTHLY AS OUR MACHINES. WE ARE STILL CALLED UPON TO COPE WITH PERSONAL CHANGES, SOME BROUGHT ABOUT BY MOMENTS OF CRISIS, OTHERS RESULTING FROM OUR DAILY ROUTINES. DEMANDS AS COMMON AS COMMUTING TO WORK OR MEETING JOB-RELATED DEADLINES CAN ELICIT THE SAME PHYSICAL RESPONSE EXPERIENCED BY OUR ANCESTORS WHEN THEY WERE FACED WITH LIFE AND DEATH SITUATIONS. WE KNOW THE RESPONSE AS STRESS, AND ITS PURPOSE IS TO HELP US MOBILIZE OUR PHYSICAL RESOURCES TO MEET THE DEMANDS OF THE STRESS PRODUCING EXPERIENCE. UNFORTUNATELY, WHEN THE STRESS RESPONSE IS TRIGGERED FOR REASONS OTHER THAN EMERGENCY SITUATIONS, IT PREPARES OUR BODIES TO COPE WITH PHYSICAL DEMANDS THAT CANNOT BE RESOLVED THROUGH PHYSICAL MEANS. THE HORMONES RELEASED TO STIMULATE OUR BODIES REACTIONS ARE LEFT RACING THROUGH OUR SYSTEMS WITH NO OUTLET FOR EXPRESSION. DURING THESE MOMENTS, STRESS MAY BE DIFFICULT TO COPE WITH AND MAY RESULT IN CONTINUATION OF THE STRESS RESPONSE. OVER A PERIOD OF TIME, UNRESOLVED STRESS ISSUES CAN LEAD TO PHYSICAL AND EMOTIONAL PROBLEMS THAT CAN AFFECT EMOTIONAL AND PHYSICAL WELL-BEING. BECAUSE OF THIS I WILL BE OFFERING THIS WORKSHOP IN STRESS MANAGEMENT AS A WAY OF AIDING YOU IN COPING WITH THE ADVERSE EFFECTS OF STRESS.
NO ONE REALLY KNOWS IF THERE IS MORE STRESS NOW THAN IN THE PAST. WE LIVE IN A WORLD OF UNCERTAINTIES, JUST LOOK IN THE NEWSPAPER OR AT THE EVENING NEWS. THE UPHEAVAL IN SOCIETY'S MOST BASIC VALUES ADDS GREATLY TO THE GENERAL LEVEL OF ANXIETY.

IN THE EARLY 50'S THOMAS HOLMES DETERMINED THAT THE SINGLE COMMON DENOMINATOR FOR STRESS IS "THE NECESSITY OF SIGNIFICANT CHANGES IN THE LIFE PATTERN OF INDIVIDUALS." IN AN ATTEMPT TO MEASURE THE IMPACT OF "LIFE CHANGE EVENTS" AND MAKE YOU AWARE OF THE IMPORTANCE OF THESE EVENTS I WILL DISPLAY A COPY OF THE HOLMES-RANE SCALE ON YOUR T.V. SCREEN SO YOU CAN FOLLOW ALONG WITH ME.
THE LIFE CHANGE INDEX

Take a moment to read over the list and record the weighted value of each change that has occurred in your life within the last year. When you complete the scale, we will discuss how your score may be a predictor of future changes in your health status.

<table>
<thead>
<tr>
<th>Life Event</th>
<th>Mean Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Death of Spouse</td>
<td>100</td>
</tr>
<tr>
<td>2. Divorce</td>
<td>73</td>
</tr>
<tr>
<td>3. Marital separation from mate</td>
<td>65</td>
</tr>
<tr>
<td>4. Detention in jail or other institution</td>
<td>63</td>
</tr>
<tr>
<td>5. Death of a close family member</td>
<td>63</td>
</tr>
<tr>
<td>6. Major personal injury or illness</td>
<td>53</td>
</tr>
<tr>
<td>7. Marriage</td>
<td>50</td>
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<tr>
<td>8. Being fired at work</td>
<td>47</td>
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<tr>
<td>9. Marital reconciliation with mate</td>
<td>45</td>
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<tr>
<td>10. Retirement from work</td>
<td>45</td>
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<tr>
<td>11. Major change in the health or behavior of a family member</td>
<td>44</td>
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<tr>
<td>12. Pregnancy</td>
<td>40</td>
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<tr>
<td>13. Sexual difficulties</td>
<td>39</td>
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<tr>
<td>14. Gaining a new family member (e.g., through birth, adoption, or older person moving in)</td>
<td>39</td>
</tr>
<tr>
<td>15. Major business readjustment (e.g., merger, reorganization, or bankruptcy)</td>
<td>39</td>
</tr>
<tr>
<td>16. Major change in financial state (e.g., becoming much worse off or much better off than usual)</td>
<td>38</td>
</tr>
<tr>
<td>17. Death of a close friend</td>
<td>37</td>
</tr>
<tr>
<td>18. Changing to a different line of work</td>
<td>36</td>
</tr>
<tr>
<td>19. Major change in the number of arguments with spouse (e.g., either many more or fewer than usual regarding child rearing or personal habits)</td>
<td>35</td>
</tr>
</tbody>
</table>
20. Taking on a mortgage greater than $10,000 (e.g., purchasing a home or business)
21. Foreclosure on a mortgage or loan
22. Major change in responsibilities at work (e.g., promotion, demotion, lateral transfer)
23. Son or daughter leaving home (e.g., marriage or attending college)
24. In-law troubles
25. Outstanding personal achievement
26. Wife beginning or ceasing work outside the home
27. Beginning or ceasing formal schooling
28. Major change in living conditions (e.g., building a new home, remodeling, or deterioration of home or neighborhood)
29. Revision of personal habits (dress, manners, associations, etc.)
30. Troubles with the boss
31. Major change in working hours or conditions
32. Change in residence
33. Changing to a new school
34. Major change in usual type and/or amount or recreation
35. Major change in church activities (e.g., many more or fewer than usual)
36. Major change in social activities (e.g., clubs, dancing, movies, or visiting)
37. Taking on a mortgage or loan less than $10,000 (e.g., purchasing a car, TV, or freezer)
38. Major change in sleeping habits (much more or less sleep or very different sleeping hours)
39. Major change in number of family get-togethers (e.g., many more or fewer than usual)
40. Major change in eating habits (much greater or lesser food intake or very different meal hours or surroundings)
41. Vacation
42. Christmas
43. Minor violations of the law (e.g., traffic tickets, jaywalking, or disturbing the peace)
AT THE TOP IS DEATH OF A SPOUSE (100 STRESS POINTS), FOLLOWED BY DIVORCE (73), MARITAL SEPARATION (65), IMPRISONMENT (63), AND DEATH OF A CLOSE FAMILY MEMBER (63). BUT, NOT ALL STRESSFUL EVENTS ARE UNPLEASANT. MARRIAGE RATES (50), PREGNANCY (40), BUYING A HOUSE (31), AND CHRISTMAS (12). THOSE OF YOU WHO TOTALED 300 OR MORE UNITS ON THE SCALE HAVE A 70% CHANCE OF SUFFERING ULCERS, PSYCHIATRIC DISTURBANCES, BROKEN BONES OR OTHER HEALTH PROBLEMS WITHIN TWO YEARS. THOSE OF YOU WHO SCORED UNDER 200 HAVE ONLY A 37% CHANCE OF SUCH INFIRMITIES. THIS HOLDS TRUE ONLY IF THOSE LEVELS REMAIN CONSTANT, AND AGAIN THIS COULD CHANGE IF CERTAIN COPING STRATEGIES ARE LEARNED AND USED. YOU SHOULD BE MADE AWARE OF THE FACT THAT YOUR SCORE ON THE QUESTIONNAIRE IS A STATISTIC, OR A PROBABILITY STATEMENT, RATHER THAN A STATEMENT THAT ILLNESS IS INEVITABLE. I FEEL IT'S IMPORTANT TO EMPHASIZE THAT STRESS IS NOT NECESSARILY HEALTH THREATENING. THE STRESS RESPONSE, IN FACT, IS ESSENTIALLY AN ADAPTIVE RESPONSE AND HEALTH PRESERVING. STRESS BECOMES UNHEALTHY ONLY WHEN THE BODY'S RESOURCES ARE INSUFFICIENT TO MEET THE DEMANDS OF THE ENVIRONMENT.
IN RECENT YEARS DOCTORS HAVE COME TO RECOGNIZE ANOTHER PSYCHOLOGICAL FACTOR THAT DRASTICALLY INCREASES AN INDIVIDUAL'S SUSCEPTIBILITY TO HEART ATTACKS AND OTHER STRESS-RELATED ILLNESSES. TYPE A BEHAVIOR; TYPE A HAS TWO MAIN COMPONENTS: BOTH OF WHICH CAN BE RECOGNIZED BY GIVING STANDARDIZED PERSONALITY TEST, WHICH ALL OF YOU WILL SEE ON YOUR T.V.

CUT (Go to the Type A-B personality questionnaire and stay on while I explain and go over.)

FIRST, THERE IS THE TENDENCY TO TRY TO ACCOMPLISH TOO MANY THINGS IN TOO LITTLE TIME. SECOND, THERE IS FREE-FLOATING HOSTILITY, WHICH MEANS THEY ARE IRRITATED BY TRIVIAL THINGS, AND EXHIBIT SIGNS OF STRUGGLE AGAINST TIME AND OTHER PEOPLE. TYPE A PERSONALITY BEHAVIOR HAS BEEN ACCEPTED AS A BONA FIDE RISK FACTOR FOR HEART DISEASE BY THE AMERICAN HEART ASSOCIATION AND THE NATIONAL HEART, LUNG AND BLOOD INSTITUTE. STUDIES HAVE SHOWN THAT TYPE A'S RESPOND DIFFERENTLY TO STRESS THAN DO CALMER PEOPLE CLASSIFIED AS TYPE B'S.

CUT (Go to the Stress Process Model and explain Type A Behavior — High Awareness and Type B Behavior — Low Awareness.)
TYPE A-B PERSONALITY QUESTIONNAIRE

The statements below apply to day-to-day living. Using a scale of one to five, indicate the degree to which each statement applies to you.

1 - Never  2 - Rarely  3 - Sometimes  4 - Frequently  5 - Always

1. I want to be the best at everything I do.
2. I get annoyed in traffic jams.
3. I become impatient when waiting in line.
4. I find myself getting angry if kept waiting for an appointment.
5. I like to drive my car very fast.
6. I get angry with co-workers who are inefficient.
7. I find I try harder than others to accomplish things.
8. I seem to put more effort into my job than other people.
9. I get irritable when others don't take their job seriously.
10. I am determined to win when playing a game with friends.
11. I enjoy intense competition.
12. When playing a game with a child, I will purposely let him win.
13. I move, walk, talk and eat rapidly.
14. I feel impatient because most things happen too slowly.
15. I think about business constantly.
16. I feel guilty when I relax and take it easy.
17. I challenge people about their thoughts or ideas.
18. I seem to have little spare time.
19. I do my work faster and more efficiently than my co-workers.
20. I enjoy discussing my achievements.
21. I become angry, easily, with my spouse or friends.
22. I find that I am quiet or subdued.
23. I appear more aggressive than others.
24. I let others know when I am angry.
25. I find I have sufficient time in which to finish my work.
26. I become confused when too many things happen at once.
27. I wish I had help to get things done.
28. I rely only on myself to get things done.
29. Relaxing seems to infringe on my work time.
30. I skip meals to get things done.
31. I do extra work to impress others.
32. I seem to race against the clock to save time.
33. I lose my temper under pressure.
34. I make mistakes because I feel rushed into things without thinking about them through completely.
<table>
<thead>
<tr>
<th>Type</th>
<th>Personality Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>34 - 67</td>
</tr>
<tr>
<td>A</td>
<td>104 - 170</td>
</tr>
<tr>
<td>AB</td>
<td>104</td>
</tr>
<tr>
<td>Type A Characteristics</td>
<td>Type B Characteristics</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>- Highly competitive</td>
<td>- Easy going manner</td>
</tr>
<tr>
<td>- Extremely achievement oriented</td>
<td>- Patient</td>
</tr>
<tr>
<td>- Aggressive</td>
<td>- Not preoccupied with achievement</td>
</tr>
<tr>
<td>- Hostile</td>
<td>- Not driven by the clock</td>
</tr>
<tr>
<td>- Impatient</td>
<td>- Less competitive than A's</td>
</tr>
<tr>
<td>- Time urgent</td>
<td>- Good listener</td>
</tr>
<tr>
<td>- Can't enjoy the present</td>
<td>- Casual</td>
</tr>
<tr>
<td>- Focus on winning more goals</td>
<td>- Does things one at a time</td>
</tr>
<tr>
<td>- Visible restlessness</td>
<td>- Slow, deliberate talker</td>
</tr>
<tr>
<td>- Hard worker</td>
<td>- Doesn't feel rushed</td>
</tr>
<tr>
<td>- Perfectionist</td>
<td>- Does tasks at a leisurely pace</td>
</tr>
<tr>
<td>- Seldom out sick</td>
<td>- Enjoys the present</td>
</tr>
<tr>
<td>- On time for appointments</td>
<td>- Likes to relax</td>
</tr>
<tr>
<td>- Strives for other's respect rather than their appreciation</td>
<td>- Risk taker</td>
</tr>
<tr>
<td>- Extroverted</td>
<td>- Lives in the now</td>
</tr>
<tr>
<td>- Does things rapidly</td>
<td>- Alive</td>
</tr>
<tr>
<td>- Hurries the ends of sentences</td>
<td>- Fun loving</td>
</tr>
<tr>
<td>- Polyphasic thought or performance</td>
<td>- Non-compulsive</td>
</tr>
<tr>
<td>- Feels guilty about relaxing</td>
<td>- Driven by &quot;do the task&quot;</td>
</tr>
<tr>
<td>- Schedules more and more in less and less time</td>
<td>- Accepts self by being self</td>
</tr>
<tr>
<td>- Difficulty listening to others</td>
<td></td>
</tr>
<tr>
<td>- Plays it safe</td>
<td></td>
</tr>
<tr>
<td>- Lives in past</td>
<td></td>
</tr>
<tr>
<td>- Serious</td>
<td></td>
</tr>
<tr>
<td>- Compulsive</td>
<td></td>
</tr>
<tr>
<td>- Driven by &quot;do your best&quot;</td>
<td></td>
</tr>
<tr>
<td>- Seeks self-worth by being competitive</td>
<td></td>
</tr>
</tbody>
</table>
STRESS PROCESS MODEL

STRESSOR 1

PERCEPTION 2

STRESS RESPONSE 3

LOW AWARENESS 4

HIGH AWARENESS 5

OUTCOMES 7
- a. Reduction of stress
- b. Altered situation

COPING STRATEGIES 6
- a. Personal management strategies
- b. Problem-solving techniques
- c. Building support systems
COPING STRATEGIES

Behavioral social workers point to a number of personal factors that seem to be helpful in coping. Among them:

1. The sense of being in control of one's life
2. Have a network of friends or family to provide what is called "social supports"
3. Such personality factors as flexibility and hopefulness
4. Relaxation training
5. Exercise, and
6. Diet

Our session will deal mostly with relaxation training, along with those just listed.

TM is only one of several techniques that can be used to produce what is termed the relaxation response. The effect can be achieved just by following four easy, simple steps:

1. Assume a comfortable position
2. Close your eyes
3. Concentrate on a single word, sound, or phrase
4. Cast off all other thoughts.

Sounds easy.

Another form of relaxation response: biofeedback--the person is connected by sensor wires to a machine with a small screen that feeds back information on such physiological indexes of stress such as blood pressure, tension in the facial muscles, or, most frequently, the temperature of one's fingers. By loosening their muscles, breathing deeply or letting their thoughts drift, a patient learns that they can control their stress response; they can make their blood pressure drop or the temperature in their hands. Biofeedback makes you more aware of what's going on in your body.
Training in deep muscle relaxation and pairing of thoughts are another form of the relaxation response which will be covered more in-depth later, along with other relaxation examples.

Physical exercise is one of the most effective stress reducing personal management strategies. Not only does it discharge built-up energy generated during moments of stress, but it also serves as a valuable aid for managing future stress. Generally speaking, the most effective type of fitness program combines exercise that builds both cardiovascular endurance and muscular strength.

CUT to tape.
1. **What are aerobics?**

   Aerobics are a group of exercises that increase the heart and breathing rates for a sustained period of time, greatly increasing the flow of oxygen and blood to all parts of the body. To be effective, the exercise must raise the heart (pulse) rate to a certain level (see chart below) and keep it at that level for not less than 10 to 15 minutes. (NOTE: Many people who are not in condition will have to build up slowly to a 10 to 15 minute exercise period.)

   Examples of aerobic exercises are bicycling, running/jogging, swimming, jumping rope, vigorous walking, etc. Stop and go exercises (like golf, downhill skiing, housework, gardening, etc.) and those of short duration (like sprinting, square dancing, calisthenics, etc.) are not effective in producing the desired level of fitness.

2. **What are some of the benefits of aerobic exercise?**

   A. Replacement of intramuscular fat (marbling) by lean muscle, leading to more efficient utilization of calories. Most of our calories are burned by lean body mass (muscle): fat burns nothing.

   B. Strengthening of heart and lungs and muscles throughout the body, thus improving general circulation. This may have the added benefit of reducing blood pressure and usually slows the heart rate.

   C. Improved absorption/utilization of food.

   D. Increased energy and stamina.

   E. More restful sleep.
F. Lessening (if not elimination) of depression, nervous tension.

G. Improved appearance; more positive self-image and outlook on life.

H. People who exercise regularly consume far fewer drugs, coffee, tea, alcohol, tobacco, sugar and refined carbohydrates than nonexercisers. They find these things to be antagonistic to a healthy life style.

3. Don’t be in a hurry.

You need time to condition your heart and muscles to the new demands. Ignoring this maxim invites trouble—increase your exercise gradually.

4. Before starting your program.

Get a physical and EKG first—especially if you are over age 40.

5. How often?

Regular (at least 4 to 5 times per week) exercise is imperative. The weekend or only now-and-then exerciser places himself in potential danger because his heart and body is not strengthened sufficiently to withstand a really vigorous workout.

NOTE: While regular exercise is important, you should temporarily suspend it whenever you are ill or excessively fatigued.

6. Warm-up.

Just like a car requires a few minutes to warm up before running efficiently, our body also needs a gradual warm-up before strenuous exercise. This is especially important for those past 40 years of age.
About 5 minutes is all that is necessary. Calisthenics (such as sit-ups and push-ups) and stretching exercises are not particularly good for warming up. Besides getting your "motor" in gear, they will increase your flexibility and coordination, and tone and strengthen muscles you may not be using in your aerobic workout.

7. Cooling down.

After a period of vigorous exercise, cooling down is just as important as warming up. During exercise such as running or cycling, the blood pools in the large leg muscles. While the activity continues, the muscles are squeezing the blood back to the heart and rest of the body. When the exercise is stopped suddenly and completely, the blood is still pooled in the legs, but now there is no contraction of the leg muscles to return the blood to the heart and brain--dizziness, fainting, or even more serious consequences can occur.

A gradual (3 to 5 minutes) cool-down eases the transition between vigorous exercise and rest. For example, walk after running, or slow whatever your exercise is to a relaxed, easy pace before stopping.

8. How much is too much?

There are several good ways to determine if you are exercising too hard:

A. If you experience faintness, dizziness, nausea, tightness or pain in the chest, severe shortness of breath, or loss of muscle control--stop exercising immediately.

B. Heart Rate Recovery. Count your pulse 5 minutes after exercise. It should have returned to 120 or below. If it hasn't, you're pushing yourself too hard. Count your pulse again after 10 minutes--if it isn't back below 100 (beats/minute), ease up a little on your exercise program.
9. How much is enough?

To gain the desired effect, you should not over-exert yourself, but neither should you go too slowly. The following is a chart to help guide you in determining that in-between, optimum level.

Find your age in the left hand column and follow it across to the second column to determine your recommended training pulse rate. If you have a history of heart disease, go to the third column (plus you should receive a clearance from your physician before beginning your exercise program). This is the heart rate at which you should exercise to achieve maximum benefit, safely.

Heart Rates: (Based on resting heart rates of 72 for male and 80 for female)

<table>
<thead>
<tr>
<th>Age</th>
<th>Recommended Rate</th>
<th>Heart Disease History</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>160</td>
<td>150</td>
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<tr>
<td>22</td>
<td>158</td>
<td>148</td>
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<td>24</td>
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<td>128</td>
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<tr>
<td>60</td>
<td>128</td>
<td>120</td>
</tr>
<tr>
<td>65+</td>
<td>120</td>
<td>113</td>
</tr>
</tbody>
</table>

If your resting pulse is more than 12 beats per minutes slower, determine your recommended training rate from this formula:

Your Recommended Rate = \(0.65 \times (\text{Recommended Rate in table} - \text{Your Resting Rate}) + \text{Your Resting Rate}\).

The value you compute from this formula should be somewhat less than the value in the table.
For someone who is terribly out of shape, walking in place may be all that is needed to raise his pulse to the desired level. Another person who is conditioned, may have to run quite hard to reach the same heart rate. Don't try to keep up with someone else—use this table to find your own pace.

The first few times, stop after a minute or two and take your pulse. If it is less than your recommended exercise pulse, you aren't pushing yourself hard enough. If it is too high, ease up a bit. Of course, you should continue to utilize the guidelines in number 8, also.

10. When to exercise.

The time of day should fit your individual schedule. Some people prefer after work because it is an extremely effective way of revitalizing yourself and eliminating all the day's problems and tensions. It is almost impossible to be "uptight" when you're exercising vigorously.

The morning time holds other advantages. In the hot summer months it is a cool time of day. Also, some people find their morning time more disciplined and less likely to vary than their evenings.
Diet or what you eat can have a real impact on how you feel and, therefore, can influence the way you cope with stress. Not only is sound nutrition an important stress management strategy, but it is a key ingredient for good health in general. (For example, too much coffee, tea, and some soft drinks can contribute to stress.)
EAT NATURAL FOODS:

Many of the processed, canned or frozen foods presently available, no longer have the vitamins and minerals they had when fresh. As a general rule, the more processed a food, the less acceptable it should be.

VARY YOUR DIET:

Choose different types of foods. Eating the same thing day after day, even if they are natural and healthy may in the end be bad for you. Foods have differing properties. To have a proper diet requires a mix. By having a variety of fresh fruits and vegetables, legumes, fish, seafood, and fowl, and whole grains, you can usually be assured of a balanced diet. Study nutrition. It is one of the easiest things you can do to promote wellness and the more you know, the better you will be. Incorporate healthful changes into your diet and you will see the difference this one change can make.

AVOID DANGEROUS FOOD ADDITIVES:

Our chemically oriented society has created problems for itself. Businesses have found that it is cheaper to put synthetics into foods to create the desired end-products than to allow them to be natural. When we first started adding these things, we were naive; we had no notion of the problems we were creating for ourselves. And now that we do know, inertia, economics and conflicting information is making it difficult to get rid of the problems. Artificial colors, flavorings, additives, preservatives, and stabilizers have all at one time or another been accused of being carcinogenic. In fact we hear
about it so much that we sometimes get the feeling that we are listening to the chicken telling us the 'sky is falling'. Unfortunately, this time, the sky may in fact be falling. There are over 5500 different chemicals being introduced into our food chain. This is effecting all of us. Whole towns were evacuated when dioxin was found in the ground water. Whole herds of cows were slaughtered and buried when they were found to have ingested PCB's in excess. Asbestos related deaths have also been prominently noted in the media. But still, we continue to place these synthetic chemicals into our food.

Nitrates are found in many processed meats (i.e., bologna, hot dogs, salami, corned beef, bacon, sausage, etc.). It is there; to add the coloring we all know and love. It is claimed to be a preservative too, but it is not put in for that reason. In laboratory tests, the relationship between nitrates and cancer was absolutely clear. Yet the special interest groups continue to lobby effectively and the nitrates are still found in the foods we eat.

Chemicals like BHT and BHA are standard ingredients in many of our foods. Learn to read labels and learn to avoid these unhealthy additives. These products are chemicals, counterfeit; They are placed there to please your palate or to make foods more easily processed or to increase the shelf life. Don't compromise your health so that they can make more money. There is enough healthy food around to eat. If we all started eating healthy foods and avoiding the chemical laden ones, they would eventually quit making the chemical ones.

AVOID REFINED, PROCESSED FOODS:

Examples here are packaged cereals, candies, commercial ice cream, colas, etc. They consist of empty calories which have little value to your body. They have few vitamins, minerals, and amino acids; all factors necessary to making a food useful in your body. Even the so-called 'enriched' foods (like white bread) are poor choices. Enriched usually means that all of the
vitamins and minerals were taken out during the processing of the product, and then a few of the vitamins were dumped back in. None of these enriched foods are as good as the whole fresh version.

**AVOID REFINED CARBOHYDRATES:**

When sugar is introduced into your bloodstream, the pancreas must immediately shoot insulin into your body to help process it. This upsets the endocrine balance in your body. The body must draw on its resources to metabolize the sugar which causes a loss of many essential vitamins and minerals. If it is not immediately processed lactic and pyruvic acid builds up, and this can lead to tissue degeneration.

So in the end, these empty carbohydrate calories are worse than no calories at all. They provide little fuel, and that which is provided doesn’t last long. They take the place of foods you might eat that could supply more energy and they contain no fiber to disrupt digestion. They also cause tooth decay and gum disease.

Among other things, you should avoid the following foods because of their high simple carbohydrate content: soda pop, pastries, candy, ice cream, potato chips, white flour bread and spaghetti, etc. Instead, consider eating things like fructose, honey, molasses, fresh fruits, whole grain breads, seeds, and other carbohydrates.

**ELIMINATE CAFFIENE AND OTHER ADDICTIVE DRUGS:**

Coffee, tea (non-herbal), cola and chocolate are hazardous to your health. I know what some of you are saying: “How can I get started in the morning without my coffee?” Well, let’s take a look at the effects of that morning coffee. It stimulates the sympathetic nervous system to secrete acid into the stomach which can lead to ulcers, gastritis, etc. It also asks the pancreas to send out insulin and gets it to believe that food is being processed. This in turn causes an increase in blood sugar levels followed by a drastic decrease in blood sugar. This
begins a roller coaster process of artificial highs and lows that often continue throughout your day. It also causes nervousness, robs your body of thiamin and burns the mucosal lining of your mouth and throat if it is too hot. It is also expensive. Why then do we drink and eat caffeine foods? Easy—we have become addicted to them. It is better to learn to enjoy juices, herbal teas and other substitute foods that nourish rather than harm your body.

EAT MORE ROUGHAGE:

Foods high in fat, starches, simple sugars and refined flours convert into fecal matter that stays in your digestive system for 3 to 4 days. This stagnant holding tank leads to heartburn, gas, nausea, bloating, abdominal pain, rectal irritation and constipation. As if that were not bad enough, it eventually can produce cancer of the colon, appendicitis, hemorrhoids, diverticulitis, varicose veins, phlebitis and obesity. It also bears some relationship to coronary heart disease. The way around these complex problems is simple. Eat more roughage by eating bran (at least two tablespoons per day), whole grain foods, fresh fruits and vegetables, and avoid the junk food.

LEARN WHAT TO EAT AND THEN ENJOY EATING IT:

Don’t consider this a diet, consider this a way of life. Forget counting calories and the numbers on the scales. Forget all of the things you presently think of when confronted with a “weight problem”. Nutritional foods (as compared to hollow calorie foods) satisfy your needs to eat. If you eat sensibly, get plenty of rest and exercise, and learn to enjoy your life, your weight will become a less important problem. In fact for many people, the problem goes away when their habits and attitudes change. Instead of junk food find wholesome foods that you can enjoy, and then eat those foods. You should get a sensual pleasure from eating. Your only task is to find healthy foods that will give you this pleasureable sensation.
THE BASICS FOR GOOD NUTRITION

The trick to having a good diet is simple: LOW FAT & HIGH FIBER

This diet will:
1. Lessen the risk of a heart attack
2. Lessen the risk of cancer
3. Help to control your weight.

<table>
<thead>
<tr>
<th>LOW FIBER (GOOD TO EAT)</th>
<th>HIGH FIBER (GOOD TO EAT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Wheat Bread</td>
<td>All oils</td>
</tr>
<tr>
<td>Corn, Barley, Wild Rice, Buckwheat, Millet</td>
<td>All fried foods</td>
</tr>
<tr>
<td>Whole Grain Cereals</td>
<td>All cheeses (except lowfat cottage cheese)</td>
</tr>
<tr>
<td>(shredded wheat, raisen bran, Wheaties, Grape Nuts, Total, Oatmeal, all bran cereals, etc.)</td>
<td>Butter, Margarine, Oleo, Lard</td>
</tr>
<tr>
<td>Granola</td>
<td>Avocado</td>
</tr>
<tr>
<td>Brown Rice</td>
<td>Coconut</td>
</tr>
<tr>
<td>Whole Wheat Spaghetti &amp; noodles</td>
<td>Red Meats (beef, lamb, veal, tongue, liver, heart, pork, etc.)</td>
</tr>
<tr>
<td>Beans &amp; Legumes (Navy, Lima, Kidney, Lentil, Pinto Beans, etc.)</td>
<td>Nuts and seeds</td>
</tr>
<tr>
<td>Blackberries, figs, prunes &amp; raspberries</td>
<td>Most fast foods (Wendy's salad bar is OK)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HIGH FIBER (GOOD TO EAT)</th>
<th>MODERATE FIBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>White spaghetti &amp; noodles</td>
<td>Fish</td>
</tr>
<tr>
<td>All veggies not noted above</td>
<td>Fowl (must remove skin BEFORE cooking)</td>
</tr>
<tr>
<td>Potatoes, squash, etc.</td>
<td>Lite salad dressings and mayo</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MODERATE FIBER</th>
<th>THINGS THAT MAY AFFECT FAT BUT ARE GOOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>All caffeine (coffee, tea, cola, decaf coffee)</td>
<td>Tuna (water packed)</td>
</tr>
<tr>
<td>Salt</td>
<td>Flounder, cod, scallops, crab, lobster, oysters, swordfish</td>
</tr>
<tr>
<td>Sugar (including white &amp; brown sugar, honey, molasses, corn syrup &amp; maple syrup)</td>
<td>Nonfat dairy foods: yogurt, skim milk, 1% cottage cheese or less</td>
</tr>
<tr>
<td>Cookies</td>
<td>Butter buds</td>
</tr>
<tr>
<td>Fruit or cream pies (unless made with a special modified recipe)</td>
<td>Herbal teas</td>
</tr>
<tr>
<td>Donuts</td>
<td>Yodolo</td>
</tr>
<tr>
<td>Pancakes &amp; Waffles</td>
<td>Weight Watchers Ice Milk</td>
</tr>
<tr>
<td>White bread</td>
<td>Soups (especially bean, split pea and vegetable)</td>
</tr>
<tr>
<td>White rice</td>
<td>( )</td>
</tr>
<tr>
<td>Sugared cereals</td>
<td>( )</td>
</tr>
<tr>
<td>Corn or tortilla chips</td>
<td>( )</td>
</tr>
<tr>
<td>Fruit juices (eat the whole fruit for fiber)</td>
<td>( )</td>
</tr>
</tbody>
</table>
I must point out that no single approach is right for everyone. Meditation may be good for somebody with hypertension, and bad for someone with a peptic ulcer. One person may need professional help while another needs nothing more than regular exercise and a vacation. Just as responses to stress vary widely according to age, sex, temperament and other factors, so do the requirements for treatment to offset it.

What no treatment program attempts to do, however, is eliminate stress entirely. There are many who believe stress can be the "spice of life", falling in love, catching an ocean wave, seeing a great performance and riding a roller coaster. All can unleash the same stress hormones as do less uplifting experiences, sending the blood pressure soaring and causing the heart to palpitate madly. A certain amount of stress is a positive and pleasurable thing. It leads to productivity in the human race. The point is not to escape the effects of stress, but to channel and control them.

But the fight or flight spasms of too much tension and dullness and of too little, our challenge for each of us is to find the level of manageable stress that meets us every day and find a balance.
STRESS PROCESS MODEL

STRESSOR 1

PERCEPTION 2

STRESS RESPONSE 3

LOW AWARENESS 4

HIGH AWARENESS 5

OUTCOMES 7
a. Reduction of stress
b. Altered situation

copING STRATEGIES 6
a. Personal management strategies
b. Problem-solving techniques
c. Building support systems
SECTION II

FRAMEWORK FOR ASSESSMENT

RECOGNIZING SIGNS OF STRESS

STRESS SIGN CHART

SYMPTOMS OF STRESS / DISEASES RELATED TO STRESS

MAJOR CAUSES OF DISTRESS
FRAMEWORK FOR ASSESSMENT

THIS SECTION WILL DESCRIBE: DEFINITIONS OF STRESS, ITS CHARACTERISTICS AND ASSESSMENT TOOLS THAT CAN BE USED BY YOU TO MEASURE THE AMOUNT OF STRESS AN INDIVIDUAL MIGHT EXPERIENCE, THE EFFECTS OF STRESS AND SELF ASSESSMENTS OF COGNITIVE AND EMOTIONAL STYLE WHICH AFFECT STRESS RESPONSES.

DEFINITION OF STRESS

STRESS: IS THE STIMULI, AND ANXIETY IS THE DISEASE.

STRESS: THE RESPONSE OF THE BODY TO ANY DEMANDS MADE UPON IT.

STRESSOR: THE SOURCE OR CAUSE OF THE STRESS.

CHARACTERISTICS

STRESS IS NATURAL. FREQUENTLY IT IS KNOWN AS THE "FIGHT OR FLIGHT" REACTION.

STRESS IS NON-SPECIFIC. THE BODY'S REACTION IS THE SAME REGARDLESS OF THE STRESSOR.

STRESS IS A CHAIN OF INTERNAL EVENTS.

STRESS CAN AFFECT HEALTH. MANY PHYSICAL AILMENTS AND DISEASES APPEAR TO BE STRESS RELATED.

STRESS IS SHORT AND LONG TERM. THERE IS A DIFFERENCE BETWEEN ACUTE AND CHRONIC STRESS.

STRESS IS CAUSED BY MANY SOURCES. ANYTHING CAN CAUSE IT, AND MANY THINGS DO.
RECOGNIZING SIGNS OF STRESS

DURING MOMENTS OF STRESS, PEOPLE UNDERGO CERTAIN CHANGES THAT PREPARE THEM FOR ACTION. THESE CHANGES REPRESENT CUES INDICATING THE EARLY STAGES OF THE STRESS RESPONSE. AS WE LEARN TO IDENTIFY THESE CUES, WE INCREASE OUR AWARENESS OF THE ADVENT OF STRESS IN OUR LIVES. SOME PEOPLE NOTICE CHANGES IN THEIR HEART RATE AND BREATHING PROCESS, AND OTHERS FEEL THEIR MUSCLES TIGHTENING. ACTUALLY, THERE ARE MANY POSSIBLE SIGNS THAT INDICATE STRESS.

(ASK THESE QUESTIONS)

PLEASE TRY TO REMEMBER THE LAST TIME YOU FELT STRESSFUL, HOW DID YOU FEEL? WHAT CHANGES DID NOT NOTICE? WHAT CAN YOU SAY ABOUT THESE SIGNS?

(CAMERA GO TO THE "STRESS SIGN CHART" AND I'LL GO OVER)

THIS SECTION WILL BE CAPPED BY DISCUSSION OF SOME OF THE MORE COMMON ADVERSE EFFECTS OF TENSION AND LONG TERM EXPOSURE TO STRESS. SUCH SYMPTOMS AS COLD HANDS, UPSET STOMACH, ANOREXIA, DIARRHEA, AND HEADACHE ARE ONLY A FEW, BUT THEY ARE FAMILIAR TO MOST INDIVIDUALS. CAUTION THAT IDENTIFICATION OF STRESSORS ARE SOMETIMES DIFFICULT SINCE THE STRESS REACTION MANIFESTED AS ADVERSE SYMPTOMATOLOGY OFTEN OCCURS SOMETIMES AFTER THE STRESSOR IS REMOVED AND, IN SOME CASES, SOMETIMES HOURS AFTER THE OCCURRENCE OF THE STRESSING EVENT. FOR EXAMPLE: GRINDING TEETH AT NIGHT. THIS POINT IS MADE TO EMPHASIZE THE NEED FOR INCORPORATION OF STRESS MANAGEMENT TECHNIQUES INTO ONE'S DAILY LIFE, RATHER THAN ACQUISITION OF COPING SKILLS TO MEET ONLY EMERGENCY SITUATION.
## Symptoms of Stress

1. Nervous Tic
2. Clearing Throat
3. Clenched Hands
4. Grit Teeth
5. Feeling Lonely
6. Queasy Stomach
7. Vomiting
8. Diarrhea
9. Headache
10. Backache
11. Neckache
12. Hives
13. Constipation
14. Depression
15. Rash
16. Pacing
17. Foot Tapping
18. Overeating
19. Smoking
20. Drinking
21. Feeling Fearful
22. Crying
23. Fatigue
24. Jittery Feelings
25. Rapid Heartbeat
26. Sweating
27. Sexual Difficulties
28. Dryness of Throat and Mouth
29. Irritability
30. Emotional Instability
31. Inability to Concentrate
32. Accident Proneness
33. Stuttering
34. Insomnia
35. Hypermotility
36. Frequent Urination
37. Nightmares
38. Negative Thoughts
39. Faintness or Dizziness
40. Lack of Interest
41. Low Energy Level
42. Temper Outbursts
DISEASES RELATED TO STRESS

1. SKIN DISORDERS
2. ALCOHOLISM
3. ALLERGIES
4. ARTHRITIS
5. ASTHMA
6. COLITIS
7. CONSTIPATION
8. DIARRHEA
9. ENTERITIS
10. GOUT
11. HEADACHES - TENSION AND MIGRAINES
12. HEART DISEASE
13. STROKE
14. HYPERTENSION
15. ULCERS
16. CANCER
17. NERVOUS BREAKDOWN
18. PSYCHOSIS
19. NEUROSIS
MAJOR CAUSES OF DISTRESS

1. The Management of Time
   a) Personal life  c) Leisure  e) Health
   b) Work

2. Impatience
   a) Self  c) Events
   b) Others

3. Increased Frequency and Pace of Change
   a) Personal  c) Organization
   b) Others  d) Society

4. Lighting and Noise
   a) Home  c) Society
   b) Work

5. The Media
   a) Radio  c) Movies
   b) Television  d) Press

6. Ambition
   a) Self  c) Organization
   b) Others  d) Society

7. Children
   a) Yours  c) Role
   b) Others

8. Aging
   a) Self
   b) Others

9. Death
   a) Self
   b) Others
SECTION 3

PREVENTING AND MANAGING STRESS IN THE ENVIRONMENT

PROBLEM SOLVING

SUPPORTING OTHERS IN PROBLEM SOLVING

A-B-C THEORY OF EMOTIONAL DISTURBANCE
7. Resisting the temptation to take over and tell the person what to do.

8. Withstanding pressure from a person who wants to be told what to do.

9. Being clear about the nature and locating of resources outside the individual.

Explain professional

End talk with a lead in to “Seeking Other Support Systems”.
SUPPORTING OTHERS IN PROBLEM SOLVING

PROBLEM SOLVING IS A STRATEGY THAT IS OFTEN DIFFICULT FOR PEOPLE EXPERIENCING STRESS TO UTILIZE ON THEIR OWN. STRESSFUL EXPERIENCES OCCUR WHEN PEOPLE FEEL ESPECIALLY VULNERABLE TO CIRCUMSTANCES THAT APPEAR BEYOND THEIR CONTROL. PEOPLE SOMETIMES LOSE SIGHT OF THE FACT THAT ACTION CAN BE TAKEN TO REDUCE STRESS. BY ASSISTING OTHERS IN THE PROBLEM-SOLVING PROCESS, YOU CAN GREATLY SUPPORT THEM IN FINDING THEIR OWN SOLUTIONS TO TROUBLESOME PROBLEMS. THE FOLLOWING SUGGESTIONS ARE INTENDED TO ASSIST YOU IN THIS PROCESS.

ASSISTING A PERSON TO REACH HIS OR HER OWN DECISION INVOLVES ...

1. HELPING THE PERSON DETERMINE WHICH PROBLEMS, OR ASPECTS OF A PROBLEM, ARE MOST IMPORTANT OR MOST IMMEDIATE.
2. HELPING THE PERSON CONSIDER RESOURCES (PERSONAL, FAMILY, PROFESSIONAL, ETC.).
3. HELPING THE PERSON EVALUATE POSSIBLE APPROACHES OR SOLUTIONS TO THE PROBLEM IN RELATION TO PERSONAL NEEDS AND THE NEEDS OF OTHERS INVOLVED IN THE SITUATION.
4. HELPING THE PERSON CLARIFY WHAT HE OR SHE WISHES TO DO.
5. HELPING THE PERSON ESTIMATE WHAT HE OR SHE CAN ACTUALLY DO.
6. EXPLAINING WHAT PART YOU CAN PLAY IN ASSISTING THE PERSON TO CARRY OUT THE PLAN.
A SUPPORT SYSTEM MAY BE VIEWED AS OUR RELATIONSHIP WITH ANYONE OR ANYTHING THAT PROVIDES A STRUCTURE FOR OUR GROWTH, SATISFACTION, AND ACHIEVEMENT.

(CUT (FOR CAMERA) - PEER GROUP, ORGANIZATIONAL GROUP, HOMOGENEOUS, HETEROGENEOUS, GROUP---NEED TO SHOW PICTURES OF PEOPLE HAVING FUN TOGETHER, WORKING TOGETHER, PEOPLE WORKING TOWARDS A COMMON GOAL.

IN ADDITION TO RELATIONSHIPS WITH OTHER PEOPLE, YOUR PHILOSOPHY, RELIGION, AND FORM OF WORK CAN BE VALUABLE SOURCES OF SUPPORT TO YOU.

(CUT (FOR CAMERA) - PHILOSOPHY---COULD BE POLITICAL, STUDENT GROUPS OF 60's OR 70's.

(GO TO "SEEKING OTHER SUPPORT SYSTEMS")
3. DEVELOP A LIST OF ALTERNATIVE ACTIONS.

4. SELECT THE MOST DESIRABLE ACTION.

Frequently, we don't see our alternatives until we examine the possibilities. Problem solving is the process of exploring possible causes, courses of action, and resources.

SUPPORT SYSTEMS

People need the support of others. Although we sometimes take this fact for granted, it would be impossible for human beings to grow and develop without well defined support systems.

The family is an example of a support system that provides its members with relationships that ideally protect and nourish them. In addition to the family, we each have other relationships that support our efforts to get what we want and need.

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FREQUENTLY, STRESSFUL SITUATIONS REPRESENT PROBLEMS FOR US TO SOLVE. THEY MAY RESULT FROM CHANGES IN OUR LIVES, CONFLICT AT WORK, OR FRUSTRATIONS GENERATED BY TOO MUCH TO DO IN TOO LITTLE TIME. REGARDLESS OF THE SOURCE OF THE STRESS, WE MOST OFTEN BENEFIT FROM TAKING A CLOSE LOOK AT THE CIRCUMSTANCES OF THE SITUATION AND OUT-LINING A SERIES OF CONCRETE STEPS TO REDUCE THE STRESS. THE FOLLOWING EXERCISE IS INTENDED TO HELP YOU UTILIZE A METHOD OF PROBLEM SOLVING IN YOUR LIFE.

1. **DEVELOP A CLEAR UNDERSTANDING OF THE PROBLEM SITUATION.**
   THIS CAN BE DONE BY ASKING YOURSELF SOME VERY DIRECT QUESTIONS, SUCH AS . . .
   - WHAT ARE THE STRESSORS?
   - WHY DO I PERCEIVE THEM TO BE STRESSFUL?
   - IS THIS A PROBLEM THAT IS RECURRENT? Seldom or often encountered? Ongoing?
   - WHAT MORE SHOULD I KNOW IN ORDER TO UNDERSTAND THE ENTIRE SITUATION?

2. **DEFINE YOUR GOALS FOR PROBLEM RESOLUTION.**
   IN ANY SITUATION WE HAVE CERTAIN DESIRABLE OUTCOMES. CONSIDER WHAT YOU WOULD LIKE TO HAPPEN BASED ON THE CIRCUMSTANCES OF THE SITUATION. HELPFUL QUESTIONS TO ASK YOURSELF ARE . . .
   - ARE ANY ASPECTS OF THE SITUATION CHANGEABLE? AVOIDABLE?
   - COULD MY STRESS LEVEL BE REDUCED IN ANY WAY?
   - IS THERE ANY HELP AVAILABLE TO ASSIST ME IN COPING WITH THE SITUATION?
I wish to present a behavioral self-control model which tries to help you develop an orderly process of planned change. This also includes enlistment of social support in order to reinforce desired efforts to change.

I also emphasize a need for controlling interpersonal relationships. This includes communicating better more directly with others whether being more assertive or improving couple communication. I would also like to include consideration of improving one's support network and using simple trading of listening time or co-counseling techniques to ensure an opportunity to express emotions and avoid social isolation.
SEEKING OTHER SUPPORT SYSTEMS

A REFERRAL CAN BE AN IMPORTANT WAY TO ASSIST OTHER PEOPLE TO MANAGE STRESS, ESPECIALLY WHEN YOU HAVE CHOSEN NOT TO HELP THEM YOURSELF OR WHEN YOU HAVE TRIED AND FOUND ONLY LIMITED SUCCESS. THE PURPOSE OF A REFERRAL IS TO MATCH A NEED WITH A RESOURCE.

THE IMPORTANCE OF MAKING A GOOD REFERRAL CANNOT BE OVEREMPHASIZED. REFERRALS SHOULD BE MADE OUT OF A GENUINE INTEREST IN HELPING PEOPLE TO REDUCE THEIR STRESS OR TO DEAL WITH THE STRESSORS. THE FOLLOWING SUGGESTIONS ARE INTENDED TO OFFER SPECIFIC GUIDELINES FOR MAKING AN EFFECTIVE REFERRAL. THE REFERRAL PROCESS ITSELF CAN EITHER ADD TO OR REDUCE STRESS.

REFERRAL SUGGESTIONS

1. KNOW THE PERSON’S NEEDS.
   EACH PERSON WHOM YOU WANT TO REFER TO SOMEONE ELSE HAS SPECIFIC NEEDS THAT YOU SHOULD KNOW ABOUT. TALK WITH THE INDIVIDUAL AND LISTEN TO WHAT HE OR SHE FEELS IS THE PROBLEM OR PROBLEM. YOUR UNDERSTANDING OF AN INDIVIDUAL’S NEEDS IS MORE LIKELY TO LEAD TO AN EFFECTIVE REFERRAL.

2. BE INFORMED OF COMMUNITY RESOURCES.
   AFTER DEVELOPING AN UNDERSTANDING OF THE PERSON’S NEEDS, YOU WILL NEED TO MATCH THOSE NEEDS WITH A RESOURCE. KNOW WHAT RESOURCES ARE AVAILABLE. THE MORE INFORMED YOU ARE OF YOUR ORGANIZATION’S AND COMMUNITY’S RESOURCES, THE EASIER AND MORE EFFECTIVE YOUR REFERRAL WILL BE.
DEFINITIONS OF COGNITIVE DISTORTIONS

WHAT FOLLOWS IS A SAMPLE SET OF RESPONSE-CLASSES THAT MAY PROVE TO BE MALADAPTIVE IF THE MEMBER COGNITIONS OCCUR WITH SUFFICIENT FREQUENCY, DURATION, OR INTENSITY. THEY BECOME MALADAPTIVE TO THE EXTENT THAT THEY MEDIATE UNDESIRABLE BEHAVIOR IN SPECIFIC SITUATIONS (E.G., DEPRESSIVE DYSPHORIA, ANXIETY, ANGER). THE LABEL FOR EACH RESPONSE-CLASS IS MERELY FOR CONVENIENCE IN ASSESSING BEHAVIOR AND IN TRAINING YOU TO RECOGNIZE AND MODIFY YOUR OWN COGNITIONS.

1. ALL-OR-NOTHING THINKING: YOU SEE THINGS IN BLACK-AND-WHITE CATEGORIES. IF YOUR PERFORMANCE FALLS SHORT OF PERFECT, YOU SEE YOURSELF AS A TOTAL FAILURE.

2. OVERGENERALIZATION: YOU SEE A SINGLE NEGATIVE EVENT AS A NEVER-ENDING PATTERN OF DEFEAT.

3. MENTAL FILTER: YOU PICK OUT A SINGLE NEGATIVE DETAIL AND DWELL ON IT EXCLUSIVELY SO THAT YOUR VISION OF ALL REALITY BECOMES DARKENED, LIKE THE DROP OF INK THAT DISCOLORS THE ENTIRE BEAKER OF WATER.

4. DISQUALIFYING THE POSITIVE: YOU REJECT POSITIVE EXPERIENCES BY INSISTING THEY "DON'T COUNT" FOR SOME REASON OR OTHER. THIS WAY YOU CAN MAINTAIN A NEGATIVE BELIEF THAT IS CONTRADICTED BY EVERYDAY EXPERIENCES.
DEFINITIONS OF COGNITIVE DISTORTIONS (CONT)

5. JUMPING TO CONCLUSIONS: YOU MAKE A NEGATIVE INTERPRETATION EVEN THOUGH THERE ARE NO DEFINITE FACTS THAT CONVINCINGLY SUPPORT YOUR CONCLUSION.
   A. MIND READING. YOU ARBITRARILY CONCLUDE THAT SOMEONE IS REACTING NEGATIVELY TO YOU, AND YOU DON'T BoTHER TO CHECK THIS OUT.
   B. THE FORTUNE TELLER ERROR. YOU ANTICIPATE THAT THINGS WILL TURN OUT BADLY, AND YOU FEEL CONVINCED THAT YOUR PREDICTION IS AN ALREADY ESTABLISHED FACT.

6. MAGNIFICATION (CATASTROPHIZING) OR MINIMIZATION: YOU EXAGGERATE THE IMPORTANCE OF THINGS (SUCH AS YOUR GOOF-UP OR SOMEONE ELSE'S ACHIEVEMENT), OR YOU INAPPROPRIATELY SHRINK THINGS UNTIL THEY APPEAR TINY (YOUR OWN DESIRABLE QUALITIES OR THE OTHER FELLOW'S IMPERFECTIONS). THIS IS ALSO CALLED THE "BINOCULAR TRICK".

7. EMOTIONAL REASONING: YOU ASSUME THAT YOUR NEGATIVE EMOTIONS NECESSARILY REFLECT THE WAY THINGS REALLY ARE: "I FEEL IT, THEREFORE IT MUST BE TRUE".

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DEFINITIONS OF COGNITIVE DISTORTIONS (cont.)

8. SHOULD STATEMENTS: You try to motivate yourself with shoulds and shouldn’ts, as if you had to be whipped and punished before you could be expected to do anything. “Musts” and “oughts” are also offenders. The emotional consequence is guilt. When you direct should statements toward others, you feel anger, frustration, and resentment.

9. LABELING AND MISLABELING: This is an extreme form of overgeneralization. Instead of describing your error, you attach a negative label to yourself: “I’m a loser.” When someone else’s behavior rubs you the wrong way, you attach a negative to him: “He’s a no-good louse.” Mislabeling involves describing an event with language that is highly colored and emotionally loaded.

10. PERSONALIZATION: You see yourself as the cause of some negative external event which in fact you were not primarily responsible for.

Included in your handout you will find a copy of “How to Eliminate Unpleasant Emotions”. This is one of the first steps to “Cognitive Behavioral Therapy”. Please read them over later and see what you think.
HOW TO ELIMINATE UNPLEASANT EMOTIONS

EMOTION REACTIONS ARE A RESULT OF HOW YOU EVALUATE EVENTS THAT HAPPEN IN YOUR LIFE. IT IS NOT THE EVENT THAT IS UPSETTING, BUT WHAT YOU TELL YOURSELF ABOUT IT.

EXAMPLE: FRIENDS ARE HAVING A PARTY AND DO NOT INVITE YOU. YOU THINK TO YOURSELF, "HOW TERRIBLE OF THEM TO NOT INVITE ME WHEN I HAVE ALWAYS INVITED THEM TO MY PARTIES. THEY MUST NOT REALLY LIKE ME. THERE MUST BE SOMETHING WRONG WITH ME." YOU FEEL SAD, DEPRESSED AND UNLOVED.

EXAMPLE: FRIENDS ARE HAVING A PARTY AND DO NOT INVITE YOU. YOU THINK TO YOURSELF, "IT WOULD BE NICE TO BE INVITED TO MY FRIENDS' PARTY, BUT I'M SURE THEY MUST HAVE A GOOD REASON. I'LL FIND SOMETHING ELSE TO DO THAT I WILL ENJOY." YOU FEEL CONTENT AND SATISFIED.

YOU FEEL AS YOU THINK. IRRATIONAL THINKING LEADS TO SUSTAINED EMOTIONAL DIFFICULTIES.

TO OVERCOME EMOTIONAL DIFFICULTIES, YOU MUST LEARN TO THINK MORE RATIONALLY. THEN YOU WILL FEEL LESS ANGRY AND/OR DEPRESSED AND BE ABLE TO TAKE MORE RATIONAL ACTION.
HOW TO ELIMINATE UNPLEASANT EMOTIONS (cont.)

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THE FOLLOWING ARE COMMON IRRATIONAL IDEAS WITH THEIR MORE RATIONAL COUNTERPART.

1. IT IS ESSENTIAL FOR YOU TO BE LOVED OR APPROVED BY OTHERS IN ORDER TO FEEL WORTHWHILE.

2. IT IS NECESSARY THAT YOU BE THOROUGHLY COMPETENT, ADEQUATE AND SUCCESSFUL IN ALL POSSIBLE RESPECTS IN ORDER TO BE WORTHWHILE.

3. PEOPLE ARE BAD, EVIL AND WICKED AND SHOULD BE SEVERELY BLAMED OR PUNISHED FOR THEIR BADNESS.

4. IT IS AWFUL OR CATASTROPHIC WHEN THINGS DO NOT GO THE WAY YOU WOULD LIKE VERY MUCH FOR THEM TO GO.

1. YOU ARE WORTHWHILE AS A PERSON WHETHER OR NOT OTHER PEOPLE LOVE AND APPROVE OF YOU.

2. YOU ARE WORTHWHILE AS A PERSON EVEN THOUGH YOU MAKE MISTAKES AND WHILE YOU MAKE MISTAKES. YOU ARE A HUMAN BEING CAPABLE OF MAKING ERRORS. YOU ARE NOT PERFECT AND DO NOT NEED TO BE PERFECT TO BE WORTHWHILE.

3. TO SEVERELY BLAME OR PUNISH ANOTHER PERSON OR YOURSELF FOR BEHAVING BADLY IS NOT CONSTRUCTIVE AND DOES NOT HELP YOU BEHAVE BETTER. IT LEADS TO FEELINGS OF GUILT AND WORTHLESSNESS.

4. IT IS NOT CATASTROPHIC—JUST INCONVENIENT FOR YOU AND NOT AS PLEASANT AS IT COULD BE.
5 HUMAN UNHAPPINESS IS EXTERNALLY CAUSED AND YOU HAVE LITTLE OR NO ABILITY TO CONTROL YOUR UNHAPPINESS.

6. IF SOMETHING IS DANGEROUS OR FEARSOME, YOU SHOULD BE TERRIBLY CONCERNED ABOUT IT AND KEEP DWELLING ON IT.

7. YOU NEED TO DEPEND ON OTHERS WHO ARE STRONGER THAN YOURSELF.

8. YOUR PAST LIFE EXPERIENCES PREDETERMINE YOUR PRESENT BEHAVIOR AND BECAUSE THEY ONCE SO STRONGLY INFLUENCED YOUR LIFE, THEY WILL CONTINUE TO DO SO.

5 YOU AND ONLY YOU CAN CONTROL YOUR THOUGHTS AND EMOTIONS WHICH LEAD TO UNHAPPINESS. IT ISN'T WHAT HAPPENS THAT UPSETS YOU, BUT IT IS WHAT YOU TELL YOURSELF ABOUT THE SITUATION THAT LEADS TO EMOTIONAL UPSET.

6. TO KEEP DWELLING UPON FEARSOME OR POTENTIALLY DANGEROUS POSSIBILITIES ONLY SUSTAINS YOUR UPSET AND LEAVES YOU LESS EFFICIENT TO COPE WITH REALISTIC DANGER.

7. IT IS NICE TO DEPEND UPON OTHERS, BUT YOU CAN LEARN THAT YOU DON'T NEED THEM AND DO NOT HAVE TO DEPEND UPON THEM. YOU CAN BE COMPETENT YOURSELF.

8. YOU CAN'T CHANGE YOUR PAST, BUT YOU CAN CHANGE THE WAY YOU THINK ABOUT YOUR PAST SO THAT IT NO LONGER DOMINATES YOUR PRESENT BEHAVIOR. EXAMPLE: BECAUSE YOU HAVE TRIED AND ALWAYS FAILED IN THE PAST DOES NOT MEAN YOU WILL FAIL AGAIN TODAY.
9. It is easier to avoid certain of life's difficulties rather than face them.

10. There is always a right and proper solution to your problems and it is a catastrophe if you don't find it.

11. People should behave the way you want them to just because you wish it.

12. People are defined by their actions, i.e., people who behave badly are bad, people who behave well are good.

10. Nothing is catastrophic unless you make it so in your mind. The more you catastrophize events, the less you are able to take constructive action.

11. It would be nice if other people behaved the way you wish them to, but to demand of them is irrational and self-defeating.

12. People and their behavior are two separate things. A more rational philosophy would be that all people are worthwhile because they are human beings with intrinsic worth.

Learn to identify your irrational ideas and totally commit yourself to changing your way of thinking. You will have to work hard, but you can to it.
SECTION 4

TRAINING YOURSELF IN DEEP MUSCLE RELAXATION

HOW TO RELAX THROUGH MEDITATION

TECHNIQUES FOR RELAXATION

HOW TO BRING FORTH THE RELAXATION RESPONSE

AUTGENIC PHRASES

SIGNS OF RELAXATION
"Rule Number One is, Don't Sweat the Small Stuff."
"Rule Number Two is, It's All Small Stuff."

"And if you can't fight and you can't flee, flow."

The group of strategies which include "Relaxation Training" is helpful in the management of the stress response. In the time left I will give you a beginning of understanding of relaxation and practical techniques, such as cueing or the "Quieting Response" which gives you some immediate positive feedback that there are practical skills you can learn in order to control reaction to stress. Relaxation is incompatible with muscle tension. Event cued relaxation facilitates more positive social interaction to the extent calm responses to stress situations or events provide a modeling effect and encourage positive feedback from others.

CUT
"Training Yourself in Deep Muscle Relaxation"
(Go thru, for example: Tighten your fist, feel the tension, now relax it, notice how your fist feels, see the difference.)

CUT
"How to Relax Through Meditation"
(Go thru, for session.)

Now get everyone ready for an example of "How to Use the Cue-Control of Pairing of Images and Relaxation, do it, show the class how it's done.

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TRAINING YOURSELF IN DEEP MUSCLE RELAXATION

YOU CAN USE THIS GUIDE TO TRAIN YOURSELF IN DEEP MUSCLE RELAXATION, A TECHNIQUE FIRST DEVELOPED BY JACOBSEN IN 1938. CHOOSE A QUIET, COMFORTABLE PLACE WHERE YOU WON'T BE DISTURBED FOR HALF AN HOUR. GO THROUGH RELAXATION WHILE LYING ON THE FLOOR, A BED, OR A RECLINING CHAIR.

CONCENTRATE ON THE MUSCLE GROUPS BELOW, ONE AT A TIME IN THE ORDER PRESENTED. CREATE TENSION IN THE MUSCLES BY TIGHTENING THEM FOR FIVE SECONDS AND THEN RELAXING THEM. FOR EACH MUSCLE GROUP A METHOD IS DESCRIBED FOR CREATING TENSION AND ACHIEVING RELAXATION. THE FIRST TIME YOU TRY IT, GO THROUGH THE PROCEDURE FOR EACH MUSCLE GROUP TWICE.

IT IS AWKWARD TO READ THE INSTRUCTIONS WHILE ATTEMPTING TO RELAX, AND IT MAY BE INCONVENIENT TO HAVE SOMEONE READ THE INSTRUCTIONS TO YOU. WE SUGGEST AN IDEAL METHOD IS TO USE A COMMERCIAL TAPE RECORDING OF RELAXATION INSTRUCTIONS OR MAKE YOUR OWN TAPE.

<table>
<thead>
<tr>
<th>MUSCLE</th>
<th>TENSING METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOREHEAD</td>
<td>WRINKLE FOREHEAD. TRY TO MAKE YOUR EYEBROWS TOUCH YOUR HAIRLINE FOR FIVE SECONDS. RELAX.</td>
</tr>
<tr>
<td>EYES AND NOSE</td>
<td>CLOSE YOUR EYES AS TIGHTLY AS YOU CAN FOR FIVE SECONDS. RELAX.</td>
</tr>
<tr>
<td>LIPS, CHEEKS AND JAW</td>
<td>DRAW CORNERS OF YOUR MOUTH BACK AND GRIMACE FOR FIVE SECONDS. RELAX. FEEL THE CALMNESS AND WARMTH IN YOUR FACE.</td>
</tr>
</tbody>
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<thead>
<tr>
<th>MUSCLE</th>
<th>TENSING METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>HANDS</td>
<td>EXTEND ARMS IN FRONT OF YOU, CLENCH FISTS TIGHTLY FOR FIVE SECONDS. RELAX, AND FEEL THE WARMTH AND CALMNESS IN YOUR HANDS.</td>
</tr>
<tr>
<td>FOREARMS</td>
<td>EXTEND ARMS OUT AGAINST AN INVISIBLE WALL AND PUSH FORWARD WITH HANDS FOR FIVE SECONDS. RELAX.</td>
</tr>
<tr>
<td>UPPER ARMS</td>
<td>BEND ELBOWS. TENSE BICEPS FOR FIVE SECONDS. RELAX, AND FEEL THE TENSION LEAVE YOUR ARMS.</td>
</tr>
<tr>
<td>SHOULDERS</td>
<td>SHRUG SHOULDERS UP TO YOUR EARS FOR FIVE SECONDS. RELAX.</td>
</tr>
<tr>
<td>BACK</td>
<td>ARCH YOUR BACK OFF THE FLOOR OR BED FOR FIVE SECONDS. RELAX. FEEL THE ANXIETY AND TENSION DISAPPEARING.</td>
</tr>
<tr>
<td>STOMACH</td>
<td>TIGHTEN YOUR STOMACH MUSCLES FOR FIVE SECONDS. RELAX.</td>
</tr>
<tr>
<td>HIPS, BUTTOCKS</td>
<td>TIGHTEN BUTTOCKS FOR FIVE SECONDS. RELAX.</td>
</tr>
<tr>
<td>MUSCLE</td>
<td>TENSING METHOD</td>
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<tr>
<td>THIGHS</td>
<td>TIGHTEN THIGH MUSCLES BY PRESSING LEGS TOGETHER AS TIGHTLY AS YOU CAN FOR FIVE SECONDS. RELAX.</td>
</tr>
<tr>
<td>FEET</td>
<td>BEND ANKLES TOWARD YOUR BODY AS FAR AS YOU CAN, FOR FIVE SECONDS. RELAX.</td>
</tr>
<tr>
<td>TOES</td>
<td>CURL TOES UNDER AS TIGHTLY AS YOU CAN FOR FIVE SECONDS. RELAX.</td>
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</table>
HOW TO RELAX THROUGH MEDITATION

TECHNIQUES OF MEDITATION:

1. SIT IN A COMFORTABLE CHAIR IN A QUIET ROOM WHERE YOU WILL NOT BE DISTURBED.

2. AFTER YOU ARE RELAXED, AND WITH YOUR EYES CLOSED, BEGIN TO TAKE SLOW, DEEP BREATHS THROUGH YOUR NOSE, FILLING YOUR LUNGS ENTIRELY. EACH TIME YOU EXHALE COMPLETELY, REPEAT A PACIFIER WORD TO YOURSELF. GOOD PACIFIER WORDS ARE: CALM, BLANK, OPEN, PEACE, AND CLEAR. WHEN YOU SAY YOUR PACIFIER, IT WILL BE ESPECIALLY HELPFUL TO VISUALIZE THE WORD ITSELF DROPPING LIKE A LEAF THROUGH YOUR ENTIRE BODY ALL THE WAY DOWN TO YOUR TOES.

3. CONTINUE TO INHALE DEEPLY AND SLOWLY. THEN EXHALE AND SIMULTANEOUSLY REPEAT YOUR PACIFIER TO YOURSELF. THE OBJECT IS NOT TO ALLOW ANY IDEAS TO FORM IN YOUR MIND. DO NOT WORK MENTALLY AT ANYTHING WHATSOEVER. JUST LET YOUR MIND UNWIND AND LET THOUGHTS AND IMAGES COME AND GO LIKE LAZY RUDDERLESS SAILBOATS IN A SILENT BREEZE. IF THOUGHTS BECKON AND TRY TO FORM, DON'T COOPERATE!

CONTINUE THIS TYPE OF BREATHING FOR FIFTEEN MINUTES. WHEN YOU FINISH, SIT QUIETLY FOR A FEW MOMENTS AND THEN SLOWLY OPEN YOUR EYES. THAT'S IT. NOTHING ELSE IS REQUIRED.
4. IF YOU LOOK AT YOURSELF IN A MIRROR, YOU WON'T SEE ANYTHING VISIBLY CHANGED. DON'T BE DISMAYED. YOU CAN BE FAIRLY SURE THAT MEASURABLE CHANGES ARE OCCURRING INSIDE YOUR BODY, IN YOUR INTERNAL ORGANS, WHICH ARE HAVING BENEFICIAL EFFECTS ON YOU.

AFTER MEDITATING, MOST PEOPLE FEEL PEACEFULLY SLOWED DOWN AND ENJOY AN UNMATCHED TRANQUILITY. MANY USE IT TO GET BACK TO SLEEP AFTER THEY'VE AWAKENED DURING THE NIGHT. REPEAT THE MEDITATION EXERCISE THREE TIMES DAILY.
TECHNIQUES FOR RELAXATION

STEP 1. LIE DOWN IN A QUIET AND DIMLY LIT ROOM. MAKE YOURSELF AS COMFORTABLE AS POSSIBLE.

STEP 2. ALLOW YOUR EYES TO CLOSE AS YOU SLOWLY TAKE A DEEP BREATH. HOLD IT FOR TEN SECONDS. STUDY THE TENSION THIS CREATES IN YOUR CHEST, NECK, ABDOMEN AND SHOULDERS. EXHALE SLOWLY AND RELAX. IMAGINE THAT THE TENSION IS LEAVING YOUR BODY AS YOU EXHALE; SAY TO YOURSELF "MY BREATH FLOWS IN AND OUT LIKE THE TIDES." REPEAT THIS FIVE OR SIX TIMES. THEN PAUSE FOR TWENTY SECONDS.

STEP 3. NOW TENSE EVERY MUSCLE IN YOUR BODY FOR TEN SECONDS, THEN LET GO AND ALLOW RELAXATION TO OCCUR. OBSERVE THE DIFFERENCE BETWEEN YOUR MUSCLES WHEN TENSED AND WHEN RELAXED. THIS IS CALLED THE TENSION-RELEASE METHOD. AS YOU REPEAT THIS THREE TIMES, KEEP YOUR MIND COMPLETELY FREE. JUST LET THOUGHTS COME AND GO FREELY AS THEY WILL. DON'T FOCUS ON ANYTHING. KEEP IN MIND THE IMAGE OF YOURSELF LYING DOWN, RELAXING MORE AND MORE. TELL YOURSELF THAT IF YOU HEAR SOUNDS THEY WON'T DISTURB YOU. AT THIS POINT, YOU SHOULD BE SOMewhat RELAXED.

STEP 4. NOW IMAGINE AS VIVIDLY AS YOU CAN A WARM, SOOTHING FEELING ENTERING YOUR TOES. FEEL IT MOVING THROUGH THE BONES, MUSCLES, AND LIGAMENTS OF YOUR FEET. IT WILL SOON MAKE ITS WAY THROUGH YOUR BODY TO THE TOP OF YOUR HEAD. IMAGINE THE FEELING PENETRATING DEEP INTO YOUR FEET THEN PASSING THROUGH YOUR ANKLES INTO THE CALVES OF YOUR LEGS. KEEP REPEATING TO YOURSELF, "CALM, RELAX, LET GO."
TECHNIQUES FOR RELAXATION (cont.)

STEP 5. IMAGINE THE FEELING MOVING UP THROUGH YOUR ANKLES INTO YOUR THIGHS, RELAXING YOU AS IT GOES, RELAXING ALL PARTS OF YOUR THIGHS. NEXT, IMAGINE IT MOVING UP THROUGH YOUR GROIN, BUTTOCKS, AND LOWER ABDOMEN—RELAXING ALL MUSCLES, TENDONS, AND SO ON. REMEMBER, THERE IS NOTHING TO THINK ABOUT EXCEPT TO RELAX. AGAIN, TRY TO GET THE IMAGE OF YOURSELF LYING THERE, RELAXING, LETTING GO.


THE FEELING CONTINUES UP INTO YOUR NECK AND SHOULDERS. IMAGINE THE RELAXATION GOING DOWN EACH ARM TO THE FINGERTIPS. JUST LET GO, NO TENSION. DEEPER AND DEEPER, RELAXED. NEXT, THE FEELING CONTINUES UP, DEEP INTO YOUR THROAT. FEEL YOUR TONGUE AND MOUTH RELAXING. SEPARATE YOUR JAWS AND RELAX YOUR JAW MUSCLES. LET YOUR MOUTH HANG OPEN SOMEWHAT. TELL YOURSELF, "LET GO."

THEN THE FEELING MOVES INTO YOUR FACIAL MUSCLES. FEEL THE TENSION LEAVING THE TINY MUSCLES AROUND YOUR LIPS, CHIN, CHEEKS, NOSE. NEXT, THE SOOTHING SENSATION MOVES INTO YOUR EYELIDS, EYEBALLS EYE MUSCLES, AND EYEBROWS. FEEL YOUR EYES LETTING GO, FLOATING FREELY, WITHOUT TENSION. THE FEELING MOVES INTO YOUR FOREHEAD AND THEN YOUR SCALP, DOWN THE BACK OF YOUR HEAD. KEEP LETTING GO.
TECHNIQUES FOR RELAXATION (cont.)

FINALLY THE FEELING PENETRATES DEEP INTO YOUR BRAIN. THERE IS A SOOTHING, RELAXING PEACE, WITH NOTHING TO THINK ABOUT. YOUR BRAIN IS CALM AND SERENE. THE ONLY IMAGE YOU HAVE IS OF YOURSELF LYING THERE, COMPLETELY RELAXED. NOW FEEL YOUR ENTIRE BODY LOOSE AND TENSION-FREE—EVERY BLOOD VESSEL, TENDON, NERVE, LIGAMENT, MEMBRANE, GLAND, AND MUSCLE—AS IF YOU WERE A RAG DOLL. ENJOY THE RELAXATION, THE CALM. PAUSE FOR ABOUT TWENTY SECONDS.

STEP 6. NOW COUNT TO YOURSELF FROM ONE TO TEN AND SUGGEST THAT YOUR MUSCLES WILL LET GO EVEN FURTHER AS YOU APPROACH TEN. REMEMBER, WHATEVER IT IS THAT YOU SEEM TO BE DOING TO RELAX, CONTINUE IT FAR PAST THE POINT WHERE YOUR BODY FEELS RELAXED.

STEP 7. BEFORE YOU GET UP, YOU MUST BRING YOURSELF TO AN ALERT STATE OF MIND. DO THE FOLLOWING: BEGIN COUNTING SLOWLY TO TWENTY AND WHEN YOU REACH FIFTEEN, BEGIN COUNTING ALOUD. SAY TO YOURSELF THAT WHEN YOU REACH TWENTY YOUR EYES WILL OPEN, YOU WILL BE ALERT AND REFRESHED. ALL PARTS OF YOUR BODY WILL BE RELAXED AND NORMAL.

THIS RELAXATION PROCESS SHOULD TAKE ABOUT FIFTEEN MINUTES. DON'T RUSH IT. REPEAT IT AT LEAST THREE TIMES EACH DAY. IT CAN EVEN BE PRACTICED IN A SITTING POSITION WHILE TRAVELING ON A BUS OR TRAIN. YOU MAY SPEED UP THE PROCESS UNTIL YOU ACHIEVE COMPLETE RELAXATION IN THREE OR FOUR MINUTES.
THE EASTERN AND WESTERN RELIGIOUS, CULTURAL, AND LAY PRACTICES HAVE LED TO THE RELAXATION RESPONSE. FROM THOSE AGE-OLD TECHNIQUES WE HAVE EXTRACTED FOUR BASIC COMPONENTS NECESSARY TO BRING FORTH THAT RESPONSE:

1) A QUIET ENVIRONMENT

IDEALLY, YOU SHOULD CHOOSE A QUIET, CALM ENVIRONMENT WITH AS FEW DISTRACTIONS AS POSSIBLE. A QUIET ROOM IS SUITABLE, AS IT A PLACE OF WORSHIP. THE QUIET ENVIRONMENT CONTRIBUTES TO THE EFFECTIVENESS OF THE REPEATED WORD OR PHRASE BY MAKING IT EASIER TO ELIMINATE DISTRACTING THOUGHTS.

2) A MENTAL DEVICE

TO SHIFT THE MIND FROM LOGICAL, EXTREMELY ORIENTED THOUGHT, THERE SHOULD BE A CONTRAST STIMULUS: A SOUND, WORD, OR PHRASE REPEATED SILENTLY OR ALOUD; OR FIXED GAZING AT AN OBJECT. SINCE ONE OF THE MAJOR DIFFICULTIES IN THE ELICITATION OF THE RELAXATION RESPONSE IS "MIND WANDERING," THE REPETITION OF THE WORD OR PHRASE IS A WAY TO HELP BREAK THE TRAIN OF DISTRACTING THOUGHTS. YOUR EYES ARE USUALLY CLOSED IF YOU ARE USING A REPEATED SOUND OR WORD; OF COURSE, YOUR EYES ARE OPEN IF YOU ARE GAZING. ATTENTION TO THE NORMAL RHYTHM OF BREATHING IS ALSO USEFUL AND ENHANCES THE REPETITION OF THE SOUND OR THE WORD.
3) A PASSIVE ATTITUDE

When distracting thoughts occur, they are to be disregarded and attention redirected to the repetition or gazing; you should not worry about how well you are performing the technique, because this may well prevent the relaxation response from occurring. Adopt a "let it happen" attitude. The passive attitude is perhaps the most important element in eliciting the relaxation response. Distracting thoughts will occur. Do not worry about them. When these thoughts do present themselves and you become aware of them, simply return to the repetition of the mental device. These other thoughts do not mean you are performing the technique incorrectly. They are to be expected.

4) A COMFORTABLE POSITION

A comfortable posture is important so that there isn't undue muscular tension. Some methods call for a sitting position. A few practitioners use the cross-legged "lotus" position of the yogi. If you are lying down, there is a tendency to fall asleep. As we have noted previously, the various postures of kneeling, swaying, or sitting in a cross-legged position are believed to have evolved to prevent falling asleep. You should be comfortable and relaxed.
HOW TO BRING FORTH THE RELAXATION RESPONSE (cont.)

IT IS IMPORTANT TO REMEMBER THAT THERE IS NOT A SINGLE METHOD THAT IS UNIQUE IN ELICITING THE RELAXATION RESPONSE. FOR EXAMPLE, TRANSCENDENTAL MEDITATION IS ONE OF THE MANY TECHNIQUES THAT INCORPORATE THESE COMPONENTS. HOWEVER, WE BELIEVE IT IS NOT NECESSARY TO USE THE SPECIFIC METHOD AND SPECIFIC SECRET, PERSONAL SOUND TAUGHT BY TRANSCENDENTAL MEDITATION. TESTS AT THE THORNDIKE MEMORIAL LABORATORY OF HARVARD HAVE SHOWN THAT A SIMILAR TECHNIQUE USED WITH ANY SOUND OR PHRASE OR PRAYER OR MANTRA BRINGS FORTH THE SAME PHYSIOLOGIC CHANGES NOTED DURING TRANSCENDENTAL MEDITATION: DECREASE OXYGEN CONSUMPTION; DECREASED CARBON DIOXIDE ELIMINATION; DECREASED RATE OF BREATHING. IN OTHER WORDS, USING THE BASIC NECESSARY COMPONENTS, ANY ONE OF THE AGE-OLD OR THE NEWLY DERIVED TECHNIQUES PRODUCES THE SAME PHYSIOLOGIC RESULTS REGARDLESS OF THE MENTAL DEVIC USED. THE FOLLOWING SET OF INSTRUCTIONS, USED TO ELICIT THE RELAXATION RESPONSE, WAS DEVELOPED BY OUR GROUP AT HARVARD'S THORNDIKE MEMORIAL LABORATORY AND WAS FOUND TO PRODUCE THE SAME PHYSIOLOGIC CHANGES WE HAD OBSERVED DURING THE PRACTICE OF TRANSCENDENTAL MEDITATION. THIS TECHNIQUE IS NOW BEING USED TO LOWER BLOOD PRESSURE IN CERTAIN PATIENTS. A NONCULTIC TECHNIQUE, FOUND IN THE MYRIAD OF HISTORICAL METHODS. WE CLAIM NO INNOVATION BUT SIMPLY A SCIENTIFIC VALIDATION OF AGE-OLD WISDOM. THE TECHNIQUE IS OUR CURRENT METHOD OF ELICITING THE RELAXATION RESPONSE IN OUR CONTINUING STUDIES AT THE BETH ISRAEL HOSPITAL OF BOSTON.

1. SIT QUIETLY IN A COMFORTABLE POSITION.
2. CLOSE YOUR EYES.
3. Deeply relax all your muscles, beginning at your feet and progressing up to your face. Keep them relaxed.

4. Breathe through your nose. Become aware of your breathing. As you breathe out, say the word, "one," silently to yourself. For example, breathe in...out, "one; in...out, "one"; etc. Breathe easily and naturally.

5. Continue for 10 to 20 minutes. You may open your eyes to check the time, but do not use an alarm. When you finish, sit quietly for several minutes at first with your eyes closed and later with your eyes opened. Do not stand up for a few minutes.

6. Do not worry about whether you are successful in achieving a deep level of relaxation. Maintain a passive attitude and permit relaxation to occur at its own pace. When distracting thoughts occur, try to ignore them by not dwelling upon them and return to repeating "one." With practice, the response should come with little effort. Practice the technique once or twice daily, but not within two hours after any eating, since the digestive processes seem to interfere with the elicitation of the relaxation response.

The subjective feelings that accompany the elicitation of the relaxation response vary among individuals. The majority of people feel a sense of calm and feel very relaxed. A small percentage of people immediately experience ecstatic feelings. Other descriptions that have been related to us involve feelings of pleasure, refreshment, and well-being. Still others have noted relatively
LITTLE CHANGE ON A SUBJECTIVE LEVEL. REGARDLESS OF THE SUBJECTIVE FEELINGS DESCRIBED BY OUR SUBJECTS, WE HAVE FOUND THAT THE PHYSIOLOGICAL CHANGES SUCH AS DECREASED OXYGEN CONSUMPTION ARE TAKING PLACE.

THERE IS NO EDUCATIONAL REQUIREMENT OR APITUDE NECESSARY TO EXPERIENCE THE RELAXATION RESPONSE. JUST AS EACH OF US EXPERIENCES ANGER, CONTENTMENT, AND EXCITEMENT, EACH HAS THE CAPACITY TO EXPERIENCE THE RELAXATION RESPONSE. IT IS AN INNATE RESPONSE WITHIN US. AGAIN, THERE ARE MANY WAYS IN WHICH PEOPLE BRING FORTH THE RELAXATION RESPONSE, AND YOUR OWN INDIVIDUAL CONSIDERATIONS MAY BE APPLIED TO THE FOUR COMPONENTS INVOLVED. YOU MAY WISH TO USE THE TECHNIQUE WE HAVE PRESENTED BUT WITH A DIFFERENT MENTAL DEVICE. YOU MAY USE A SYLLABLE OR PHRASE THAT MAY BE EASILY REPEATED AND SOUNDS NATURAL TO YOU.

ANOTHER TECHNIQUE YOU MAY WISH TO USE IS A PRAYER FROM YOUR RELIGIOUS TRADITION. CHOOSE A PRAYER THAT INCORPORATES THE FOUR ELEMENTS NECESSARY TO BRING FORTH THE RELAXATION RESPONSE. WE BELIEVE EVERY RELIGION HAS SUCH PRAYERS. WE WOULD REEMPHASIZE THAT WE DO NOT VIEW RELIGION IN A MECHANISTIC FASHION SIMPLY BECAUSE A RELIGIOUS PRAYER BRINGS FORTH THIS DESIRED PHYSIOLOGIC RESPONSE. RATHER, WE BELIEVE, AS DID WILLIAM JAMES, THAT THESE AGE-OLD PRAYERS ARE ONE WAY TO REMEDY AN INNER INCOMPLETENESS AND TO REDUCE INNER DISCORD. OBVIOUSLY, THERE ARE MANY OTHER ASPECTS TO RELIGIOUS BELIEFS AND PRACTICES WHICH HAVE LITTLE TO DO WITH THE RELAXATION RESPONSE. HOWEVER, THERE IS LITTLE REASON NOT TO MAKE USE OF AN APPROPRIATE PRAYER WITHIN THE FRAMEWORK OF YOUR OWN BELIEFS IF YOU ARE MOST COMFORTABLE WITH IT.
HOW TO BRING FORTH THE RELAXATION RESPONSE (CONT.)

YOUR INDIVIDUAL CONSIDERATIONS OF A PARTICULAR TECHNIQUE MAY PLACE DIFFERENT EMPHASIS UPON THE COMPONENTS NECESSARY TO ELICIT THE RELAXATION RESPONSE AND ALSO MAY INCORPORATE VARIOUS PRACTICES INTO THE USE OF THE TECHNIQUE. FOR EXAMPLE, FOR SOME A QUIET ENVIRONMENT WITH LITTLE DISTRACTION IS CRUCIAL. HOWEVER, OTHERS PREFER TO PRACTICE THE RELAXATION RESPONSE IN SUBWAYS OR TRAINS. SOME PEOPLE CHOOSE ALWAYS TO PRACTICE THE RELAXATION RESPONSE IN THE SAME PLACE AND AT A REGULAR TIME.

SINCE THE DAILY USE OF THE RELAXATION RESPONSE NECESSITATES A SLIGHT CHANGE IN LIFE-STYLE, SOME FIND IT DIFFICULT AT FIRST TO KEEP TRACK OF THE REGULARITY WITH WHICH THEY EVOKE THE RESPONSE.

IT MAY BE SAID, AS AN ASIDE, THAT MANY PEOPLE HAVE TOLD US THAT THEY USE OUR TECHNIQUE FOR EVOKING THE RELAXATION RESPONSE WHILE LYING IN BED TO HELP THEM FALL ASLEEP. SOME HAVE EVEN GIVEN UP SLEEPING PILLS AS A RESULT. IT SHOULD BE NOTED, HOWEVER, THAT WHEN YOU FALL ASLEEP USING THE TECHNIQUE, YOU ARE NOT EXPERIENCING THE RELAXATION RESPONSE. YOU ARE ASLEEP. AS WE HAVE SHOWN, THE RELAXATION RESPONSE IS DIFFERENT FROM SLEEP.
SIGNS OF RELAXATION

1. RELAXED PEOPLE HAVE REGULAR BREATHING.

2. JAW IS LOOSE, CHIN DROPPED, HEAD DOWN.

3. FOREHEAD WILL RELEASE AND BE SMOOTH.

4. REM INCREASES OR STOP
   A. YOU GET REM IN ALPHA AND THETA BRAIN WAVES.

5. LEGS AND HIPS ROTATE OUTWARD.

6. INCREASE BLOOD FLOW—HEAVY OR A TINGLING FEELING.

7. WILL EXPERIENCE A DROPPING OR SINKING FEELING.

8. MAY GET LEG OR MUSCLE JERK BUT ALSO MAY BE SLEEP.

ALSO

PLEASE REFER TO YOUR COPIES OF: HOW TO RELAX THROUGH MEDITATION AND YOUR COPIES OF SUGGESTIONS ON COPING WITH STRESS.
SECTION 5

Potential Problems

Suggestions on Coping with Stress

Personal Planning

Stress Log 1

Stress Log 2

Stress Log 3

Behavior Modification Form
SECTION 5

POTENTIAL PROBLEMS

SUGGESTIONS ON COPING WITH STRESS

PERSONAL PLANNING

"GO THROUGH THE WHOLE ISSUE OF HOW BEHAVIOR WILL GENERALIZE TO OTHER BEHAVIOR"
POTENTIAL PROBLEMS

1. RESISTENT CLIENT - FEAR OF LETTING GO
   A. USUALLY SO IN REST OF THEIR LIVES.

2. NEGATIVE IMAGES
   A. CORRECT THE IMAGE
   B. CHANGE IT TO BE POSITIVE
   C. HAVE THE DREAM. BE IT, CREATE IT, ACT IT.

3. CLIENT WON'T PRACTICE TECHNIQUES AT HOME
   A. SUGGESTION
      (1) SMILE TO SELF
      (2) TWO DEEP BREATHS
      (3) LET MY BODY OUT

4. PERSON WITH PAIN
   A. FOCUS ON OPEN AREA
   B. SPACE BEYOND THE PAIN

5. DEEP DEPRESSION
   A. USE ONLY POSITIVE IMAGES
   B. USE JACOBSEN'S YOGA, QUIETING RESPONSE
POTENTIAL PROBLEMS (cont.)

6. PERSON ON MEDICATION
   A. BE AWARE — DEEP RELAXATION CAN MOVE A TRANQUILIZED PERSON DEEPER.
   B. FIND OUT FROM DOCTOR ABOUT MEDICATION
   C. COVER YOURSELF

7. PSYCHOTICS
   A. DO NOT DO RELAXATION
   B. MANY PROBLEMS
   C. GET INTO NEGATIVE IMAGES

8. ARTERIOSCLEROSIS
   A. HARD TO WORK WITH

9. STROKE PATIENTS
   A. CONFUSED

10. PEOPLE WITH CONSTANT HEADACHES
    A. GET TO DOCTOR
    B. CAT SCAN BEFORE PROCESS
    C. LOOK FOR BRAIN TUMOR
POTENTIAL PROBLEMS (CONT.)

11. RETARDED - UNABLE TO FOLLOW DIRECTION

12. THOSE SEEKING SOMETHING ELSE - SECONDARY GAIN
   A. LAW SUIT CLIENT
   B. GAME PLAYER

13. DIABETICS/LOW BLOOD SUGAR
   A. INSULIN PATIENTS GO INTO OVERDOSE ON DEEP RELAXATION

14. LOW THYROID
   A. PROBLEM WITH DEEP RELAXATION

15. HIGH BLOOD PRESSURE
   A. PUT ONE INTO POSSIBLE DEEP STATE
   B. CHECK WITH DOCTOR

16. EPILEPSY
   A. PUT INTO POSSIBLE REACTION

17. CONTROL
   A. UNWILLINGNESS TO LET GO
   B. RESIST THE PROCESS
SUGGESTIONS ON COPING WITH STRESS

1. TALK IT OVER - WHEN TENSION BUILDS UP, DISCUSS THE PROBLEM WITH A CLOSE FRIEND OR WITH PEOPLE INVOLVED.

2. EXERCISE REGULARLY - THIS WILL HELP YOU WORK OFF STEAM AND WORK OUT STRESS.

3. PLAN YOUR WORK - TENSION AND WORK REALLY BUILD UP WHEN YOUR WORK IS ENDLESS. PLAN YOUR WORK TO USE TIME AND ENERGY EFFICIENTLY.

4. TAKE A BREAK - A CHANGE OF PACE, NO MATTER HOW SHORT, GIVES YOU A NEW OUTLOOK ON OLD PROBLEMS.

5. LEARN TO RELAX - A FEW MINUTES OF PEACE AND QUIET EVERY DAY MAKES A BIG DIFFERENCE.

6. BE REALISTIC - PEOPLE WHO EXPECT TOO MUCH OF THEMSELVES CAN GET TENSE IF THINGS DON'T WORK OUT. SET PRACTICAL GOALS.

7. AVOID STRESS - WHENEVER POSSIBLE, PLAN TO AVOID TOO MANY BIG CHANGES COMING AT THE SAME TIME.

8. BE IN CONTROL, NOT CONTROLLED BY OTHERS.

9. DEVELOP THE ABILITY TO INTERPRET EVENTS REALISTICALLY.

10. ESTABLISH SHORT RANGE AND LONG RANGE GOALS.
11. FORGIVE OTHERS - ACCEPT FORGIVENESS.

12. DEVELOP A PHILOSOPHY OF LIFE (BELIEFS, VALUES).

13. SHARE YOUR CONCERNS WITH A GREATER POWER.

14. DO SOMETHING SIMPLE - SOMETHING THAT IS EASY AND THAT YOU CAN CONTROL, SUCH AS WEEDING A GARDEN, SWEEPING THE WALK, OR THE LITTLE MECHANICAL CHORES THAT ARE ALWAYS AROUND.

15. IN COMPETITION WITH OTHERS, LEARN TO ACCEPT A LOSS AS OK.

16. REDUCE EXCESSIVE STIMULATION FROM SUCH SOURCES AS NEWS REPORTS, VIOLENT TELEVISION PROGRAMS, OR MOVIES.

17. MAKE FRIENDS, KEEP FRIENDS, HELP OTHERS.

18. IF POSSIBLE, SOLVE PROBLEMS AS THEY OCCUR. DON'T LET UNSOLVED PROBLEMS LINGER OR ACCUMULATE.

19. BREAK THE USUAL ROUTINE OF ACTIVITIES; SEEK NEW EXPERIENCES. BECOME ACTIVE IN GROUPS, ORGANIZATIONS, POLITICAL PARTIES, OR CHARITABLE CAUSES.
PERSONAL PLANNING

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HOW DO YOU ACTUALLY SPEND YOUR TIME? HOW WOULD YOU LIKE TO SPEND YOUR TIME, TAKING INTO ACCOUNT THE IMPORTANCE OF THE ACTIVITIES IN YOUR LIFE?

MAKE A LIST OF FIFTEEN SPECIFIC ACTIVITIES RELATED TO WORK, FAMILY LIFE, SOCIAL AND COMMUNITY LIFE, AND RECREATIONAL, EDUCATIONAL, OR RELIGIOUS PURSUITS ON WHICH YOU TYPICALLY SPEND SIGNIFICANT TIME EACH WEEK.

UNDERLINE THOSE ACTIVITIES THAT YOU CONSIDER TO BE VERY IMPORTANT (HIGH VALUE) IN YOUR LIFE. NOW ADD ANY OTHER ACTIVITIES THAT YOU DO NOT NOW DO, OR THAT YOU Seldom DO, THAT YOU WOULD LIKE TO DO IF YOU HAD TIME.

WHEN YOU HAVE COMPLETED YOUR LIST, LOOK BACK OVER ALL THE ACTIVITIES THAT YOU HAVE LABELED AS IMPORTANT IN YOUR LIFE. CIRCLE THOSE THAT ALSO GIVE ENJOYMENT AND SATISFACTION TO YOU. DO THE CIRCLED ITEMS REPRESENT THE KIND OF RANGE AND BALANCES OF VALUES AND JOY THAT YOU WOULD REALLY LIKE TO SEE IN YOUR LIFE? ADD ONE OR TWO OTHERS IF YOU WISH.

NOW PUT A "*" IN FRONT OF THOSE ACTIVITIES ON WHICH YOU BELIEVE YOU SPEND ABOUT THE RIGHT AMOUNT OF TIME; PUT A "-" IN FRONT OF THOSE ON WHICH YOU SHOULD (AND CONCEIVABLY COULD) SPEND LESS TIME. PUT A "+" IN FRONT OF THOSE ON WHICH YOU WOULD LIKE TO (AND CONCEIVABLY COULD) SPEND MORE TIME.

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YOU NOW HAVE SOME IDEAS AS TO HOW YOU MIGHT BETTER ALLOCATE YOUR TIME TO THE ACTIVITIES THAT YOU CONSIDER MOST IMPORTANT AND OR ENJOYABLE. WHAT KIND OF PLANNING WOULD IMPROVE YOUR SITUATION? (REMEMBER, IF YOUR TIME IS FILLED NOW, YOU MUST ELIMINATE TIME WASTERS OR DECREASE THE TIME SPENT ON LESS IMPORTANT OR LESS ENJOYABLE ACTIVITIES BEFORE YOU CAN INCREASE TIME SPENT ON OTHER ACTIVITIES OR ADD NEW ONES.)

ACTIVITIES ON WHICH I SPEND TIME
1. _________________________________
2. _________________________________
3. _________________________________
4. _________________________________
5. _________________________________
6. _________________________________
7. _________________________________
8. _________________________________
9. _________________________________
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ADDITIONAL IMPORTANT ACTIVITIES
18 WAYS TO A STRESS-FREE LIFE

TO GET STROKES, GIVE STROKES. If we lived in isolation, without contact with others, we would soon wither and die. We all need to get stroked--either positive or negative. People tend to stroke those people who give them strokes. So if you want to be psychologically healthier, give strokes.

AVOID COMPETITION. In competition, there is a winner and a loser. The winner may feel great, but the loser does not. We can all be winners if we stop trying to beat the other person.

BE OUT OF CONTROL. At least when it comes to dealing with others, the more we try to control others, the more stress we have in our lives. If you stop trying to manipulate and change people to your way of thinking, then you have taken a giant stride toward a stress-free life.

GET RID OF THE WORDS "MUST," "HAVE TO," "SHOULD," ETC. There are only a handful of things you have to do in life (i.e., eat, breath, maintain your body temperature, etc.). The rest of the "have to's" are manufactured by you. When you say you "have to," "must," or "should do," something, think again and be sure you really "have to".

RULES CAN CHANGE. We all believe things to be true. But just like you found out that Santa didn't exist, you will find, on analysis, that many of the things you "believe" to be true are relative. You will be under less stress if you can remember that your rules are relative and can change to meet changes in your world.

GET OFF YOUR POSITION. This relates to the rule above. Many people say what they believe to be true, and then proceed to defend that position at all costs. Most arguments begin with people taking positions and fighting to maintain them--to prove it to the other person. This creates stress. And in the end, that which you believe to be true now can change. So fighting to "prove" your point is useless.
DO WHAT'S BEST FOR YOU, NOT FOR ME. This one is easier to say and somewhat harder to do. If you are doing something to gain approval from others at the risk of not doing what you want to do yourself, you are creating stress for yourself. Trying to be something you are not is almost always stressful.

FIND LOVEABLENESS AND UNIQUENESS IN OTHERS. When you look for the positive aspects in people, you will surely find them. The same is true of the negative aspects. By looking for and talking about the positive part of the person, you are creating a positive atmosphere for you and for them. Gossiping, negativity, and backbiting puts us all in a negative spiral.

LEARN TO SPOT GAMES IN YOUR LIFE. Games are tactics used by people to avoid intimacy. They force the players to act—to be something they are not. This, of course, creates stress.

AVOID NEGATIVE PEOPLE. If you are positive about the person you are dealing with and that person continues to react negatively to you and to the world in general, avoid that person. Their negativity will make you negative.

BE OPEN, HONEST, AND GENUINE. Move away from facade and pretense. They only serve to make you manipulative and eventually make you negative. We often avoid “genuineness” because we want approval. We often “say what we think the other person wants to hear”. To the extent we do this, we are not being true to our own feelings and, therefore, create stress.

TAKE RISKS. It is always easier to avoid risks. If you stay in the house all the time it is unlikely you will get run over by a train. But at the same time, that makes life dull, pointless, and lackluster. The reason one fails to take a risk is usually tied into “fear of failure”. But taking the risk is necessary for growth and learning experiences. Failures are a part of life, and are just as meaningful and important as successes. And in the final analysis, if you don’t take risks, you are doomed to fail as a person, because you will stagnate and die. If you take risks, you can only fail at a project.
LIFE IS AN ONGOING PROCESS. Life does not end when you reach a goal. It only ends when you die (and we are not sure of that). When you put "goal attainment" at the top of your must-do list, you are creating stress for yourself. And when you finally attain that goal, you find it is only one in a series of mountains you will climb; it is not that important after all. If you look at life as an ongoing process, no success of failure seems that important.

THERE IS NO "FAIRNESS," "EQUITY," OR "LOGIC" IN LIFE. Many people walk around thinking that they will get what they want if they work hard and always obey the rules. It is almost as if they think the "good" will make more money or find more happiness because they think that is "fair". They also believe the world has some plan and that all they have to do is to figure out how the "damn" thing works and they will be just fine. In truth, there is no fairness in the world, there is no overriding logic to life, and in the real world, the "guy in the white hat" doesn't always get the pretty girl. The world is none of these things. The world just is.

STOP AND SMELL THE ROSES. The past is over and done with. Nothing you can do will change one single thing that happened. The future will come in its time and in the way it comes. You can try to modify and control that, but you will be under stress if you try to control too much of that future world. The only thing that is real is now. If you live in the past or future, you will miss the "real thing"...now.

BREAK BARRIERS. Any behavior you are not able to evidence can be seen as a barrier to growth. Try to overcome these barriers by doing things that you avoid or fear. By doing so, you can achieve positive feelings of accomplishment unlike the feelings surrounding accomplishing easier tasks. And ultimately, your self-image is based on your accomplishments.

BEHAVIOR IS LEARNED. If you can learn to do something, you can "unlearn" how to do it. Many of us force ourselves into molds by believing that we just are the way we are. Nothing is going
to change that. You are what you believe you are, and can do what you believe you can do. We often let our own labels and preconceived notions about ourselves get in the way of accomplishing or creating. We are all capable of learning new behavior.
Unhappiness
Depression

Low Self-Esteem

Feels Unsuccessful

Lack of Energy

Do Nothing
(Low Productivity)

Happy

Positive (High Self-Esteem)

Feels Successful

High Energy

High Productivity
STRESS!
WE CAN HELP YOU COPE

OCCUPATION FRUSTRATION
LOSS AND DEPRESSION
FAMILY STRESS
ROLE CHANGES

Seeking Cures for Modern Anxiety
SPONSORED BY
G.M.I. ENGINEERING and MANAGEMENT INSTITUTE
Human Resources Management/Personnel Administration
Course MGT - 632

For details contact Prof. Howard A. White.
(313) 762-7964
on Mondays and Tuesdays
STRESS INFORMATION HANDBOOKS

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SECTION 1

How Much Do You Know About Burnout Syndrome?

Stress Control Test

The Life Change Index

Type A-B Personality Questionnaires

(a) Score Process

(b) Type A-B Personality Characteristics

Stress Process Model

Coping Strategies
HOW MUCH DO YOU KNOW ABOUT BURNOUT SYNDROME?

LIFE IS SO FULL OF STRESS TODAY THAT A NEW WORD - **BURNOUT** - DESCRIBES ON EFFECT IT HAS. WHAT DO YOU KNOW ABOUT BURNOUT?

1. BURNOUT ALWAYS COMES FROM WHAT SOCIETY DOES TO PEOPLE; IT COMES FROM OUTSIDE AND DESTROYS THE INDIVIDUAL. TRUE ( ) FALSE ( )

2. ALL OF US ARE EQUALLY OPEN TO BURNOUT UNDER CERTAIN STRESS SITUATIONS. TRUE ( ) FALSE ( )

3. GIVEN ENOUGH STRESS ON THE JOB, BURNOUT WILL OCCUR. TRUE ( ) FALSE

4. STRESS IS ALWAYS NEGATIVE AND DESTRUCTIVE. TRUE ( ) FALSE ( )

5. MEN ARE AT GREATER RISK OF BURNOUT THAN WOMEN. TRUE ( ) FALSE ( )

6. OVERINDULGENCE IS ONE SIGN OF BURNOUT. TRUE ( ) FALSE ( )

7. HOMEMAKERS RARELY EXPERIENCE SEVERE STRESS SO THEY NEVER SUFFER FROM BURNOUT. TRUE ( ) FALSE ( )
1. **False**. Burnout, that sense of physical and emotional exhaustion that leaves a person unable to feel or care, is more apt to come from inside, from within the individual, rather than from outside forces.

2. **False**. Burnout can be a cop-out. People in very stressful jobs don't necessarily develop the burnout symptoms. Part of how well people survive and adjust to high-tension, high-risk jobs depends on their ability to relax outside the job.

3. **False**. If a person in a high-stress position is using his or her talent to the full, and if rewarded and acknowledge that person wouldn't burn out.

4. **False**. Without some stress life would be very boring.

    Burnout is a reality but the options of modern life create interesting tensions. People have any number of choices, but whenever a person makes a change, it creates fear. It also provides variety and can mean growth.
5. **FALSE** ACCORDING TO STUDIES, WOMEN ARE AT GREATER RISK OF BURNOUT THAN MEN. SURPRISINGLY, THOSE AT THE LEAST RISK ARE PEOPLE WHO OWN AND RUN THEIR OWN BUSINESS. PEOPLE WHO FEEL THEY HAVE MORE CONTROL OVER THEIR LIVES, EVEN THOUGH THEY MAY HAVE A GREAT DEAL OF WORRY AND TENSION, LESS APT TO SUFFER FROM BURNOUT.

6. **TRUE** SOME PEOPLE TRY TO ESCAPE FROM EXCESS TENSION AND ANXIETY BY OVER-INDULGENCE. THEY MAY USE ALCOHOL, FOOD, SEX, GAMBLING, OR ALMOST ANY ACTIVITY AND THIS, IN TURN, CAN BECOME AN ADDICTION. WHEN NEGATIVE, FRUSTRATING EXPERIENCES BECOME THE NORM IN A PERSON'S LIFE, HE OR SHE MAY TRY TO BLOCK OUT THESE PROBLEMS BY OVERINDULGENCE.

7. **FALSE** HOMEMAKERS DO EXPERIENCE STRESS, JUST AS HIGH-POWERED EXECUTIVES, BLUE-Collar WORKERS AND ARTISTS DO.

   EXPERT ON STRESS MANAGEMENT, FOUND HOMEMAKERS WERE AT THE GREATEST RISK OF BURN-OUT. THEY'RE OFTEN BURDENED BY OVERLOAD, A PRIMARY CAUSE OF BURNOUT.
Burnout, a stressful condition or stimulus that a person has been living with for too long.

Some of the strain in their lives comes from inevitable life events—a death, an illness, a divorce, a major shift in work or living environment, a serious loss of function or status, or other external occurrences which cause prolonged disruption in the way they feel or do things. Sometimes the burnout occurs because they have simply been trying to do too much—either because they have too much to do or because they enjoy the feeling of working against deadlines or on dangerous or exciting tasks.

Whatever the reason, they have been burning up "adaptation energy" much faster than it can be replaced!

No one reaches the exhausted state of burnout all at once. The condition builds up over time and tends to get worse, as people get into energy-wasting habits and further demanding situations. In its early stages, the road to burnout is fairly well hidden from oneself and others—especially for people who start out with good resources and creative adaptibility. During the period of adaptation, people tend to feel quite normal. They may then load their lives with challenges, leaving little leeway for things that may reasonably be expected to go wrong. At some time, the load reaches its maximum, and it may take only a relatively minor setback to cause an overwhelming physical or emotional let-down.

They simply do not realize that they are over-doing—particularly when the strain continues over time. Exhaustion can occur with very little warning, and the "burnt out" individuals may experience a sudden, overwhelming onset of hopelessness, depression, fatigue, irritability, and cynicism. If they do not recognize these as signals to slow down and pace their activities more reasonably, they may get into chronic cycles of "ups" and "downs," which tend to keep their adaptation resources at a marginal level.
One of the real dangers of burnout is that it can be life-threatening. As Johnny Carson has said before on the Tonight Show, "Death is nature’s way of telling the body to slow down." The feeling of hopelessness which accompanies the condition can seriously affect one’s ability to judge the seriousness of any situation and may lead to carelessness while driving or operating machinery, or even to suicide. Another danger derives from the fact that the individual may be too "down" to plan for realistic relief—he or she may make fairly drastic alterations in career or relationships, which may merely make things worse. In addition, someone who has been in this condition of physical and psychological exhaustion over a long period of time may have convinced possible supporters and resources of the hopelessness of the situation: burnout victims can be quite unpleasant to deal with. They can seem both demanding and ungrateful—and others tend to back away after unappreciated attempts to assist.
It is fairly easy to get significant relief from some very small changes. In the short run, you may be able to regain important energy reserves, by simply taking some time out, by taking better care of your physical needs, or by letting go of some of the less important things you are doing. However, it is important to realize that the relief will be only temporary if you then return to your old habits.

In the long run, it will be necessary to make permanent changes in the patterns of your life—setting priorities based on your long-term goals and the things that really matter to you. You may need to give up some responsibilities before you take on new challenges.

If you are experiencing burnout, you are likely to feel less enthusiastic than you can be, to be irritable, to find it hard to get involved, or to keep your mind on what you should be doing. You may be a “wet blanket” when interacting with others and may be showing a negative attitude when others think up things that might be fun or that might solve some problems. You may be sleeping too much or too little, losing your temper more than you think you should, forgetting things, or generally believing that you are not acting or feeling like yourself. Life may seem too hard to be worthwhile. You may be trying to overcome these difficulties with chemical assistance: however, caffeine, tobacco, alcohol, prescription or non-prescription drugs cannot bring back the energy reserves you need. These may help you forget your discomfort for a short time or give you a brief lift—but they do so by drawing on your already depleted reserves.

You seriously need some form of renewal of physical or mental resources. However, this requires long-term commitment to change, and for a while, any changes are likely to draw further on your scarce energies. A necessary first step is a careful re-evaluation of your total stress load. A second step is some nondisruptive
reduction in your load. A third step is to make some small kinds of habit changes that are likely to require simple improvements, without creating further difficulties. Later, you may learn to monitor your life-time stress load on a more permanent basis—reading the signs of over-doing, in time to prevent a recurrence.

Be able to recognize the signs of "burnout" when they occur again in your life. Get in the habit of effective personal planning, you may find it helpful to spend some time with professional counseling. A medical checkup is also a good idea.
STRESS CONTROL TEST

THE SELF-TEST IN THE STRESS PRIMER FROM BOSTON UNIVERSITY PUBLISHED IN THE CURRENT ISSUE OF BOSTONIA, TITLE "COPIING RESOURCES".

IT IS PUBLISHED HERE WITH PERMISSION FROM PSYCHOLOGIST LYLE MILLER.

THE FOLLOWING ARE SOME FACTORS THAT HAVE BEEN FOUND TO ENHANCE YOUR ABILITY TO DEAL WITH STRESS. A COMMON ASPECT OF EACH ITEM IS "BE GOOD TO YOURSELF".

CHECK YES OR NO BESIDE EACH ITEM

1__YES___NO I EAT ONE HOT, BALANCED MEAL PER DAY.
2__YES___NO I GET SEVEN-EIGHT HOURS SLEEP AT LEAST FOUR DAYS PER WEEK.
3__YES___NO I GIVE AND RECEIVE AFFECTION REGULARLY.
4__YES___NO I HAVE AT LEAST ONE RELATIVE WITHIN 50 MILES WHOM I CAN RELY ON.
5__YES___NO I EXERCISE TO THE POINT OF EXERTION ABOUT TWICE PER WEEK.
6__YES___NO I SMOKE LESS THAN ONE PACK OF CIGARETTES PER DAY.
7__YES___NO I DO NOT DRINK ALCOHOL TO EXCESS.
8__YES___NO I AM APPROPRIATE WEIGHT FOR MY HEIGHT.
9__YES___NO I HAVE AN INCOME ADEQUATE TO MEET BASIC EXPENSES.
10__YES___NO I REGULARLY ATTEND CHURCH.
11__YES___NO I REGULARLY ATTEND CLUB OR SOCIAL ACTIVITIES.
12__YES___NO I HAVE A NETWORK OF FRIENDS WITH WHOM I AM ACQUAINTED.
13__YES___NO I HAVE ONE OR MORE FRIENDS TO CONFIDE IN ABOUT PERSONAL MATTERS.
14__YES___NO I AM IN GOOD HEALTH (INCLUDING EYESIGHT, HEARING, TEETH.)
15__YES___NO I'M ABLE TO SPEAK OPENLY ABOUT MY FEELINGS WHEN ANGRY OR WORRIED.
16__YES___NO I HAVE REGULAR CONVERSATIONS WITH THE PEOPLE I LIVE WITH ABOUT DOMESTIC ISSUES -- THAT IS, CHORES, MONEY, DAILY LIVING ISSUE.
17__YES___NO I DO SOMETHING FOR FUN AT LEAST ONCE PER WEEK.
18__YES___NO I AM ABLE TO ORGANIZE MY TIME EFFECTIVELY.
19__YES___NO I DRINK LESS THAN THREE CUPS OF COFFEE (OR TEA OR COLA DRINKS) PER DAY.
20__YES___NO I TAKE ADEQUATE QUIET TIME FOR MYSELF EACH DAY.

COUNT THE NUMBER OF YES ANSWERS. THEY SHOULD ALL BE YES. THE MORE YES ANSWERS, THE LESS VULNERABLE TO STRESS A PERSON IS.
INTRODUCTION

THIS WORKSHOP WILL BE A SETTING IN WHICH TO PRESENT THE IDEA THAT THE CONSUMER SHOULD ASSUME PRIMARY RESPONSIBILITY FOR HEALTH MAINTENANCE AND TO INTRODUCE YOU TO STRATEGIES OR IDEAS THAT DEVELOP HEALTH BEHAVIOR ACTIVITIES WHICH ENCOURAGE HEALTH AND RESIST DISEASE.

OUR WORKSHOP GOAL IS TO GIVE YOU A BASIC UNDERSTANDING OF STRESS AND THE RELATIONSHIP BETWEEN PSYCHOLOGICAL FACTORS AND PHYSICAL HEALTH. ALSO EXPOSE YOU TO A RANGE OF STRESS MANAGEMENT AND RELAXATION TECHNIQUES THAT COULD LATER BE USED IN STRESS MANAGEMENT.

AT THE DAWN OF HUMAN HISTORY ONE OF OUR ANCESTORS STEPPED OUT OF HIS DWELLING TO GET FOOD; SUDDENLY HE SEES A LARGE ANIMAL COMING HIS WAY. HIS MUSCLES TENSE, HIS HEART POUNDS, HIS BREATH COMES RAPIDLY AS HE LOCKS EYES WITH AN ANIMAL, WHO WANTS HIM, FOR SUPPER. THESE RESPONSES SERVED OUR ANCESTORS WELL; THAT EXTRA BURST OF ADRENALINE GOT THEIR MUSCLES PRIMED. THEIR ATTENTION FOCUSED AND THEIR NERVES READY FOR A SUDDEN "FIGHT OR FLIGHT". WE ARE NOT OUR ANCESTORS, BUT THE MODERN JUNGLE IS NO LESS STRESSFUL. THE SCENE OF PANIC OVER A DEADLINE, A TIGHT AIRPLANE CONNECTION, A RECKLESS DRIVER ON YOUR TAIL ARE THE NEW BEASTS THAT CAN cause YOUR HEART RACING, YOUR TEETH GRINDING, THE SWEAT STREAMING.

THE EVOLUTION OF THE HUMAN SPECIES HAS BEEN A HISTORY OF CHANGE AND CRISIS. OUR ANCESTORS ENDURED THE HARSH REALITIES OF UNPREDICTABLE WEATHER CONDITIONS, PREDATORY ANIMALS, AND A CONTINUOUS CHAIN OF NATURAL AND MADE DISASTERS. THROUGHOUT OUR HISTORY, SURVIVAL HAS OFTEN DEPENDED UPON THE ABILITY TO ACT AND REACT QUICKLY TO MOBILIZE ALL OF ONE'S RESOURCES TO COPE WITH LIFE'S EVENTS.
OUR LIVES TODAY ARE DRAMATICALLY DIFFERENT FROM THOSE OF OUR ANCESTORS. WE HAVE MODERN EQUIPMENT AND IN MANY WAYS WE ARE MORE PROTECTED FROM THE DANGERS THAT WERE ONCE BOTH COMMONPLACE AND UNAVOIDABLE. YET, OUR LIVES OFTEN DO NOT RUN AS SMOOTHLY AS OUR MACHINES. WE ARE STILL CALLED UPON TO COPE WITH PERSONAL CHANGES, SOME BROUGHT ABOUT BY MOMENTS OF CRISIS, OTHERS RESULTING FROM OUR DAILY ROUTINES. DEMANDS AS COMMON AS COMMUTING TO WORK OR MEETING JOB-RELATED DEADLINES CAN ELICIT THE SAME PHYSICAL RESPONSE EXPERIENCED BY OUR ANCESTORS WHEN THEY WERE FACED WITH LIFE AND DEATH SITUATIONS. WE KNOW THE RESPONSE AS STRESS, AND ITS PURPOSE IS TO HELP US MOBILIZE OUR PHYSICAL RESOURCES TO MEET THE DEMANDS OF THE STRESS PRODUCING EXPERIENCE. UNFORTUNATELY, WHEN THE STRESS RESPONSE IS TRIGGERED FOR REASONS OTHER THAN EMERGENCY SITUATIONS, IT PREPARES OUR BODIES TO COPE WITH PHYSICAL DEMANDS THAT CANNOT BE RESOLVED THROUGH PHYSICAL MEANS. THE HORMONES RELEASED TO STIMULATE OUR BODIES REACTIONS ARE LEFT RACING THROUGH OUR SYSTEMS WITH NO OUTLET FOR EXPRESSION. DURING THESE MOMENTS, STRESS MAY BE DIFFICULT TO COPE WITH AND MAY RESULT IN CONTINUATION OF THE STRESS RESPONSE. OVER A PERIOD OF TIME, UNRESOLVED STRESS ISSUES CAN LEAD TO PHYSICAL AND EMOTIONAL PROBLEMS THAT CAN AFFECT EMOTIONAL AND PHYSICAL WELL-BEING. BECAUSE OF THIS I WILL BE OFFERING THIS WORKSHOP IN STRESS MANAGEMENT AS A WAY OF AIDING YOU IN COPING WITH THE ADVERSE EFFECTS OF STRESS.
NO ONE REALLY KNOWS IF THERE IS MORE STRESS NOW THAN IN THE PAST. WE LIVE IN A WORLD OF UNCERTAINTIES, JUST LOOK IN THE NEWSPAPER OR AT THE EVENING NEWS. THE UPEAVAL IN SOCIETY'S MOST BASIC VALUES ADDS GREATLY TO THE GENERAL LEVEL OF ANXIETY.

IN THE EARLY 50'S THOMAS HOLMES DETERMINED THAT THE SINGLE COMMON DENOMINATOR FOR STRESS IS "THE NECESSITY OF SIGNIFICANT CHANGES IN THE LIFE PATTERN OF INDIVIDUALS." IN AN ATTEMPT TO MEASURE THE IMPACT OF "LIFE CHANGE EVENTS" AND MAKE YOU AWARE OF THE IMPORTANCE OF THESE "EVENTS" I WILL DISPLAY A COPY OF THE HOLMES-RANE SCALE ON YOUR T.V. SCREEN SO YOU CAN FOLLOW ALONG WITH ME.
THE LIFE CHANGE INDEX

Take a moment to read over the list and record the weighted value of each change that has occurred in your life within the last year. When you complete the scale, we will discuss how your score may be a predictor of future changes in your health status.

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<thead>
<tr>
<th>Life Event</th>
<th>Mean Value</th>
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</thead>
<tbody>
<tr>
<td>1. Death of spouse</td>
<td>100</td>
</tr>
<tr>
<td>2. Divorce</td>
<td>73</td>
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<tr>
<td>3. Marital separation from mate</td>
<td>65</td>
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<tr>
<td>4. Detention in jail or other institution</td>
<td>63</td>
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<tr>
<td>5. Death of a close family member</td>
<td>63</td>
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<tr>
<td>6. Major personal injury or illness</td>
<td>53</td>
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<tr>
<td>7. Marriage</td>
<td>50</td>
</tr>
<tr>
<td>8. Being fired at work</td>
<td>47</td>
</tr>
<tr>
<td>9. Marital reconciliation with mate</td>
<td>45</td>
</tr>
<tr>
<td>10. Retirement from work</td>
<td>45</td>
</tr>
<tr>
<td>11. Major change in the health or behavior of a family member</td>
<td>44</td>
</tr>
<tr>
<td>12. Pregnancy</td>
<td>40</td>
</tr>
<tr>
<td>13. Sexual difficulties</td>
<td>39</td>
</tr>
<tr>
<td>14. Gaining a new family member (e.g., through birth, adoption, or older person moving in)</td>
<td>39</td>
</tr>
<tr>
<td>15. Major business readjustment (e.g., merger, reorganization, or bankruptcy)</td>
<td>39</td>
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<tr>
<td>16. Major change in financial state (e.g., becoming much worse off or much better off than usual)</td>
<td>38</td>
</tr>
<tr>
<td>17. Death of a close friend</td>
<td>37</td>
</tr>
<tr>
<td>18. Changing to a different line of work</td>
<td>36</td>
</tr>
<tr>
<td>19. Major change in the number of arguments with spouse (e.g., either many more or fewer than usual regarding child rearing or personal habits)</td>
<td>35</td>
</tr>
<tr>
<td></td>
<td>Event Description</td>
</tr>
<tr>
<td>---</td>
<td>-----------------------------------------------------------------------------------</td>
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<tr>
<td>20</td>
<td>Taking on a mortgage greater than $10,000 (e.g., purchasing a home or business)</td>
</tr>
<tr>
<td>21</td>
<td>Foreclosure on a mortgage or loan</td>
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<tr>
<td>22</td>
<td>Major change in responsibilities at work (e.g., promotion, demotion, lateral transfer)</td>
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<tr>
<td>23</td>
<td>Son or daughter leaving home (e.g., marriage or attending college)</td>
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<td>24</td>
<td>In-law troubles</td>
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<tr>
<td>25</td>
<td>Outstanding personal achievement</td>
</tr>
<tr>
<td>26</td>
<td>Wife beginning or ceasing work outside the home</td>
</tr>
<tr>
<td>27</td>
<td>Beginning or ceasing formal schooling</td>
</tr>
<tr>
<td>28</td>
<td>Major change in living conditions (e.g., building a new home, remodeling, or deterioration of home or neighborhood)</td>
</tr>
<tr>
<td>29</td>
<td>Revision of personal habits (dress, manners, associations, etc.)</td>
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<tr>
<td>30</td>
<td>Troubles with the boss</td>
</tr>
<tr>
<td>31</td>
<td>Major change in working hours or conditions</td>
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<td>32</td>
<td>Change in residence</td>
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<td>33</td>
<td>Changing to a new school</td>
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<td>34</td>
<td>Major change in usual type and/or amount or recreation</td>
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<tr>
<td>35</td>
<td>Major change in church activities (e.g., many more or fewer than usual)</td>
</tr>
<tr>
<td>36</td>
<td>Major change in social activities (e.g., clubs, dancing, movies, or visiting)</td>
</tr>
<tr>
<td>37</td>
<td>Taking on a mortgage or loan less than $10,000 (e.g., purchasing a car, TV, or freezer)</td>
</tr>
<tr>
<td>38</td>
<td>Major change in sleeping habits (much more or less sleep or very different sleeping hours)</td>
</tr>
<tr>
<td>39</td>
<td>Major change in number of family get-togethers (e.g., many more or fewer than usual)</td>
</tr>
<tr>
<td>40</td>
<td>Major change in eating habits (much greater or lesser food intake or very different meal hours or surroundings)</td>
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<tr>
<td>41</td>
<td>Vacation</td>
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<td>42</td>
<td>Christmas</td>
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<tr>
<td>43</td>
<td>Minor violations of the law (e.g., traffic tickets, jaywalking, or disturbing the peace)</td>
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</tbody>
</table>
AT THE TOP IS DEATH OF A SPOUSE (100 STRESS POINTS), FOLLOWED BY
DIVORCE (73), MARITAL SEPARATION (65), IMPRISONMENT (63), AND
DEATH OF A CLOSE FAMILY MEMBER (63). BUT, NOT ALL STRESSFUL
EVENTS ARE UNPLEASANT. MARRIAGE RATES (50), PREGNANCY (40),
BUYING A HOUSE (31), AND CHRISTMAS (12). THOSE OF YOU WHO TOTALED
300 OR MORE UNITS ON THE SCALE HAVE A 70% CHANCE OF SUFFERING
ULCERS, PSYCHIATRIC DISTURBANCES, BROKEN BONES OR OTHER HEALTH
PROBLEMS WITHIN TWO YEARS, THOSE OF YOU WHO SCORED UNDER 200 HAVE
ONLY A 37% CHANCE OF SUCH INFIRMITIES. THIS HOLDS TRUE ONLY IF
THOSE LEVELS REMAIN CONSTANT, AND AGAIN THIS COULD CHANGE IF
CERTAIN COPING STRATEGIES ARE LEARNED AND USED. YOU SHOULD BE
MADE AWARE OF THE FACT THAT YOUR SCORE ON THE QUESTIONNAIRE IS A
STATISTIC, OR A PROBABILITY STATEMENT, RATHER THAN A STATEMENT
THAT ILLNESS IS INEVITABLE. I FEEL IT'S IMPORTANT TO EMPHASIZE
THAT STRESS IS NOT NECESSARILY HEALTH THREATENING. THE STRESS
RESPONSE, IN FACT, IS ESSENTIALLY AN ADAPTIVE RESPONSE AND HEALTH
PRESERVING. STRESS BECOMES UNHEALTHY ONLY WHEN THE body'S
RESOURCES ARE INSUFFICIENT TO MEET THE DEMANDS OF THE ENVIRONMENT.
TYPE A-B PERSONALITY QUESTIONNAIRE

The statements below apply to day-to-day living. Using a scale of one to five, indicate the degree to which each statement applies to you.

1 - Never  2 - Rarely  3 - Sometimes  4 - Frequently  5 - Always

1. I want to be the best at everything I do.
2. I get annoyed in traffic jams.
3. I become impatient when waiting in line.
4. I find myself getting angry if kept waiting for an appointment.
5. I like to drive my car very fast.
6. I get angry with co-workers who are inefficient.
7. I find I try harder than others to accomplish things.
8. I seem to put more effort into my job than other people.
9. I get irritable when others don't take their job seriously.
10. I am determined to win when playing a game with friends.
11. I enjoy intense competition.
12. When playing a game with a child, I will purposely let him win.
13. I move, walk, talk and eat rapidly.
14. I feel impatient because most things happen too slowly.
15. I think about business constantly.
16. I feel guilty when I relax and take it easy.
17. I challenge people about their thoughts or ideas.
18. I seem to have little spare time.
19. I do my work faster and more efficiently than my co-workers.
20. I enjoy discussing my achievements.
21. I become angry, easily, with my spouse or friends.
22. I find that I am quiet or subdued.
23. I appear more aggressive than others.
24. I let others know it when I am angry.
25. I find I have sufficient time in which to finish my work.
26. I become confused when too many things happen at once.
27. I wish I had help to get things done.
28. I rely only on myself to get things done.
29. Relaxing seems to infringe on my work time.
30. I skip meals to get things done.
31. I do extra work to impress others.
32. I seem to race against the clock to save time.
33. I lose my temper under pressure.
34. I make mistakes because I feel rushed into things without thinking about them through completely.
<table>
<thead>
<tr>
<th>Type</th>
<th>Personality Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>34 - 67</td>
</tr>
<tr>
<td>A</td>
<td>104 - 170</td>
</tr>
<tr>
<td>AB</td>
<td>104</td>
</tr>
</tbody>
</table>
Type A & B Personality Characteristics

Type A Characteristics
- Highly competitive
- Extremely achievement oriented
- Aggressive
- Hostile
- Impatient
- Time urgent
- Can't enjoy the present
- Focus on winning more goals
- Visible restlessness
- Hard worker
- Perfectionist
- Seldom sick
- On time for appointments
- Strives for other's respect rather than their appreciation
- Extroverted
- Does things rapidly
- Hurries the ends of sentences
- Polyphasic thought or performance
- Feels guilty about relaxing
- Schedules more and more in less and less time
- Difficulty listening to others
- Plays it safe
- Lives in past
- Serious
- Compulsive
- Driven by "do your best"
- Seeks self-worth by being competitive

Type B Characteristics
- Easy going manner
- Patient
- Not preoccupied with achievement
- Not driven by the clock
- Less competitive than A's
- Good listener
- Casual
- Does things one at a time
- Slow, deliberate talker
- Doesn't feel rushed
- Does tasks at a leisurely pace
- Enjoys the present
- Likes to relax
- Risk taker
- Lives in the now
- Alive
- Fun loving
- Non-compulsive
- Driven by "do the task"
- Accepts self by being self

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COPING STRATEGIES

Behavioral social workers point to a number of personal factors that seem to be helpful in coping. Among them:

1. The sense of being in control of one's life
2. Have a network of friends or family to provide what is called "social supports"
3. Such personality factors as flexibility and hopefulness
4. Relaxation training
5. Exercise, and
6. Diet

Our session will deal mostly with relaxation training, along with those just listed.

TM is only one of several techniques that can be used to produce what is termed the relaxation response. The effect can be achieved just by following four easy, simple steps:

1. Assume a comfortable position
2. Close your eyes
3. Concentrate on a single word, sound, or phrase
4. Cast off all other thoughts.

Sounds easy.

Another form of relaxation response: biofeedback--the person is connected by sensor wires to a machine with a small screen that feeds back information on such physiological indexes of stress such as blood pressure, tension in the facial muscles, or, most frequently, the temperature of one's fingers. By loosening their muscles, breathing deeply or letting their thoughts drift, a patient learns that they can control their stress response; they can make their blood pressure drop or the temperature in their hands. Biofeedback makes you more aware of what's going on in your body.
1. **What are aerobics?**

   Aerobics are a group of exercises that increase the heart and breathing rates for a sustained period of time, greatly increasing the flow of oxygen and blood to all parts of the body. To be effective, the exercise must raise the heart (pulse) rate to a certain level (see chart below) and keep it at that level for not less than 10 to 15 minutes. (NOTE: Many people who are not in condition will have to build up slowly to a 10 to 15 minute exercise period.)

   Examples of aerobic exercises are bicycling, running/jogging, swimming, jumping rope, vigorous walking, etc. Stop and go exercises (like golf, downhill skiing, housework, gardening, etc.) and those of short duration (like sprinting, square dancing, calisthenics, etc.) are not effective in producing the desired level of fitness.

2. **What are some of the benefits of aerobic exercise?**

   A. Replacement of intramuscular fat (marbling) by lean muscle, leading to more efficient utilization of calories. Most of our calories are burned by lean body mass (muscle); fat burns nothing.

   B. Strengthening of heart and lungs and muscles throughout the body, thus improving general circulation. This may have the added benefit of reducing blood pressure and usually slows the heart rate.

   C. Improved absorption/utilization of food.

   D. Increased energy and stamina.

   E. More restful sleep.
F. Lessening (if not elimination) of depression, nervous tension.

G. Improved appearance; more positive self-image and outlook on life.

H. People who exercise regularly consume far fewer drugs, coffee, tea, alcohol, tobacco, sugar and refined carbohydrates than nonexercisers. They find these things to be antagonistic to a healthy lifestyle.

3. Don't be in a hurry.
   You need time to condition your heart and muscles to the new demands. Ignoring this maxim invites trouble--increase your exercise gradually.

4. Before starting your program.
   Get a physical and EKG first--especially if you are over age 40.

5. How often?
   Regular (at least 4 to 5 times per week) exercise is imperative. The weekend or only now-and-then exerciser places himself in potential danger because his heart and body is not strengthened sufficiently to withstand a really vigorous workout.
   NOTE: While regular exercise is important, you should temporarily suspend it whenever you are ill or excessively fatigued.

6. Warm-up.
   Just like a car requires a few minutes to warm up before running efficiently, our body also needs a gradual warm-up before strenuous exercise. This is especially important for those past 40 years of age.
About 5 minutes is all that is necessary. Callisthenics (such as sit-ups and push-ups) and stretching exercises are not particularly good for warming up. Besides getting your "motor" in gear, they will increase your flexibility and coordination, and tone and strengthen muscles you may not be using in your aerobic workout.

7. **Cooling down.**

After a period of vigorous exercise, cooling down is just as important as warming up. During exercise such as running or cycling, the blood pools in the large leg muscles. While the activity continues, the muscles are squeezing the blood back to the heart and rest of the body. When the exercise is stopped suddenly and completely, the blood is still pooled in the legs, but now there is no contraction of the leg muscles to return the blood to the heart and brain—dizziness, fainting, or even more serious consequences can occur.

A gradual (3 to 5 minutes) cool-down eases the transition between vigorous exercise and rest. For example, walk after running, or slow whatever your exercise is to a relaxed, easy pace before stopping.

8. **How much is too much?**

There are several good ways to determine if you are exercising too hard:

A. If you experience faintness, dizziness, nausea, tightness or pain in the chest, severe shortness of breath, or loss of muscle control—stop exercising immediately.

B. Heart Rate Recovery. Count your pulse 5 minutes after exercise. It should have returned to 120 or below. If it hasn’t, you’re pushing yourself too hard. Count your pulse again after 10 minutes—if it isn’t back below 100 (beats/minute), ease up a little on your exercise program.
9. **How much is enough?**

To gain the desired effect, you should not over-exert yourself, but neither should you go too slowly. The following is a chart to help guide you in determining that in-between, optimum level.

Find your age in the left hand column and follow it across to the second column to determine your recommended training pulse rate. If you have a history of heart disease, go to the third column (plus you should receive a clearance from your physician before beginning your exercise program). This is the heart rate at which you should exercise to achieve maximum benefit, safely.

Heart Rates: (Based on resting heart rates of 72 for male and 80 for female)

<table>
<thead>
<tr>
<th>Recommended Heart Disease</th>
<th>Age</th>
<th>Training Rate</th>
<th>History</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Not to exceed)</td>
</tr>
<tr>
<td>20</td>
<td>160</td>
<td>150</td>
<td>If your resting pulse is more than 12 beats per minute</td>
</tr>
<tr>
<td>22</td>
<td>158</td>
<td>148</td>
<td>slower, determine your recommended training rate from this formula:</td>
</tr>
<tr>
<td>24</td>
<td>157</td>
<td>147</td>
<td>Your Recommended Rate = .65 x (Recommended Rate in table - Your Resting Rate) + Your Resting Rate.</td>
</tr>
<tr>
<td>25</td>
<td>155</td>
<td>145</td>
<td>The value you compute from this formula should be somewhat less than the value in the table.</td>
</tr>
<tr>
<td>28</td>
<td>154</td>
<td>144</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>152</td>
<td>143</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>151</td>
<td>142</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>150</td>
<td>140</td>
<td></td>
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<tr>
<td>36</td>
<td>149</td>
<td>140</td>
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<td>38</td>
<td>147</td>
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<td>128</td>
<td></td>
</tr>
<tr>
<td>60</td>
<td>128</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>65+</td>
<td>120</td>
<td>113</td>
<td></td>
</tr>
</tbody>
</table>

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For someone who is terribly out of shape, walking in place may be all that is needed to raise his pulse to the desired level. Another person who is conditioned, may have to run quite hard to reach the same heart rate. Don’t try to keep up with someone else--use this table to find your own pace.

The first few times, stop after a minute or two and take your pulse. If it is less than your recommended exercise pulse, you aren’t pushing yourself hard enough. If it is too high, ease up a bit. Of course, you should continue to utilize the guidelines in number 8, also.

10. When to exercise.

The time of day should fit your individual schedule. Some people prefer after work because it is an extremely effective way of revitalizing yourself and eliminating all the day’s problems and tensions. It is almost impossible to be “uptight” when you’re exercising vigorously.

The morning time holds other advantages. In the hot summer months it is a cool time of day. Also, some people find their morning time more disciplined and less likely to vary than their evenings.
Diet or what you eat can have a real impact on how you feel and, therefore, can influence the way you cope with stress. Not only is sound nutrition an important stress management strategy, but it is a key ingredient for good health in general. (For example, too much coffee, tea, and some soft drinks can contribute to stress.)
EAT NATURAL FOODS:

Many of the processed, canned or frozen foods presently available, no longer have the vitamins and minerals they had when fresh. As a general rule, the more processed a food, the less acceptable it should be.

VARY YOUR DIET:

Choose different types of foods. Eating the same thing day after day, even if they are natural and healthy may in the end be bad for you. Foods have differing properties. To have a proper diet requires a mix. By having a variety of fresh fruits and vegetables, legumes, fish, seafood, and fowl, and whole grains, you can usually be assured of a balanced diet. Study nutrition. It is one of the easiest things you can do to promote wellness and the more you know, the better you will be. Incorporate healthful changes into your diet and you will see the difference this one change can make.

AVOID DANGEROUS FOOD ADDITIVES:

Our chemically oriented society has created problems for itself. Businesses have found that it is cheaper to put synthetics into foods to create the desired end-products than to allow them to be natural. When we first started adding these things, we were naive; we had no notion of the problems we were creating for ourselves. And now that we do know, inertia, economics and conflicting information is making it difficult to get rid of the problems. Artificial colors, flavorings, additives, preservatives, and stabilizers have all at one time or another been accused of being carcinogenic. In fact we hear
about it so much that we sometimes get the feeling that we are listening to the chicken telling us the ‘sky is falling’. Unfortunately, this time, the sky may in fact be falling. There are over 5500 different chemicals being introduced into our food chain. This is effecting all of us. Whole towns were evacuated when dioxin was found in the ground water. Whole herds of cows were slaughtered and buried when they were found to have ingested PCB’s in excess. Asbestos related deaths have also been prominently noted in the media. But still, we continue to place these synthetic chemicals into our food.

Nitrate are found in many processed meats (i.e., bologna, hot dogs, salami, corned beef, bacon, sausage, etc.). It is there to add the coloring we all know and love. It is claimed to be a preservative too, but it is not put in for that reason. In laboratory tests, the relationship between nitrate and cancer was absolutely clear. Yet the special interest groups continue to lobby effectively and the nitrates are still found in the foods we eat.

Chemicals like BHT and BHA are standard ingredients in many of our foods. Learn to read labels and learn to avoid these unhealthy additives. These products are chemicals, counterfeit. They are placed there to please your palate or to make foods more easily processed or to increase the shelf life. Don’t compromise your health so that they can make more money. There is enough healthy food around to eat. If we all started eating healthy foods and avoiding the chemical laden ones, they would eventually quit making the chemical ones.

AVOID REFINED, PROCESSED FOODS:

Examples here are packaged cereals, candies, commercial ice cream, colas, etc. They consist of empty calories which have little value to your body. They have few vitamins, minerals, and amino acids; all factors necessary to making a food useful in your body. Even the so-called ‘enriched’ foods (like white bread) are poor choices. Enriched usually means that all of the
vitamins and minerals were taken out during the processing of the product, and then a few of the vitamins were dumped back in. None of these enriched foods are as good as the whole fresh version.

AVOID REFINED CARBOHYDRATES:

When sugar is introduced into your bloodstream, the pancreas must immediately shoot insulin into your body to help process it. This upsets the endocrine balance in your body. The body must draw on its resources to metabolize the sugar which causes a loss of many essential vitamins and minerals. If it is not immediately processed lactic and pyruvic acid builds up, and this can lead to tissue degeneration.

So in the end, these empty carbohydrate calories are worse than no calories at all. They provide little fuel, and that which is provided doesn’t last long. They take the place of foods you might eat that could supply more energy and they contain no fiber to disrupt digestion. They also cause tooth decay and gum disease.

Among other things, you should avoid the following foods because of their high simple carbohydrate content: soda pop, pastries, candy, ice cream, potato chips, white flour bread and spaghetti, etc. Instead, consider eating things like fructose, honey, molasses, fresh fruits, whole grain breads, seeds, and other carbohydrates.

ELIMINATE CAFFEINE AND OTHER ADDICTIVE DRUGS:

Coffee, tea (non-herbal), cola and chocolate are hazardous to your health. I know what some of you are saying: “How can I get started in the morning without my coffee?” Well, let’s take a look at the effects of that morning coffee. It stimulates the sympathetic nervous system to secrete acid into the stomach which can lead to ulcers, gastritis, etc. It also asks the pancreas to send out insulin and gets it to believe that food is being processed. This in turn causes an increase in blood sugar levels followed by a drastic decrease in blood sugar. This
begins a roller coaster process of artificial highs and lows that often continue throughout your day. It also causes nervousness; robs your body of thiamin and burns the mucosal lining of your mouth and throat if it is too hot. It is also expensive. Why then do we drink and eat caffiene foods? Easy—we have become addicted to them. It is better to learn to enjoy juices, herbal teas and other substitute foods that nourish rather than harm your body.

EAT MORE ROUGHAGE:

Foods high in fat, starches, simple sugars and refined flours converts into fecal matter that stays in your digestive system for 3 to 4 days. This stagnant holding tank leads to heartburn, gas, nausea, bloating, abdominal pain, rectal irritation and constipation. As if that were not bad enough, it eventually can produce cancer of the colon, appendicitis, hemorrhoids, diverticulitis, varicose veins, phlebitis and obesity. It also bears some relationship to coronary heart disease. The way around these complex problems is simple. Eat more roughage by eating bran (at least two tablespoons per day), whole grain foods, fresh fruits and vegetables, and avoid the junk food.

LEARN WHAT TO EAT AND THEN ENJOY EATING IT:

Don’t consider this a diet, consider this a way of life. Forget counting calories and the numbers on the scales. Forget all of the things you presently think of when confronted with a “weight problem”. Nutritional foods (as compared to hollow calorie foods) satisfy your needs to eat. If you eat sensibly, get plenty of rest and exercise, and learn to enjoy your life, your weight will become a less important problem. In fact for many people, the problem goes away when their habits and attitudes change. Instead of junk food find wholesome foods that you can enjoy, and then eat those foods. You should get a sensual pleasure from eating. Your only task is to find healthy foods that will give you this pleasureable sensation.
THE BASICS FOR GOOD NUTRITION

The trick to having a good diet is simple: **LOW FAT & HIGH FIBER**

This diet will:
1. Lessen the risk of a heart attack
2. Lessen the risk of cancer
3. Help to control your weight

<table>
<thead>
<tr>
<th>HIGH FIBER (GOOD TO EAT)</th>
<th>MODERATE FIBER</th>
<th>OTHER THINGS THAT SHOULD BE AVOIDED</th>
<th>HIGH-FAT FOODS (AVOID)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Wheat Bread</td>
<td>White spaghetti &amp; noodles</td>
<td>All caffeine (coffee, tea, cola, decaf coffee)</td>
<td>All oils</td>
</tr>
<tr>
<td>Corn, Barley, Wild Rice, Buckwheat, Millet</td>
<td>Fruits not noted above</td>
<td>Salt</td>
<td>All fried foods</td>
</tr>
<tr>
<td>Whole Grain Cereals (shredded wheat, raisin bran, Wheaties, Grape Nuts, Total, Oatmeal, all bran cereals, etc.)</td>
<td>All veggies not noted above</td>
<td>Sugar (including white &amp; brown sugar, honey, molasses, corn syrup &amp; maple syrup)</td>
<td>All cheeses (except lowfat cottage cheese)</td>
</tr>
<tr>
<td>Granola</td>
<td>Potatoes, squash, etc.</td>
<td>Cakes</td>
<td>Butter, Margarine, Oleo, Lard</td>
</tr>
<tr>
<td>Brown Rice</td>
<td></td>
<td>Cookies</td>
<td>Avocado</td>
</tr>
<tr>
<td>Whole Wheat Spaghetti &amp; noodles</td>
<td></td>
<td>Fruit or cream pies (unless made with a special modified recipe)</td>
<td>Coconut</td>
</tr>
<tr>
<td>Beans &amp; Legumes (Navy, Lima, Kidney, Lentil, Pinto Beans, etc.)</td>
<td></td>
<td>Donuts</td>
<td>Eggnog</td>
</tr>
<tr>
<td>Blackberries, figs, prunes &amp; raspberries</td>
<td></td>
<td>Pancakes &amp; Waffles</td>
<td>Red Meats (beef, lamb, veal, tongue, liver, heart, pork, etc.)</td>
</tr>
</tbody>
</table>

- **MODERATE FATS**
- **THINGS THAT MAY APPEAR FATTY BUT ARE GOOD**

- Tuna (water packed)
- Flounder, cod, scallops, crab, lobster, oysters, swordfish
- Nonfat dairy foods: yogurt, skim milk, 1% cottage cheese or less
- Butter buds
- Herbal teas
- Yodolo
- Weight Watchers Ice Milk
- Soups (especially bean, split pea and vegetable)

- **HIGH-FAT FOODS (AVOID)**

- All oils
- All fried foods
- All cheeses (except lowfat cottage cheese)
- Butter, Margarine, Oleo, Lard
- Avocado
- Coconut
- Eggnog
- Red Meats (beef, lamb, veal, tongue, liver, heart, pork, etc.)
- Nuts and seeds
- Most fast foods (Wendy's salad bar is 0)
- Eggs
- Ice Cream
- Duck
- Salmon & Rainbow Trout
- Sardines & tuna packed in oil
- Dairy products generally
- Luncheon meats (bologna, salami, hot dogs etc.)

- **OTHER THINGS TO AVOID**

- White spaghetti & noodles
- Fruits not noted above
- All veggies not noted above
- Potatoes, squash, etc.

- **FIFO**

- Fish (must remove skin BEFORE cooking)
- Lite salad dressings and mayo
- Tofu
- Stuffing

- **PROTEINS**

- Tuna (water packed)
- Flounder, cod, scallops, crab, lobster, oysters, swordfish
- Nonfat dairy foods: yogurt, skim milk, 1% cottage cheese or less
- Butter buds
- Herbal teas
- Yodolo
- Weight Watchers Ice Milk
- Soups (especially bean, split pea and vegetable)

- **OTHER THINGS**

- White bread
- White rice
- Sugared cereals
- Corn or tortilla chips
- Fruit juices (eat the whole fruit for fiber)
- Crackers
- Muffins

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I must point out that no single approach is right for everyone. Meditation may be good for somebody with hypertension, and bad for someone with a peptic ulcer. One person may need professional help while another needs nothing more than regular exercise and a vacation. Just as responses to stress vary widely according to age, sex, temperament and other factors, so do the requirements for treatment to offset it.

What no treatment program attempts to do, however, is eliminate stress entirely. There are many who believe stress can be the "spice of life", falling in love, catching an ocean wave, seeing a great performance and riding a roller coaster. All can unleash the same stress hormones as do less uplifting experiences, sending the blood pressure soaring and causing the heart to palpitate madly. A certain amount of stress is a positive and pleasurable thing. It leads to productivity in the human race. The point is not to escape the effects of stress, but to channel and control them.

But the fight or flight spasms of too much tension and dullness and of too little, our challenge for each of us is to find the level of manageable stress that meets us every day and find a balance.
SECTION II

FRAMEWORK FOR ASSESSMENT

RECOGNIZING SIGNS OF STRESS

STRESS SIGN CHART

SYMPTOMS OF STRESS / DISEASES RELATED TO STRESS

MAJOR CAUSES OF DISTRESS
FRAMEWORK FOR ASSESSMENT

THIS SECTION WILL DESCRIBE DEFINITIONS OF STRESS, ITS CHARACTERISTICS AND ASSESSMENT TOOLS THAT CAN BE USED BY YOU TO MEASURE THE AMOUNT OF STRESS AN INDIVIDUAL MIGHT EXPERIENCE, THE EFFECTS OF STRESS AND SELF ASSESSMENTS OF COGNITIVE AND EMOTIONAL STYLE WHICH AFFECT STRESS RESPONSES.

DEFINITION OF STRESS

STRESS IS THE STIMULI, AND ANXIETY IS THE DISEASE.

STRESS: THE RESPONSE OF THE BODY TO ANY DEMANDS MADE UPON IT.

STRESSOR: THE SOURCE OR CAUSE OF THE STRESS.

CHARACTERISTICS

STRESS IS NATURAL. FREQUENTLY IT IS KNOWN AS THE “FIGHT OR FLIGHT” REACTION.

STRESS IS NON-SPECIFIC. THE BODY’S REACTION IS THE SAME REGARDLESS OF THE STRESSOR.

STRESS IS A CHAIN OF INTERNAL EVENTS.

STRESS CAN AFFECT HEALTH. MANY PHYSICAL AILMENTS AND DISEASES APPEAR TO BE STRESS RELATED.

STRESS IS SHORT AND LONG TERM. THERE IS A DIFFERENCE BETWEEN ACUTE AND CHRONIC STRESS.

STRESS IS CAUSED BY MANY SOURCES. ANYTHING CAN CAUSE IT, AND MANY THINGS DO.
RECOGNIZING SIGNS OF STRESS

DURING MOMENTS OF STRESS, PEOPLE UNDERGO CERTAIN CHANGES THAT PREPARE THEM FOR ACTION. THESE CHANGES REPRESENT CUES INDICATING THE EARLY STAGES OF THE STRESS RESPONSE. AS WE LEARN TO IDENTIFY THESE CUES, WE INCREASE OUR AWARENESS OF THE ADVENT OF STRESS IN OUR LIVES. SOME PEOPLE NOTICE CHANGES IN THEIR HEART RATE AND BREATHING PROCESS, AND OTHERS FEEL THEIR MUSCLES TIGHTENING. ACTUALLY, THERE ARE MANY POSSIBLE SIGNS THAT INDICATE STRESS.

(ASK THESE QUESTIONS)

PLEASE TRY TO REMEMBER THE LAST TIME YOU FELT STRESSFUL, HOW DID YOU FEEL? WHAT CHANGES DID NOT NOTICE? WHAT CAN YOU SAY ABOUT THESE SIGNS?

(CAMERA GO TO THE "STRESS SIGN CHART" AND I’LL GO OVER)

THIS SECTION WILL BE CAPPED BY DISCUSSION OF SOME OF THE MORE COMMON ADVERSE EFFECTS OF TENSION AND LONG TERM EXPOSURE TO STRESS. SUCH SYMPTOMS AS COLD HANDS, UPSET STOMACH, ANOREXIA, DIARRHEA, AND HEADACHE ARE ONLY A FEW, BUT THEY ARE FAMILIAR TO MOST INDIVIDUALS. I CAUTION THAT IDENTIFICATION OF STRESSORS ARE SOMETIMES DIFFICULT SINCE THE STRESS REACTION MANIFESTED AS ADVERSE SYMPTOMOLOGY OFTEN OCCURS SOMETIMES AFTER THE STRESSOR IS REMOVED AND, IN SOME CASES, SOMETIMES HOURS AFTER THE OCCURRENCE OF THE STRESSING EVENT. FOR EXAMPLE: GRINDING TEETH AT NIGHT. THIS POINT IS MADE TO EMPHASIZE THE NEED FOR INCORPORATION OF STRESS MANAGEMENT TECHNIQUES INTO ONE’S DAILY LIFE, RATHER THAN ACQUISITION OF COPING SKILLS TO MEET ONLY EMERGENCY SITUATION.
SYMPTOMS OF STRESS

1. NERVOUS TIC
2. CLEARING THROAT
3. CLENCHED HANDS
4. GRIT TEETH
5. FEELING LONELY
6. QUEASY STOMACH
7. VOMITING
8. DIARRHEA
9. HEADACHE
10. BACKACHE
11. NECKACHE
12. HIVES
13. CONSTIPATION
14. DEPRESSION
15. RASH
16. PACING
17. FOOT TAPPING
18. OVEREATING
19. SMOKING
20. DRINKING
21. FEELING FEARFUL
22. CRYING
23. FATIGUE
24. JITTERY FEELINGS
25. RAPID HEARTBEAT
26. SWEATING
27. SEXUAL DIFFICULTIES
28. DRYNESS OF THROAT AND MOUTH
29. IRRITABILITY
30. EMOTIONAL INSTABILITY
31. INABILITY TO CONCENTRATE
32. ACCIDENT PRONENESS
33. STUTTERING
34. INSOMNIA
35. HYPERMOTILITY
36. FREQUENT URINATION
37. NIGHTMARES
38. NEGATIVE THOUGHTS
39. FAINTNESS OR DIZZINESS
40. LACK OF INTEREST
41. LOW ENERGY LEVEL
42. TEMPER OUTBURSTS

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DISEASES RELATED TO STRESS

1. SKIN DISORDERS
2. ALCOHOLISM
3. ALLERGIES
4. ARTHRITIS
5. ASTHMA
6. COLITIS
7. CONSTIPATION
8. DIARRHEA
9. ENTERITIS
10. GOUT
11. HEADACHES - TENSION AND MIGRAINES
12. HEART DISEASE
13. STROKE
14. HYPERTENSION
15. ULCERS
16. CANCER
17. NERVOUS BREAKDOWN
18. PSYCHOSIS
19. NEUROSIS
MAJOR CAUSES OF DISTRESS

1. The Management of Time
   a) Personal life  c) Leisure  e) Health
   b) Work

2. Impatience
   a) Self  c) Events
   b) Others

3. Increased Frequency and Pace of Change
   a) Personal  c) Organization
   b) Others  d) Society

4. Lighting and Noise
   a) Home  c) Society
   b) Work

5. The Media
   a) Radio  c) Movies
   b) Television  d) Press

6. Ambition
   a) Self  c) Organization
   b) Others  d) Society

7. Children
   a) Yours  c) Role
   b) Others

8. Aging
   a) Self
   b) Others

9. Death
   a) Self
   b) Others
SECTION 3

PREVENTING AND MANAGING STRESS IN THE ENVIRONMENT

PROBLEM SOLVING

SUPPORTING OTHERS IN PROBLEM SOLVING

A-B-C THEORY OF EMOTIONAL DISTURBANCE
SUPPORTING OTHERS IN PROBLEM SOLVING (cont.)

7. Resisting the temptation to take over and tell the person what to do.

8. Withstanding pressure from a person who wants to be told what to do.

9. Being clear about the nature and locating of resources outside the individual.

Explain professional

End talk with a lead in to "Seeking Other Support Systems".
SUPPORTING OTHERS IN PROBLEM SOLVING

PROBLEM SOLVING IS A STRATEGY THAT IS OFTEN DIFFICULT FOR PEOPLE EXPERIENCING STRESS TO UTILIZE ON THEIR OWN. STRESSFUL EXPERIENCES OCCUR WHEN PEOPLE FEEL ESPECIALLY VULNERABLE TO CIRCUMSTANCES THAT APPEAR BEYOND THEIR CONTROL. PEOPLE SOMETIMES LOSE SIGHT OF THE FACT THAT ACTION CAN BE TAKEN TO REDUCE STRESS. BY ASSISTING OTHERS IN THE PROBLEM-SOLVING PROCESS, YOU CAN GREATLY SUPPORT THEM IN FINDING THEIR OWN SOLUTIONS TO TROUBLESOME PROBLEMS. THE FOLLOWING SUGGESTIONS ARE INTENDED TO ASSIST YOU IN THIS PROCESS.

ASSISTING A PERSON TO REACH HIS OR HER OWN DECISION INVOLVES ...

1. HELPING THE PERSON DETERMINE WHICH PROBLEMS, OR ASPECTS OF A PROBLEM, ARE MOST IMPORTANT OR MOST IMMEDIATE.

2. HELPING THE PERSON CONSIDER RESOURCES (PERSONAL, FAMILY, PROFESSIONAL, ETC.).

3. HELPING THE PERSON EVALUATE POSSIBLE APPROACHES OR SOLUTIONS TO THE PROBLEM IN RELATION TO PERSONAL NEEDS AND THE NEEDS OF OTHERS INVOLVED IN THE SITUATION.

4. HELPING THE PERSON CLARIFY WHAT HE OR SHE WISHES TO DO.

5. HELPING THE PERSON ESTIMATE WHAT HE OR SHE CAN ACTUALLY DO.

6. EXPLAINING WHAT PART YOU CAN PLAY IN ASSISTING THE PERSON TO CARRY OUT THE PLAN.
A SUPPORT SYSTEM MAY BE VIEWED AS OUR RELATIONSHIP WITH ANYONE OR ANYTHING THAT PROVIDES A STRUCTURE FOR OUR GROWTH, SATISFACTION AND ACHIEVEMENT.

CUT (FOR CAMERA)

PEER GROUP, ORGANIZATIONAL GROUP, HOMOGENEOUS, HETEROGENEOUS, GROUP—NEED TO SHOW PICTURES OF PEOPLE HAVING FUN TOGETHER, WORKING TOGETHER, PEOPLE WORKING TOWARDS A COMMON GOAL.

IN ADDITION TO RELATIONSHIPS WITH OTHER PEOPLE, YOUR PHILOSOPHY, RELIGION, AND FORM OF WORK CAN BE VALUABLE SOURCES OF SUPPORT TO YOU.

CUT (FOR CAMERA)

PHILOSOPHY—COULD BE POLITICAL, STUDENT GROUPS OF 60'S OR 70'S.

(GO TO "SEEKING OTHER SUPPORT SYSTEMS")
3. **DEVELOP A LIST OF ALTERNATIVE ACTIONS.**

4. **SELECT THE MOST DESIRABLE ACTION.**

Frequently, we don't see our alternatives until we examine the possibilities. Problem solving is the process of exploring possible causes, courses of action, and resources.

**SUPPORT SYSTEMS**

Cut to scene of Support Systems idea; people working together, organizations - anything that fits.

People need the support of others. Although we sometimes take this fact for granted, it would be impossible for human beings to grow and develop without well defined support systems.

Cut Family. Show evolution of the family system.

The family is an example of a support system that provides its members with relationships that ideally protect and nourish them. In addition to the family, we each have other relationships that support our efforts to get what we want and need.
PROBLEM SOLVING

FREQUENTLY, STRESSFUL SITUATIONS REPRESENT PROBLEMS FOR US TO SOLVE. THEY MAY RESULT FROM CHANGES IN OUR LIVES, CONFLICT AT WORK, OR FRUSTRATIONS GENERATED BY TOO MUCH TO DO IN TOO LITTLE TIME. REGARDLESS OF THE SOURCE OF THE STRESS, WE MOST OFTEN BENEFIT FROM TAKING A CLOSE LOOK AT THE CIRCUMSTANCES OF THE SITUATION AND OUT-LINING A SERIES OF CONCRETE STEPS TO REDUCE THE STRESS. THE FOLLOWING EXERCISE IS INTENDED TO HELP YOU UTILIZE A METHOD OF PROBLEM SOLVING IN YOUR LIFE.

1. DEVELOP A CLEAR UNDERSTANDING OF THE PROBLEM SITUATION.
   THIS CAN BE DONE BY ASKING YOURSELF SOME VERY DIRECT QUESTIONS, SUCH AS ...
   - WHAT ARE THE STRESSORS?
   - WHY DO I PERCEIVE THEM TO BE STRESSFUL?
   - IS THIS A PROBLEM THAT IS RECURRENT? Seldom or often encountered? ONGOING?
   - WHAT MORE SHOULD I KNOW IN ORDER TO UNDERSTAND THE ENTIRE SITUATION?

2. DEFINE YOUR GOALS FOR PROBLEM RESOLUTION.
   IN ANY SITUATION WE HAVE CERTAIN DESIRABLE OUTCOMES. CONSIDER WHAT YOU WOULD LIKE TO HAPPEN BASED ON THE CIRCUMSTANCES OF THE SITUATION. HELPFUL QUESTIONS TO ASK YOURSELF ARE ...
   - ARE ANY ASPECTS OF THE SITUATION CHANGEABLE? AVOIDABLE?
   - COULD MY STRESS LEVEL BE REDUCED IN ANY WAY?
   - IS THERE ANY HELP AVAILABLE TO ASSIST ME IN COPING WITH THE SITUATION?
PREVENTING AND MANAGING STRESS IN THE ENVIRONMENT 342

I WISH TO PRESENT A BEHAVIORAL SELF-CONTROL MODEL WHICH TRIES TO HELP YOU DEVELOP AN ORDERLY PROCESS OF PLANNED CHANGE. THIS ALSO INCLUDES ENLISTMENT OF SOCIAL SUPPORT IN ORDER TO REINFORCE DESIRED EFFORTS TO CHANGE.

I ALSO EMPHASIZE A NEED FOR CONTROLLING INTERPERSONAL RELATIONSHIPS. THIS INCLUDES COMMUNICATING BETTER MORE DIRECTLY WITH OTHERS WHETHER BEING MORE ASSERTIVE OR IMPROVING COUPLE COMMUNICATION. I WOULD ALSO LIKE TO INCLUDE CONSIDERATION OF IMPROVING ONE'S SUPPORT NETWORK AND USING SIMPLE TRADING OF LISTENING TIME OR CO-COUNSELING TECHNIQUES TO ENSURE AN OPPORTUNITY TO EXPRESS EMOTIONS AND AVOID SOCIAL ISOLATION.
SEEKING OTHER SUPPORT SYSTEMS

A REFERRAL CAN BE AN IMPORTANT WAY TO ASSIST OTHER PEOPLE TO MANAGE STRESS, ESPECIALLY WHEN YOU HAVE CHOSEN NOT TO HELP THEM YOURSELF OR WHEN YOU HAVE TRIED AND FOUND ONLY LIMITED SUCCESS. THE PURPOSE OF A REFERRAL IS TO MATCH A NEED WITH A RESOURCE.

THE IMPORTANCE OF MAKING A GOOD REFERRAL CANNOT BE OVER-EMPHASIZED. REFERRALS SHOULD BE MADE OUT OF A GENUINE INTEREST IN HELPING PEOPLE TO REDUCE THEIR STRESS OR TO DEAL WITH THE STRESSORS. THE FOLLOWING SUGGESTIONS ARE INTENDED TO OFFER SPECIFIC GUIDELINES FOR MAKING AN EFFECTIVE REFERRAL. THE REFERRAL PROCESS ITSELF CAN EITHER ADD TO OR REDUCE STRESS.

1. KNOW THE PERSON’S NEEDS.
   EACH PERSON WHOM YOU WANT TO REFER TO SOMEONE ELSE HAS SPECIFIC NEEDS THAT YOU SHOULD KNOW ABOUT. TALK WITH THE INDIVIDUAL AND LISTEN TO WHAT HE OR SHE FEELS IS THE PROBLEMS OR PROBLEM. YOUR UNDERSTANDING OF AN INDIVIDUAL’S NEEDS IS MORE LIKELY TO LEAD TO AN EFFECTIVE REFERRAL.

2. BE INFORMED OF COMMUNITY RESOURCES.
   AFTER DEVELOPING AN UNDERSTANDING OF THE PERSON’S NEEDS, YOU WILL NEED TO MATCH THOSE NEEDS WITH A RESOURCE. KNOW WHAT RESOURCES ARE AVAILABLE. THE MORE INFORMED YOU ARE OF YOUR ORGANIZATION’S AND COMMUNITY’S RESOURCES, THE EASIER AND MORE EFFECTIVE YOUR REFERRAL WILL BE.
WHAT FOLLOWS IS A SAMPLE SET OF RESPONSE-CLASSES THAT MAY PROVE TO BE MALADAPTIVE IF THE MEMBER COGNITIONS OCCUR WITH SUFFICIENT FREQUENCY, DURATION, OR INTENSITY. THEY BECOME MALADAPTIVE TO THE EXTENT THAT THEY MEDIATE UNDESIRABLE BEHAVIOR IN SPECIFIC SITUATIONS (E.G., DEPRESSIVE DYSPHORIA, ANXIETY, ANGER). THE LABEL FOR EACH RESPONSE-CLASS IS MERELY FOR CONVENIENCE IN ASSESSING BEHAVIOR AND IN TRAINING YOU TO RECOGNIZE AND MODIFY YOUR OWN COGNITIONS.

1. ALL-OR-NOTHING THINKING: YOU SEE THINGS IN BLACK-AND-WHITE CATEGORIES. IF YOUR PERFORMANCE FALLS SHORT OF PERFECT, YOU SEE YOURSELF AS A TOTAL FAILURE.

2. OVERGENERALIZATION: YOU SEE A SINGLE NEGATIVE EVENT AS A NEVER-ENDING PATTERN OF DEFEAT.

3. MENTAL FILTER: YOU PICK OUT A SINGLE NEGATIVE DETAIL AND DWELL ON IT EXCLUSIVELY SO THAT YOUR VISION OF ALL REALITY BECOMES DARKENED, LIKE THE DROP OF INK THAT DISCOLORS THE ENTIRE BEAKER OF WATER.

4. DISQUALIFYING THE POSITIVE: YOU REJECT POSITIVE EXPERIENCES BY INSISTING THEY "DON'T COUNT" FOR SOME REASON OR OTHER. IN THIS WAY YOU CAN MAINTAIN A NEGATIVE BELIEF THAT IS CONTRADICTED BY EVERYDAY EXPERIENCES.
5. **Jumping to Conclusions:** You make a negative interpretation even though there are no definite facts that convincingly support your conclusion.
   
   A. **Mind Reading.** You arbitrarily conclude that someone is reacting negatively to you, and you don’t bother to check this out. 
   
   B. **The Fortune Teller Error.** You anticipate that things will turn out badly, and you feel convinced that your prediction is an already established fact.

6. **Magnification (Catastrophizing) or Minimization:** You exaggerate the importance of things (such as your goof-up or someone else’s achievement), or you inappropriately shrink things until they appear tiny (your own desirable qualities or the other fellow’s imperfections). This is also called the “Binocular Trick.”

7. **Emotional Reasoning:** You assume that your negative emotions necessarily reflect the way things really are: “I feel it, therefore it must be true.”
8. SHOULD STATEMENTS: YOU TRY TO MOTIVATE YOURSELF WITH SHOULD AND SHOULDN'TS, AS IF YOU HAD TO BE WHIPPED AND PUNISHED BEFORE YOU COULD BE EXPECTED TO DO ANYTHING. "MUSTS" AND "OUGHTS" ARE ALSO OFFENDERS. THE EMOTIONAL CONSEQUENCE IS GUILT. WHEN YOU DIRECT SHOULD STATEMENTS TOWARD OTHERS, YOU FEEL ANGER, FRUSTRATION, AND RESENTMENT.

9. LABELING AND MISLABELING: THIS IS AN EXTREME FORM OF OVERGENERALIZATION. INSTEAD OF DESCRIBING YOUR ERROR, YOU ATTACH A NEGATIVE LABEL TO YOURSELF: "I'M A LOSER". WHEN SOMEONE ELSE'S BEHAVIOR RUBS YOU THE WRONG WAY, YOU ATTACH A NEGATIVE TO HIM: "HE'S A NO-GOOD LOUSE". MISLABELING INVOLVES DESCRIBING AN EVENT WITH LANGUAGE THAT IS HIGHLY COLORED AND EMOTIONALLY LOADED.

10. PERSONALIZATION: YOU SEE YOURSELF AS THE CAUSE OF SOME NEGATIVE EXTERNAL EVENT WHICH IN FACT YOU WERE NOT PRIMARILY RESPONSIBLE FOR.

INCLUDED IN YOUR HANDOUT YOU WILL FIND A COPY OF "HOW TO ELIMINATE UNPLEASANT EMOTIONS". THIS IS ONE OF THE FIRST STEPS TO "COGNITIVE BEHAVIORAL THERAPY". PLEASE READ THEM OVER LATER AND SEE WHAT YOU THINK.
HOW TO ELIMINATE UNPLEASANT EMOTIONS

EMOTION REACTIONS ARE A RESULT OF HOW YOU EVALUATE EVENTS THAT HAPPEN IN YOUR LIFE. IT IS NOT THE EVENT THAT IS UPSETTING, BUT WHAT YOU TELL YOURSELF ABOUT IT.

EXAMPLE: FRIENDS ARE HAVING A PARTY AND DO NOT INVITE YOU. YOU THINK TO YOURSELF, "HOW TERRIBLE OF THEM TO NOT INVITE ME WHEN I HAVE ALWAYS INVITED THEM TO MY PARTIES. THEY MUST NOT REALLY LIKE ME. THERE MUST BE SOMETHING WRONG WITH ME." YOU FEEL SAD, DEPRESSED AND UNLOVED.

EXAMPLE: FRIENDS ARE HAVING A PARTY AND DO NOT INVITE YOU. YOU THINK TO YOURSELF, "IT WOULD BE NICE TO BE INVITED TO MY FRIENDS' PARTY, BUT I'M SURE THEY MUST HAVE A GOOD REASON. I'LL FIND SOMETHING ELSE TO DO THAT I WILL ENJOY." YOU FEEL CONTENT AND SATISFIED.

YOU FEEL AS YOU THINK. IRRATIONAL THINKING LEADS TO SUSTAINED EMOTIONAL DIFFICULTIES.

TO OVERCOME EMOTIONAL DIFFICULTIES, YOU MUST LEARN TO THINK MORE RATIONALLY, THEN YOU WILL FEEL LESS ANGRY AND/OR DEPRESSED AND BE ABLE TO TAKE MORE RATIONAL ACTION.
HOW TO ELIMINATE UNPLEASANT EMOTIONS (CONT.)

THE FOLLOWING ARE COMMON IRRATIONAL IDEAS WITH THEIR MORE RATIONAL COUNTERPART.

1. IT IS ESSENTIAL FOR YOU TO BE LOVED OR APPROVED BY OTHERS IN ORDER TO FEEL WORTHWHILE.

   1. YOU ARE WORTHWHILE AS A PERSON WHETHER OR NOT OTHER PEOPLE LOVE AND APPROVE OF YOU.

2. IT IS NECESSARY THAT YOU BE THOROUGHLY COMPETENT, ADEQUATE AND SUCCESSFUL IN ALL POSSIBLE RESPECTS IN ORDER TO BE WORTHWHILE.

   2. YOU ARE WORTHWHILE AS A PERSON EVEN THOUGH YOU MAKE MISTAKES AND WHILE YOU MAKE MISTAKES. YOU ARE A HUMAN BEING CAPABLE OF MAKING ERRORS. YOU ARE NOT PERFECT AND DO NOT NEED TO BE PERFECT TO BE WORTHWHILE.

3. PEOPLE ARE BAD, EVIL AND WICKED AND SHOULD BE SEVERELY BLAMED OR PUNISHED FOR THEIR BADNESS.

   3. TO SEVERELY BLAME OR PUNISH ANOTHER PERSON OR YOURSELF FOR BEHAVING BADLY IS NOT CONSTRUCTIVE AND DOES NOT HELP YOU BEHAVE BETTER. IT LEADS TO FEELINGS OF GUILT AND WORTHLESSNESS.

4. IT IS AwFUL OR CATASTROPHIC WHEN THINGS DO NOT GO THE WAY YOU WOULD LIKE VERY MUCH FOR THEM TO GO.

   4. IT IS NOT CATASTROPHIC--JUST INCONVENIENT FOR YOU AND NOT AS PLEASANT AS IT COULD BE.
5. Human unhappiness is externally caused and you have little or no ability to control your unhappiness.

6. If something is dangerous or fearsome, you should be terribly concerned about it and keep dwelling on it.

7. You need to depend on others who are stronger than yourself.

8. Your past life experiences predetermine your present behavior and because they once so strongly influenced your life, they will continue to do so.

5. You and only you can control your thoughts and emotions which lead to unhappiness. It isn't what happens that upsets you, but it is what you tell yourself about the situation that leads to emotional upset.

6. To keep dwelling upon fearsome or potentially dangerous possibilities only sustains your upset and leaves you less efficient to cope with realistic danger.

7. It is nice to depend upon others, but you can learn that you don't need them and do not have to depend upon them. You can be competent yourself.

8. You can't change your past, but you can change the way you think about your past so that it no longer dominates your present behavior. Example: because you have tried and always failed in the past does not mean you will fail again today.
9. It is easier to avoid certain of life's difficulties rather than face them.

9. Your anxiety is reduced by facing your difficulties and meeting your challenges.

10. There is always a right and proper solution to your problems and it is a catastrophe if you don't find it.

10. Nothing is catastrophic unless you make it so in your mind. The more you catastrophize events, the less you are able to take constructive action.

11. People should behave the way you want them to just because you wish it.

11. It would be nice if other people behaved the way you wish them to, but to demand it of them is irrational and self-defeating.

12. People are defined by their actions, i.e., people who behave badly are bad. People who behave well are good.

12. People and their behavior are two separate things. A more rational philosophy would be that all people are worthwhile because they are human beings with intrinsic worth.

Learn to identify your irrational ideas and totally commit yourself to changing your way of thinking. You will have to work hard, but you can to it.
SECTION 4

TRAINING YOURSELF IN DEEP MUSCLE RELAXATION

HOW TO RELAX THROUGH MEDITATION

TECHNIQUES FOR RELAXATION

HOW TO BRING FORTH THE RELAXATION RESPONSE

AUTGENIC PHRASES

SIGNS OF RELAXATION
TRAINING YOURSELF IN DEEP MUSCLE RELAXATION

You can use this guide to train yourself in deep muscle relaxation, a technique first developed by Jacobsen in 1938. Choose a quiet, comfortable place where you won't be disturbed for half an hour. Go through relaxation while lying on the floor, a bed, or a reclining chair.

Concentrate on the muscle groups below, one at a time in the order presented. Create tension in the muscles by tightenining them for five seconds and then relaxing them. For each muscle group a method is described for creating tension and achieving relaxation. The first time you try it, go through the procedure for each muscle group twice.

It is awkward to read the instructions while attempting to relax, and it may be inconvenient to have someone read the instructions to you. We suggest an ideal method is to use a commercial tape recording of relaxation instructions or make your own tape.

<table>
<thead>
<tr>
<th>Muscle</th>
<th>Tensing Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forehead</td>
<td>Wrinkle forehead. Try to make your eyebrows touch your hairline for five seconds. Relax.</td>
</tr>
<tr>
<td>Eyes and nose</td>
<td>Close your eyes as tightly as you can for five seconds. Relax.</td>
</tr>
<tr>
<td>Lips, cheeks and jaw</td>
<td>Draw corners of your mouth back and grimace for five seconds. Relax. Feel the calmness and warmth in your face.</td>
</tr>
<tr>
<td>MUSCLE</td>
<td>TENSING METHOD</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>HANDS</td>
<td>EXTEND ARMS IN FRONT OF YOU, CLENCH FISTS Tightly FOR FIVE SECONDS. RELAX, AND FEEL THE WARMTH AND CALMNESS IN YOUR HANDS.</td>
</tr>
<tr>
<td>FOREARMS</td>
<td>EXTEND ARMS OUT AGAINST AN INVISIBLE WALL AND PUSH FORWARD WITH HANDS FOR FIVE SECONDS. RELAX.</td>
</tr>
<tr>
<td>UPPER ARMS</td>
<td>BEND ELBOWS. TENSE BICEPS FOR FIVE SECONDS. RELAX, AND FEEL THE TENSION LEAVE YOUR ARMS.</td>
</tr>
<tr>
<td>SHOULDERS</td>
<td>SHRUG SHOULDERS UP TO YOUR EARS FOR FIVE SECONDS. RELAX.</td>
</tr>
<tr>
<td>BACK</td>
<td>ARCH YOUR BACK OFF THE FLOOR OR BED FOR FIVE SECONDS. RELAX. FEEL THE ANXIETY AND TENSION DISAPPEARING.</td>
</tr>
<tr>
<td>STOMACH</td>
<td>TIGHTEN YOUR STOMACH MUSCLES FOR FIVE SECONDS. RELAX.</td>
</tr>
<tr>
<td>HIPS, BUTTOCKS</td>
<td>TIGHTEN BUTTOCKS FOR FIVE SECONDS. RELAX.</td>
</tr>
<tr>
<td>MUSCLE</td>
<td>TENSING METHOD</td>
</tr>
<tr>
<td>--------</td>
<td>----------------</td>
</tr>
<tr>
<td>THIGHS</td>
<td>TIGHTEN THIGH MUSCLES BY PRESSING LEGS TOGETHER AS TIGHTLY AS YOU CAN FOR FIVE SECONDS. RELAX.</td>
</tr>
<tr>
<td>FEET</td>
<td>BEND ANKLES TOWARD YOUR BODY AS FAR AS YOU CAN, FOR FIVE SECONDS. RELAX.</td>
</tr>
<tr>
<td>TOES</td>
<td>CURL TOES UNDER AS TIGHTLY AS YOU CAN FOR FIVE SECONDS. RELAX.</td>
</tr>
</tbody>
</table>
HOW TO RELAX THROUGH MEDITATION

TECHNIQUES OF MEDITATION:

1. SIT IN A COMFORTABLE CHAIR IN A QUIET ROOM WHERE YOU WILL NOT BE DISTURBED.

2. AFTER YOU ARE RELAXED, AND WITH YOUR EYES CLOSED, BEGIN TO TAKE SLOW, DEEP BREATHS THROUGH YOUR NOSE, FILLING YOUR LUNGS ENTIRELY. EACH TIME YOU EXHALE COMPLETELY, REPEAT A PACIFIER WORD TO YOURSELF. GOOD PACIFIER WORDS ARE: CALM, BLANK, OPEN, PEACE, AND CLEAR. WHEN YOU SAY YOUR PACIFIER, IT WILL BE ESPECIALLY HELPFUL TO VISUALIZE THE WORD ITSELF DROPPING LIKE A LEAF THROUGH YOUR ENTIRE BODY ALL THE WAY DOWN TO YOUR TOES.

3. CONTINUE TO INHALE DEEPLY AND SLOWLY. THEN EXHALE AND SIMULTANEOUSLY REPEAT YOUR PACIFIER TO YOURSELF. THE OBJECT IS NOT TO ALLOW ANY IDEAS TO FORM IN YOUR MIND. DO NOT WORK MENTALLY AT ANYTHING WHATEVER. JUST LET YOUR MIND UNWIND AND LET THOUGHTS AND IMAGES COME AND GO LIKE LAZY RUDDERLESS SAILBOATS IN A SILENT BREEZE. IF THOUGHTS BECKON AND TRY TO FORM, DON’T COOPERATE!

CONTINUE THIS TYPE OF BREATHING FOR FIFTEEN MINUTES. WHEN YOU FINISH, SIT QUIETLY FOR A FEW MOMENTS AND THEN SLOWLY OPEN YOUR EYES. THAT’S IT. NOTHING ELSE IS REQUIRED.
4. IF YOU LOOK AT YOURSELF IN A MIRROR, YOU WON'T SEE ANYTHING VISIBLY CHANGED. DON'T BE DISMAYED. YOU CAN BE FAIRLY SURE THAT MEASURABLE CHANGES ARE OCCURRING INSIDE YOUR BODY, IN YOUR INTERNAL ORGANS, WHICH ARE HAVING BENEFICIAL EFFECTS ON YOU.

AFTER MEDITATING, MOST PEOPLE FEEL PEACEFULLY SLOWED DOWN AND ENJOY AN UNMATCHED TRANQUILITY. MANY USE IT TO GET BACK TO SLEEP AFTER THEY'VE AWAKENED DURING THE NIGHT. REPEAT THE MEDITATION EXERCISE THREE TIMES DAILY.
TECHNIQUES FOR RELAXATION

STEP 1. LIE DOWN IN A QUIET AND DIMLY LIT ROOM. MAKE YOURSELF AS COMFORTABLE AS POSSIBLE.

STEP 2. ALLOW YOUR EYES TO CLOSE AS YOU SLOWLY TAKE A DEEP BREATH. HOLD IT FOR TEN SECONDS. STUDY THE TENSION THIS CREATES IN YOUR CHEST, NECK, ABDOMEN AND SHOULDERS. EXHALE SLOWLY AND RELAX. IMAGINE THAT THE TENSION IS LEAVING YOUR BODY AS YOU EXHALE; SAY TO YOURSELF, "MY BREATH FLOWS IN AND OUT LIKE THE TIDES." REPEAT THIS FIVE OR SIX TIMES THEN PAUSE FOR TWENTY SECONDS.

STEP 3. NOW TENSE EVERY MUSCLE IN YOUR BODY FOR TEN SECONDS, THEN LET GO AND ALLOW RELAXATION TO OCCUR. OBSERVE THE DIFFERENCE BETWEEN YOUR MUSCLES WHEN TENSED AND WHEN RELAXED. THIS IS CALLED THE TENSION-RELEASE METHOD. AS YOU REPEAT THIS THREE TIMES, KEEP YOUR MIND COMPLETELY FREE. JUST LET THOUGHTS COME AND GO FREELY AS THEY WILL. DON'T FOCUS ON ANYTHING. KEEP IN MIND THE IMAGE OF YOURSELF LYING DOWN, RELAXING MORE AND MORE. TELL YOURSELF THAT IF YOU HEAR SOUNDS THEY WON'T DISTURB YOU. AT THIS POINT, YOU SHOULD BE SOMewhat RELAXED.

STEP 4. NOW IMAGINE AS VIVIDLY AS YOU CAN A WARM, SOOTHING FEELING ENTERING YOUR TOES. FEEL IT MOVING THROUGH THE BONES, MUSCLES, AND LIGAMENTS OF YOUR FEET. IT WILL SOON MAKE ITS WAY THROUGH YOUR BODY TO THE TOP OF YOUR HEAD. IMAGINE THE FEELING PENETRATING DEEP INTO YOUR FEET THEN PASSING THROUGH YOUR ANKLES INTO THE CALVES OF YOUR LEGS. KEEP REPEATING TO YOURSELF, "CALM, RELAX, LET GO."
TECHNIQUES FOR RELAXATION (cont.)

STEP 5. IMAGINE THE FEELING MOVING UP THROUGH YOUR ANKLES INTO YOUR THIGHS, RELAXING YOU AS IT GOES, RELAXING ALL PARTS OF YOUR THIGHS. NEXT, IMAGINE IT MOVING UP THROUGH YOUR GROIN, BUTTOCKS, AND LOWER ABDOMEN---RELAXING ALL MUSCLES, TENDONS, AND SO ON. REMEMBER, THERE IS NOTHING TO THINK ABOUT EXCEPT TO RELAX. AGAIN, TRY TO GET THE IMAGE OF YOURSELF LYING THERE, RELAXING, LETTING GO.

IMAGINE THE SENSATION MOVING UP THROUGH YOUR ABDOMEN AND LOWER BACK. FEEL THE MUSCLES LETTING GO, DEEPER AND DEEPER. FEEL THE TENSION LEAVING YOUR BODY. IMAGINE YOUR INTERNAL ORGANS RELAXING---THE LIVER, KIDNEYS, SPLEEN, INTESTINES, STOMACH. NEXT, THE FEELING MOVES UP INTO YOUR UPPER CHEST AND BACK. YOUR HEART AND LUNGS ARE WORKING SMOOTHLY. YOU FEEL CALM AND SERENE.

THE FEELING CONTINUES UP INTO YOUR NECK AND SHOULDERS. IMAGINE THE RELAXATION GOING DOWN EACH ARM TO THE FINGERTIPS. JUST LET GO. NO TENSION. DEEPER AND DEEPER, RELAXED. NEXT, THE FEELING CONTINUES UP, DEEP INTO YOUR THROAT. FEEL YOUR TONGUE AND MOUTH RELAXING. SEPARATE YOUR JAWS AND RELAX YOUR JAW MUSCLES. LET YOUR MOUTH HANG OPEN SOMEWHAT. TELL YOURSELF, "LET GO."

FINALLY THE FEELING PENETRATES DEEP INTO YOUR BRAIN. THERE IS A
SOOTHING, RELAXING PEACE, WITH NOTHING TO THINK ABOUT. YOUR BRAIN IS
CALM AND SERENE. THE ONLY IMAGE YOU HAVE IS OF YOURSELF LYING THERE,
COMPLETELY RELAXED.

NOW FEEL YOUR ENTIRE BODY LOOSE AND TENSION-FREE—EVERY BLOOD
VESSEL, TENDON, NERVE, LIGAMENT, MEMBRANE, GLAND, AND MUSCLE—AS IF
YOU WERE A RAG DOLL. ENJOY THE RELAXATION, THE CALM. PAUSE FOR ABOUT
TWENTY SECONDS.

STEP 6. NOW COUNT TO YOURSELF FROM ONE TO TEN AND SUGGEST THAT YOUR
MUSCLES WILL LET GO EVEN FURTHER AS YOU APPROACH TEN. REMEMBER,
WHATEVER IT IS THAT YOU SEEM TO BE DOING TO RELAX, CONTINUE IT FAR
PAST THE POINT WHERE YOUR BODY FEELS RELAXED.

STEP 7. BEFORE YOU GET UP, YOU MUST BRING YOURSELF TO AN ALERT STATE
OF MIND. DO THE FOLLOWING: BEGIN COUNTING SLOWLY TO TWENTY AND WHEN
YOU REACH FIFTEEN, BEGIN COUNTING ALOUD. SAY TO YOURSELF THAT WHEN
YOU REACH TWENTY YOUR EYES WILL OPEN, YOU WILL BE ALERT AND
REFRESHED. ALL PARTS OF YOUR BODY WILL BE RELAXED AND NORMAL.

THIS RELAXATION PROCESS SHOULD TAKE ABOUT FIFTEEN MINUTES. DON'T
RUSH IT. REPEAT IT AT LEAST THREE TIMES EACH DAY. IT CAN EVEN BE
PRACTICED IN A SITTING POSITION WHILE TRAVELING ON A BUS OR TRAIN. YOU
MAY SPEED UP THE PROCESS UNTIL YOU ACHIEVE COMPLETE RELAXATION IN
THREE OR FOUR MINUTES.
HOW TO BRING FORTH THE RELAXATION RESPONSE

THE EASTERN AND WESTERN RELIGIOUS, CULTURAL, AND LAY PRACTICES HAVE LED TO THE RELAXATION RESPONSE. FROM THOSE AGE-OLD TECHNIQUES WE HAVE EXTRACTED FOUR BASIC COMPONENTS NECESSARY TO BRING FORTH THAT RESPONSE:

1) A QUIET ENVIRONMENT

IDEALLY, YOU SHOULD CHOICE A QUIET, CALM ENVIRONMENT WITH AS FEW DISTRACTIONS AS POSSIBLE. A QUIET ROOM IS SUITABLE, AS IT A PLACE OF WORSHIP. THE QUIET ENVIRONMENT CONTRIBUTES TO THE EFFECTIVENESS OF THE REPEATED WORD OR PHRASE BY MAKING IT EASIER TO ELIMINATE DISTRACTING THOUGHTS.

2) A MENTAL DEVICE

TO SHIFT THE MIND FROM LOGICAL, EXTREMELY ORIENTED THOUGHT, THERE SHOULD BE A CONTRAST STIMULUS: A SOUND, WORD, OR PHRASE REPEATED SILENTLY OR ALOUD; OR FIXED GAZING AT AN OBJECT. SINCE ONE OF THE MAJOR DIFFICULTIES IN THE ELICITATION OF THE RELAXATION RESPONSE IS “MIND WANDERING,” THE REPETITION OF THE WORD OR PHRASE IS A WAY TO HELP BREAK THE TRAIN OF DISTRACTING THOUGHTS. YOUR EYES ARE USUALLY CLOSED IF YOU ARE USING A REPEATED SOUND OR WORD; OF COURSE, YOUR EYES ARE OPEN IF YOU ARE GAZING. ATTENTION TO THE NORMAL RHYTHM OF BREATHING IS ALSO USEFUL AND ENHANCES THE REPETITION OF THE SOUND OR THE WORD.

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3) A PASSIVE ATTITUDE

WHEN DISTRACTING THOUGHTS OCCUR, THEY ARE TO BE DISREGARDED AND ATTENTION REDIRECTED TO THE REPETITION OR GAZING; YOU SHOULD NOT WORRY ABOUT HOW WELL YOU ARE PERFORMING THE TECHNIQUE, BECAUSE THIS MAY WELL PREVENT THE RELAXATION RESPONSE FROM OCCURRING. ADOPT A "LET IT HAPPEN" ATTITUDE. THE PASSIVE ATTITUDE IS PERHAPS THE MOST IMPORTANT ELEMENT IN ELICITING THE RELAXATION RESPONSE. DISTRACTING THOUGHTS WILL OCCUR. DO NOT WORRY ABOUT THEM. WHEN THESE THOUGHTS DO PRESENT THEMSELVES AND YOU BECOME AWARE OF THEM, SIMPLY RETURN TO THE REPETITION OF THE MENTAL DEVICE. THESE OTHER THOUGHTS DO NOT MEAN YOU ARE PERFORMING THE TECHNIQUE INCORRECTLY. THEY ARE TO BE EXPECTED.

4) A COMFORTABLE POSITION

A COMFORTABLE POSTURE IS IMPORTANT SO THAT THERE Isn’T UNDUE MUSCULAR TENSION. SOME METHODS CALL FOR A SITTING POSITION. A FEW PRACTITIONERS USE THE CROSS-LEGGED "LOTUS" POSITION OF THE YOGI. IF YOU ARE LYING DOWN, THERE IS A TENDENCY TO FALL ASLEEP. AS WE HAVE NOTED PREVIOUSLY, THE VARIOUS POSTURES OF KNEELING, SWAYING, OR SITTING IN A CROSS-LEGGED POSITION ARE BELIEVED TO HAVE EVOLVED TO PREVENT FALLING ASLEEP. YOU SHOULD BE COMFORTABLE AND RELAXED.
HOW TO BRING FORTH THE RELAXATION RESPONSE (cont.)

IT IS IMPORTANT TO REMEMBER THAT THERE IS NOT A SINGLE METHOD THAT IS UNIQUE IN ELICITING THE RELAXATION RESPONSE. FOR EXAMPLE, TRANSCENDENTAL MEDITATION IS ONE OF THE MANY TECHNIQUES THAT INCORPORATE THESE COMPONENTS. HOWEVER, WE BELIEVE IT IS NOT NECESSAR TO USE THE SPECIFIC METHOD AND SPECIFIC SECRET, PERSONAL SOUND TAUGHT BY TRANSCENDENTAL MEDITATION. TESTS AT THE THORNDIKE MEMORIAL LABORATORY OF HARVARD HAVE SHOWN THAT A SIMILAR TECHNIQUE USED WITH ANY SOUND OR PHRASE OR PRAYER OR MANTRA BRINGS FORTH THE SAME PHYSIOLOGIC CHANGES NOTED DURING TRANSCENDENTAL MEDITATION: DECREASED OXYGEN CONSUMPTION; DECREASED CARBON DIOXIDE ELIMINATION; DECREASED RATE OF BREATHING. IN OTHER WORDS, USING THE BASIC NECESSARY COMPONENTS, ANY ONE OF THE AGE-OLD OR THE NEWLY DERIVED TECHNIQUES PRODUCES THE SAME PHYSIOLOGIC RESULTS REGARDLESS OF THE MENTAL DEVICE USED. THE FOLLOWING SET OF INSTRUCTIONS, USED TO ELICIT THE RELAXATION RESPONSE, WAS DEVELOPED BY OUR GROUP AT HARVARD'S THORNDIK MEMORIAL LABORATORY AND WAS FOUND TO PRODUCE THE SAME PHYSIOLOGIC CHANGES WE HAD OBSERVED DURING THE PRACTICE OF TRANSCENDENTAL MEDITATION. THIS TECHNIQUE IS NOW BEING USED TO LOWER BLOOD PRESSURE IN CERTAIN PATIENTS. A NONCULTIC TECHNIQUE, FOUND IN THE MYRIAD OF HISTORICAL METHODS. WE CLAIM NO INNOVATION BUT SIMPLY A SCIENTIFIC VALIDATION OF AGE-OLD WISDOM. THE TECHNIQUE IS OUR CURRENT METHOD OF ELICITING THE RELAXATION RESPONSE IN OUR CONTINUING STUDIES AT THE BETH ISRAEL HOSPITAL OF BOSTON.

1. SIT QUIETLY IN A COMFORTABLE POSITION.
2. CLOSE YOUR EYES.
3. Deeply relax all your muscles, beginning at your feet and progressing up to your face. Keep them relaxed.

4. Breathe through your nose. Become aware of your breathing. As you breathe out, say the word, "one," silently to yourself. For example: breathe in...out, "one; in...out, "one"; etc. Breathe easily and naturally.

5. Continue for 10 to 20 minutes. You may open your eyes to check the time, but do not use an alarm. When you finish, sit quietly for several minutes at first with your eyes closed and later with your eyes opened. Do not stand up for a few minutes.

6. Do not worry about whether you are successful in achieving a deep level of relaxation. Maintain a passive attitude and permit relaxation to occur at its own pace. When distracting thoughts occur, try to ignore them by not dwelling upon them and return to repeating "one." With practice, the response should come with little effort. Practice the technique once or twice daily, but not within two hours after any eating, since the digestive processes seem to interfere with the elicitation of the relaxation response.

The subjective feelings that accompany the elicitation of the relaxation response vary among individuals. The majority of people feel a sense of calm and feel very relaxed. A small percentage of people immediately experience ecstatic feelings. Other descriptions that have been related to us involve feelings of pleasure; refreshment, and well-being. Still others have noted relatively
LITTLE CHANGE ON A SUBJECTIVE LEVEL. REGARDLESS OF THE SUBJECTIVE FEELINGS DESCRIBED BY OUR SUBJECTS, WE HAVE FOUND THAT THE PHYSIOLOGIC CHANGES SUCH AS DECREASED OXYGEN CONSUMPTION ARE TAKING PLACE.

THERE IS NO EDUCATIONAL REQUIREMENT OR APITUDE NECESSARY TO EXPERIENCE THE RELAXATION RESPONSE. JUST AS EACH OF US EXPERIENCES ANGER, CONTENTMENT, AND EXCITEMENT, EACH HAS THE CAPACITY TO EXPERIENCE THE RELAXATION RESPONSE. IT IS AN INNATE RESPONSE WITHIN US. AGAIN, THERE ARE MANY WAYS IN WHICH PEOPLE BRING FORTH THE RELAXATION RESPONSE, AND YOUR OWN INDIVIDUAL CONSIDERATIONS MAY BE APPLIED TO THE FOUR COMPONENTS INVOLVED. YOU MAY WISH TO USE THE TECHNIQUE WE HAVE PRESENTED BUT WITH A DIFFERENT MENTAL DEVICE. YOU MAY USE A SYLLABLE OR PHRASE THAT MAY BE EASILY REPEATED AND SOUNDS NATURAL TO YOU.

ANOTHER TECHNIQUE YOU MAY WISH TO USE IS A PRAYER FROM YOUR RELIGIOUS TRADITION. CHOOSE A PRAYER THAT INCORPORATES THE FOUR ELEMENTS NECESSARY TO BRING FORTH THE RELAXATION RESPONSE. WE BELIEVE EVERY RELIGION HAS SUCH PRAYERS. WE WOULD REEMPHASIZE THAT WE DO NOT VIEW RELIGION IN A MECHANISTIC FASHION SIMPLY BECAUSE A RELIGIOUS PRAYER BRINGS FORTH THIS DESIRED PHYSIOLOGIC RESPONSE. RATHER, WE BELIEVE, AS DID WILLIAM JAMES, THAT THESE AGE-OLD PRAYERS ARE ONE WAY TO REMEDY AN INNER INCOMPLETENESS AND TO REDUCE INNER DISCORD. OBVIOUSLY, THERE ARE MANY OTHER ASPECTS TO RELIGIOUS BELIEFS AND PRACTICES WHICH HAVE LITTLE TO DO WITH THE RELAXATION RESPONSE. HOWEVER, THERE IS LITTLE REASON NOT TO MAKE USE OF AN APPROPRIATE PRAYER WITHIN THE FRAMEWORK OF YOUR OWN BELIEFS IF YOU ARE MOST COMFORTABLE WITH IT.
YOUR INDIVIDUAL CONSIDERATIONS OF A PARTICULAR TECHNIQUE MAY PLACE DIFFERENT EMPHASIS UPON THE COMPONENTS NECESSARY TO ELICIT THE RELAXATION RESPONSE AND ALSO MAY INCORPORATE VARIOUS PRACTICES INTO THE USE OF THE TECHNIQUE. FOR EXAMPLE, FOR SOME A QUIET ENVIRONMENT WITH LITTLE DISTRACTION IS CRUCIAL. HOWEVER, OTHERS PREFER TO PRACTICE THE RELAXATION RESPONSE IN SUBWAYS OR TRAINS. SOME PEOPLE CHOOSE ALWAYS TO PRACTICE THE RELAXATION RESPONSE IN THE SAME PLACE AND AT A REGULAR TIME.

SINCE THE DAILY USE OF THE RELAXATION RESPONSE NECESSITATES A SLIGHT CHANGE IN LIFE-STYLE, SOME FIND IT DIFFICULT AT FIRST TO KEEP TRACK OF THE REGULARITY WITH WHICH THEY EVOKE THE RESPONSE.

IT MAY BE SAID, AS AN ASIDE, THAT MANY PEOPLE HAVE TOLD US THAT THEY USE OUR TECHNIQUE FOR EVOKING THE RELAXATION RESPONSE WHILE LYING IN BED TO HELP THEM FALL ASLEEP. SOME HAVE EVEN GIVEN UP SLEEPING PILLS AS A RESULT. IT SHOULD BE NOTED, HOWEVER, THAT WHEN YOU FALL ASLEEP USING THE TECHNIQUE, YOU ARE NOT EXPERIENCING THE RELAXATION RESPONSE. YOU ARE ASLEEP. AS WE HAVE SHOWN, THE RELAXATION RESPONSE IS DIFFERENT FROM SLEEP.
AUTGENIC PHRASES

1) I FEEL QUITE QUIET.
2) I AM BEGINNING TO FEEL QUITE RELAXED.
3) MY FEET FEEL HEAVY AND RELAXED.
4) MY ANKLES, MY KNEES AND MY HIPS FEEL HEAVY, RELAXED AND COMFORTABLE.
5) MY SOLAR PLEXUS, AND THE WHOLE CENTRAL PORTION OF MY BODY, FEEL RELAXED AND QUIET.
6) MY HANDS, MY ARMS AND MY SHOULDERS FEEL HEAVY, RELAXED AND COMFORTABLE.
7) MY NECK, MY JAWS AND MY FOREHEAD FEEL RELAXED. THEY FEEL COMFORTABLE AND SMOOTH.
8) MY WHOLE BODY FEELS QUIET, HEAVY, COMFORTABLE AND RELAXED.
9) CONTINUE ALONE FOR A MINUTE.
10) I AM QUITE RELAXED.
11) MY ARMS AND HANDS ARE HEAVY AND WARM.
12) I FEEL QUITE QUIET.
13) MY WHOLE BODY IS RELAXED AND MY HANDS ARE WARM, RELAXED AND WARM.
14) MY HANDS ARE WARM.
15) WARMTH IS FLOWING INTO MY HANDS, THEY ARE WARM, WARM.
16) I CAN FEEL THE WARMTH FLOWING DOWN MY ARMS INTO MY HANDS.
17) MY HANDS ARE WARM, RELAXED AND WARM.
18) CONTINUE ALONE FOR A MINUTE.
19) MY WHOLE BODY FEELS QUIET, COMFORTABLE AND RELAXED.
20) MY MIND IS QUIET.
21) I WITHDRAW MY THOUGHTS FROM THE SURROUNDINGS AND I FEEL SERENE AND STILL.
22) MY THOUGHTS ARE TURNED INWARD AND I AM AT EASE.
23) DEEP WITHIN MY MIND I CAN VISUALIZE AND EXPERIENCE MYSELF AS RELAXED, COMFORTABLE AND STILL.
24) I AM ALERT, BUT IN AN EASY, QUIET, INWARD-TURNED WAY.
25) MY MIND IS CALM AND QUIET.
26) I FEEL AN INWARD QUIETNESS.
27) CONTINUE ALONE FOR A MINUTE.
SIGNS OF RELAXATION

1. RELAXED PEOPLE HAVE REGULAR BREATHING.

2. JAW IS LOOSE, CHIN DROPPED, HEAD DOWN.

3. FOREHEAD WILL RELEASE AND BE SMOOTH.

4. REM INCREASES OR STOP
   A. YOU GET REM IN ALPHA AND THETA BRAIN WAVES.

5. LEGS AND HIPS ROTATE OUTWARD.

6. INCREASE BLOOD FLOW—HEAVY OR A TINGLING FEELING.

7. WILL EXPERIENCE A DROPPING OR SINKING FEELING.

8. MAY GET LEG OR MUSCLE JERK BUT ALSO MAY BE SLEEP.

ALSO

PLEASE REFER TO YOUR COPIES OF: HOW TO RELAX THROUGH MEDITATION AND YOUR COPIES OF SUGGESTIONS ON COPING WITH STRESS.
SECTION 5

Potential Problems

Suggestions on Coping with Stress

Personal Planning

Stress Log 1

Stress Log 2

Stress Log 3

Behavior Modification Form
SECTION 5

POTENTIAL PROBLEMS

SUGGESTIONS ON COPING WITH STRESS

PERSONAL PLANNING

"GO THROUGH THE WHOLE ISSUE OF HOW BEHAVIOR WILL GENERALIZE TO OTHER BEHAVIOR"
POTENTIAL PROBLEMS

1. RESISTENT CLIENT - FEAR OF LETTING GO
   A. USUALLY SO IN REST OF THEIR LIVES.

2. NEGATIVE IMAGES
   A. CORRECT THE IMAGE
   B. CHANGE IT TO BE POSITIVE
   C. HAVE THE DREAM. BE IT, CREATE IT, ACT IT.

3. CLIENT WON'T PRACTICE TECHNIQUES AT HOME
   A. SUGGESTION
      (1) SMILE TO SELF
      (2) TWO DEEP BREATHS
      (3) LET MY BODY OUT

4. PERSON WITH PAIN
   A. FOCUS ON OPEN AREA
   B. SPACE BEYOND THE PAIN

5. DEEP DEPRESSION
   A. USE ONLY POSITIVE IMAGES
   B. USE JACOBSEN'S YOGA, QUIETING RESPONSE
POTENTIAL PROBLEMS (CONT.)

6. PERSON ON MEDICATION
   A. BE AWARE - DEEP RELAXATION CAN MOVE A TRANQUILIZED PERSON DEEPER.
   B. FIND OUT FROM DOCTOR ABOUT MEDICATION
   C. COVER YOURSELF

7. PSYCHOTICS
   A. DO NOT DO RELAXATION
   B. MANY PROBLEMS
   C. GET INTO NEGATIVE IMAGES

8. ARTERIOSCLEROSIS
   A. HARD TO WORK WITH

9. STROKE PATIENTS
   A. CONFUSED

10. PEOPLE WITH CONSTANT HEADACHES
    A. GET TO DOCTOR
    B. CAT SCAN BEFORE PROCESS
    C. LOOK FOR BRAIN TUMOR
POTENTIAL PROBLEMS (CONT.)

11. RETARDED - UNABLE TO FOLLOW DIRECTION

12. THOSE SEEKING SOMETHING ELSE - SECONDARY GAIN
   A. LAW SUIT CLIENT
   B. GAME PLAYER

13. DIABETICS/LOW BLOOD SUGAR
   A. INSULIN PATIENTS GO INTO OVERDOSE ON DEEP RELAXATION

14. LOW THYROID
   A. PROBLEM WITH DEEP RELAXATION

15. HIGH BLOOD PRESSURE
   A. PUT ONE INTO POSSIBLE DEEP STATE
   B. CHECK WITH DOCTOR

16. EPILEPSY
   A. PUT INTO POSSIBLE REACTION

17. CONTROL
   A. UNWILLINGNESS TO LET GO
   B. RESIST THE PROCESS
SUGGESTIONS ON COPING WITH STRESS

1. TALK IT OVER - WHEN TENSION BUILDS UP, DISCUSS THE PROBLEM WITH A CLOSE FRIEND OR WITH PEOPLE INVOLVED.

2. EXERCISE REGULARLY - THIS WILL HELP YOU WORK OFF STEAM AND WORK OUT STRESS.

3. PLAN YOUR WORK - TENSION AND WORK REALLY BUILD UP WHEN YOUR WORK IS ENDLESS. PLAN YOUR WORK TO USE TIME AND ENERGY EFFICIENTLY.

4. TAKE A BREAK - A CHANGE OF PACE, NO MATTER HOW SHORT, GIVES YOU A NEW OUTLOOK ON OLD PROBLEMS.

5. LEARN TO RELAX - A FEW MINUTES OF PEACE AND QUIET EVERY DAY MAKES A BIG DIFFERENCE.

6. BE REALISTIC - PEOPLE WHO EXPECT TOO MUCH OF THEMSELVES CAN GET TENSE IF THINGS DON'T WORK OUT. SET PRACTICAL GOALS.

7. AVOID STRESS - WHENEVER POSSIBLE, PLAN TO AVOID TOO MANY BIG CHANGES COMING AT THE SAME TIME.

8. BE IN CONTROL, NOT CONTROLLED BY OTHERS.

9. DEVELOP THE ABILITY TO INTERPRET EVENTS REALISTICALLY.

10. ESTABLISH SHORT RANGE AND LONG RANGE GOALS.
SUGGESTIONS ON COPING WITH STRESS (CONT.)

11. FORGIVE OTHERS - ACCEPT FORGIVENESS.

12. DEVELOP A PHILOSOPHY OF LIFE (BELIEFS, VALUES).

13. SHARE YOUR CONCERNS WITH A GREATER POWER.

14. DO SOMETHING SIMPLE - SOMETHING THAT IS EASY AND THAT YOU CAN CONTROL, SUCH AS WEEDING A GARDEN, SWEEPING THE WALK, OR THE LITTLE MECHANICAL CHORES THAT ARE ALWAYS AROUND.

15. IN COMPETITION WITH OTHERS, LEARN TO ACCEPT A LOSS AS OK.

16. REDUCE EXCESSIVE STIMULATION FROM SUCH SOURCES AS NEWS REPORTS, VIOLENT TELEVISION PROGRAMS, OR MOVIES.

17. MAKE FRIENDS, KEEP FRIENDS, HELP OTHERS.

18. IF POSSIBLE, SOLVE PROBLEMS AS THEY OCCUR. DON'T LET UNSOLVED PROBLEMS LINGER OR ACCUMULATE.

19. BREAK THE USUAL ROUTINE OF ACTIVITIES; SEEK NEW EXPERIENCES. BECOME ACTIVE IN GROUPS, ORGANIZATIONS, POLITICAL PARTIES, OR CHARITABLE CAUSES.
PERSONAL PLANNING

HOW DO YOU ACTUALLY SPEND YOUR TIME? HOW WOULD YOU LIKE TO SPEND YOUR TIME, TAKING INTO ACCOUNT THE IMPORTANCE OF THE ACTIVITIES IN YOUR LIFE?

MAKE A LIST OF FIFTEEN SPECIFIC ACTIVITIES RELATED TO WORK, FAMILY LIFE, SOCIAL AND COMMUNITY LIFE, AND RECREATIONAL, EDUCATIONAL, OR RELIGIOUS PURSUITS ON WHICH YOU TYPICALLY SPEND SIGNIFICANT TIME EACH WEEK.

UNDERLINE THOSE ACTIVITIES THAT YOU CONSIDER TO BE VERY IMPORTANT (HIGH VALUE) IN YOUR LIFE. NOW ADD ANY OTHER ACTIVITIES THAT YOU DO NOT NOW DO, OR THAT YOU SELDOM DO, THAT YOU WOULD LIKE TO DO IF YOU HAD TIME.

WHEN YOU HAVE COMPLETED YOUR LIST, LOOK BACK OVER ALL THE ACTIVITIES THAT YOU HAVE LABELED AS IMPORTANT IN YOUR LIFE. CIRCLE THOSE THAT ALSO GIVE ENJOYMENT AND SATISFACTION TO YOU. DO THE CIRCLED ITEMS REPRESENT THE KIND OF RANGE AND BALANCES OF VALUES AND JOY THAT YOU WOULD REALLY LIKE TO SEE IN YOUR LIFE? ADD ONE OR "TWO OTHERS IF YOU WISH.

NOW PUT A "*" IN FRONT OF THOSE ACTIVITIES ON WHICH YOU BELIEVE YOU SPEND ABOUT THE RIGHT AMOUNT OF TIME; PUT A "-" IN FRONT OF THOSE ON WHICH YOU SHOULD (AND CONCEIVABLY COULD) SPEND LESS TIME. PUT A "+" IN FRONT OF THOSE ON WHICH YOU WOULD LIKE TO (AND CONCEIVABLY COULD) SPEND MORE TIME.
PERSONAL PLANNING (cont.)

YOU NOW HAVE SOME IDEAS AS TO HOW YOU MIGHT BETTER ALLOCATE YOUR TIME TO THE ACTIVITIES THAT YOU CONSIDER MOST IMPORTANT AND OR ENJOYABLE. WHAT KIND OF PLANNING WOULD IMPROVE YOUR SITUATION? (REMEMBER, IF YOUR TIME IS FILLED NOW, YOU MUST ELIMINATE TIME WASTERS OR DECREASE THE TIME SPENT ON LESS IMPORTANT OR LESS ENJOYABLE ACTIVITIES BEFORE YOU CAN INCREASE TIME SPENT ON OTHER ACTIVITIES OR ADD NEW ONES.)

ACTIVITIES ON WHICH I SPEND TIME

1. ____________________________________
2. ____________________________________
3. ____________________________________
4. ____________________________________
5. ____________________________________
6. ____________________________________
7. ____________________________________
8. ____________________________________
9. ____________________________________
10. ____________________________________
11. ____________________________________
12. ____________________________________
13. ____________________________________
14. ____________________________________
15. ____________________________________

ADDITIONAL IMPORTANT ACTIVITIES
18 WAYS TO A STRESS-FREE LIFE

TO GET STROKES, GIVE STROKES. If we lived in isolation, without contact with others, we would soon wither and die. We all need to get stroked--either positive or negative. People tend to stroke those people who give them strokes. So if you want to be psychologically healthier, give strokes.

AVOID COMPETITION. In competition, there is a winner and a loser. The winner may feel great, but the loser does not. We can all be winners if we stop trying to beat the other person.

BE OUT OF CONTROL. At least when it comes to dealing with others; the more we try to control others, the more stress we have in our lives. If you stop trying to manipulate and change people to your way of thinking, then you have taken a giant stride toward a stress-free life.

GET RID OF THE WORDS "MUST," "HAVE TO," "SHOULD," ETC. There are only a handful of things you have to do in life (i.e., eat, breath, maintain your body temperature, etc.). The rest of the "have to's" are manufactured by you. When you say you "have to," "must," or "should do," something, think again and be sure you really "have to".

RULES CAN CHANGE. We all believe things to be true. But just like you found out that Santa didn't exist, you will find, on analysis, that many of the things you "believe" to be true are relative. You will be under less stress if you can remember that your rules are relative and can change to meet changes in your world.

GET OFF YOUR POSITION. This relates to the rule above. Many people say what they believe to be true, and then proceed to defend that position at all costs. Most arguments begin with people taking positions and fighting to maintain them--to prove it to the other person. This creates stress. And in the end, that which you believe to be true now can change. So fighting to "prove" your point is useless.
DO WHAT'S BEST FOR YOU, NOT FOR ME. This one is easier to say and somewhat harder to do. If you are doing something to gain approval from others at the risk of not doing what you want to do yourself, you are creating stress for yourself. Trying to be something you are not is almost always stressful.

FIND LOVEABLENESS AND UNIQUENESS IN OTHERS. When you look for the positive aspects in people, you will surely find them. The same is true of the negative aspects. By looking for and talking about the positive part of the person, you are creating a positive atmosphere for you and for them. Gossiping, negativity, and backbiting puts us all in a negative spiral.

LEARN TO SPOT GAMES IN YOUR LIFE. Games are tactics used by people to avoid intimacy. They force the players to act—to be something they are not. This, of course, creates stress.

AVOID NEGATIVE PEOPLE. If you are positive about the person you are dealing with and that person continues to react negatively to you and to the world in general, avoid that person. Their negativity will make you negative.

BE OPEN, HONEST, AND GENUINE. Move away from facade and pretense. They only serve to make you manipulative and eventually make you negative. We often avoid "genuineness" because we want approval. We often "say what we think the other person wants to hear". To the extent we do this, we are not being true to our own feelings and, therefore, create stress.

TAKE RISKS. It is always easier to avoid risks. If you stay in the house all the time it is unlikely you will get run over by a train. But at the same time, that makes life dull, pointless, and lackluster. The reason one fails to take a risk is usually tied into "fear of failure". But taking the risk is necessary for growth and learning experiences. Failures are a part of life, and are just as meaningful and important as successes. And in the final analysis, if you don't take risks, you are doomed to fail as a person, because you will stagnate and die. If you take risks, you can only fail at a project.
LIFE IS AN ONGOING PROCESS. Life does not end when you reach a goal. It only ends when you die (and we are not sure of that). When you put "goal attainment" at the top of your must do list, you are creating stress for yourself. And when you finally attain that goal, you find it is only one in a series of mountains you will climb; it is not that important after all. If you look at life as an ongoing process, no success of failure seems that important.

THERE IS NO "FAIRNESS," "EQUITY," OR "LOGIC" IN LIFE. Many people walk around thinking that they will get what they want if they work hard and always obey the rules. It is almost as if they think the "good" will make more money or find more happiness because they think that is "fair". They also believe the world has some plan and that all they have to do is to figure out how the "damn" thing works and they will be just fine. In truth, there is no fairness in the world, there is no overriding logic to life, and in the real world, the "guy in the white hat" doesn't always get the pretty girl. The world is none of these things. The world just is.

STOP AND SMELL THE ROSES. The past is over and done with. Nothing you can do will change one single thing that happened. The future will come in its time and in the way it comes. You can try to modify and control that, but you will be under stress if you try to control too much of that future world. The only thing that is real is now. If you live in the past or future, you will miss the "real thing"...now.

BREAK BARRIERS. Any behavior you are not able to evidence can be seen as a barrier to growth. Try to overcome these barriers by doing things that you avoid or fear. By doing so, you can achieve positive feelings of accomplishment unlike the feelings surrounding accomplishing easier tasks. And ultimately, your self-image is based on your accomplishments.

BEHAVIOR IS LEARNED. If you can learn to do something, you can "unlearn" how to do it. Many of us force ourselves into molds by believing that we just are the way we are. Nothing is going
to change that. You are what you believe you are, and can do what you believe you can do. We often let our own labels and preconceived notions about ourselves get in the way of accomplishing or creating. We are all capable of learning new behavior.
Unhappiness
Depression

Low Self-Esteem

Lack of Energy

Feels Unsuccessful

Do Nothing
(Low Productivity)

Happy

Positive (High
Self-Esteem)

Feels Successful

High Energy

High Productivity
Appendix F

Post Measurement Research Questionnaire - 1988
March 23, 1988

TO: Graduate Students in HGT-632, Human Resources Management

Third communication mailing and post form completion request.

Please complete the enclosed forms one week after taking your final course examination. Include name and date on each form returned. All data collected will be completely confidential. As indicated in the first communication of February 12, 1988, information from this data will be used for educational purposes only. No name or other information will be shared with anyone, as stated by Dr. Carl Thornton, tape Session 9 after break and by me during Session 10.

Go to your Medical Department (First Aid) on the day you fill out the questionnaires and have your blood pressure, heart rate, and temperature taken and record this information on the bottom of the "Hudson," Generalized Contentment Scale (GCS).

This is the third of three packets mailed on different dates. Enclosed in each package to be completed and returned to me is:

1. Wright State Measure of Burnout Questionnaire
2. "Hudson," Generalized Contentment Scale (GCS)
3. "Hudson," Index of Peer Relations (IFR)
4. "Hudson," Index of Family Relations (IFR)

This mailing will complete the post-measurements, after viewing Session 10 tape. If you would like a general summary of the statistical analysis, standard deviation and/or a summary of your personal scores in relationship to the sample of the study, please so note this request on your return forms and I will comply. If you would like any additional information in relationship to your personal scores, please state this request in writing and include your telephone number (I will be getting with you on this matter).

I would like to thank you very much for taking part in this survey. If you would like any personal interaction on any material enclosed in Session 4 or 10, or the data requested, please feel free to contact me at 762-7964.

Thank you again.

Sincerely,

Howard A. White
Management Department

P.S. All data will be processed after your final grade is determined. As stated by me in Session 10, "If you wish not to participate, please let me know."
FIGURE 1

Wright State Measure of Burnout
Questionnaire

Number of years in your present job?
Number of years employed in this type work?
Hours per week that you work?
Jobs held in the last five years?
Your organization level?

Strength of feeling: 0 1 2 3 4 5 6 7
No Very mild Moderate Very strong

Please note the strength of feeling regarding each statement below:

AT WORK I FEEL THAT, I:
1. have clearly defined goals.
2. treat some coworkers like impersonal objects.
3. help other people.
4. don't know what's expected of me.
5. accomplish worthwhile things.
6. deal calmly with emotional situations.
7. have an "I don't care" attitude.
8. don't know what it takes to get ahead.
9. put in my time, but I'm not really contributing.
10. may become emotionally hardened by this job.

AT WORK I FEEL THAT I AM:
11. overworked.
12. emotionally drained.
13. burned out.
14. bored.
15. frustrated.
16. trapped.
17. competent at what I do.
18. somewhat callous toward people.
19. at the "end of my rope."

AT WORK I FEEL THAT:
20. working with people is really a strain.
21. coworkers blame me for some of their problems.
22. things I would like to change are beyond my control.
23. working with people is stressful.
24. people help me get through the day.

FREQUENCY: Never Once a few times a month once a week
Never Once a few times a month once a week every day

Using the scale above, please rate the frequency for each statement below:

AT WORK I FEEL THAT, I:
25. deal effectively with my coworker's problems.
26. need a long vacation.
27. am energetic.
28. don't care what happens to my coworkers.
29. "used up" at the end of the day.
30. fatigued when I start a new day.
(Please complete in a safe and relaxed environment.)

GENERALIZED CONTENTMENT SCALE (GCS)

Name ___________________________;__________________ Date ______________

This questionnaire is designed to measure the degree of contentment that you feel about your life and surroundings. It is not a test, so there are no right or wrong answers. Answer each item as carefully and accurately as you can by placing a number beside each one as follows:

1 Rarely or none of the time   4 Good part of the time
2 A little of the time   5 Most or all of the time
3 Sometime

Please begin.

1. I feel powerless to do anything about my life.
2. I feel blue.
3. I am restless and can't keep still.
4. I have crying spells.
5. It is easy for me to relax.
6. I have a hard time getting started on things that I need to do.
7. I do not sleep well at night.
8. When things get tough, I feel there is always someone I can turn to.
9. I feel that the future looks bright to me.
10. I feel downhearted.
11. I feel that I am needed.
12. I feel that I am appreciated by others.
13. I enjoy being active and busy.
14. I feel that others would be better off without me.
15. I enjoy being with other people.
16. I feel it is easy for me to make decisions.
17. I feel downtrodden.
18. I am irritable.
19. I get upset easily.
20. I feel that I don't deserve to have a good time.
21. I have a full life.
22. I feel that people really care about me.
23. I have a great deal of fun.
24. I feel great in the morning.
25. I feel that my situation is hopeless.

Blood Pressure   Heart Rate   Temperature

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(Please complete in a safe and relaxed environment.)

INDEX OF PEER RELATIONS (IPR)

Name ___________________________ Date _________________________

This questionnaire is designed to measure the way you feel about the people you work, play, or associate with most of the time; your peer group. It is not a test so there are no right or wrong answers. Answer each item as carefully and as accurately as you can by placing a number beside each one as follows:

1 Rarely or none of the time  4 A good part of the time
2 A little of the time  5 Most or all of the time
3 Some of the time

Please begin.

1. I get along very well with my peers.
2. My peers act like they don’t care about me.
3. My peers treat me badly.
4. My peers really seem to respect me.
5. I don’t feel like I am “part of the group”.
6. My peers are a bunch of snobs.
7. My peers really understand me.
8. My peers seem to like me very much.
9. I really feel “left out” of my peer group.
10. I hate my present peer group.
11. My peers seem to like having me around.
12. I really like my present peer group.
13. I really feel like I am disliked by my peers.
14. I wish I had a different peer group.
15. My peers are very nice to me.
16. My peers seem to look up to me.
17. My peers think I am important to them.
18. My peers are a real source of pleasure to me.
19. My peers don’t seem to even notice me.
20. I wish I were not part of this peer group.
21. My peers regard my ideas and opinions very highly.
22. I feel like I am an important member of my peer group.
23. I can’t stand to be around my peer group.
24. My peers seem to look down on me.
25. My peers really do not interest me.
(Please complete in a safe, relaxed environment.)

INDEX OF FAMILY RELATIONS (IFR)

Name _________________________________________ Date _________________________

This questionnaire is designed to measure the way you feel about your family as a whole. It is not a test, so there are no right or wrong answers. Answer each item as carefully and accurately as you can by placing a number beside each one as follows:

1. Rarely or none of the time
2. A little of the time
3. Some of the time
4. A good part of the time
5. Most or all of the time

Please begin.

1. The members of my family really care about each other.
2. I think my family is terrific.
3. My family gets on my nerves.
4. I really enjoy my family.
5. I can really depend on my family.
6. I really do not care to be around my family.
7. I wish I was not part of this family.
8. I get along well with my family.
9. Members of my family argue too much.
10. There is no sense of closeness in my family.
11. I feel like a stranger in my family.
12. My family does not understand me.
13. There is too much hatred in my family.
14. Members of my family are really good to one another.
15. My family is well respected by those who know us.
16. There seems to be a lot of friction in my family.
17. There is a lot of live in my family.
18. Members of my family get along well together.
19. Life in my family is generally unpleasant.
20. My family is a great joy to me.
21. I feel proud of my family.
22. Other families seem to get along better than ours.
23. My family is a real source of comfort to me.
24. I feel left out of my family.
25. My family is an unhappy one.
Appendix G

Cover Letter - 1993 Research
March 23, 1993

(Individual's name)
(Individual's address)

Dear (Individual's name):

During the winter term of 1988 while you were taking the Human Resources Management course at G.M.I., you provided information on several health related surveys. (Individual's name), if you would like a general summary of your scores on these surveys, please so note on the enclosed release of information form. A stamped return envelope is enclosed.

I am asking your permission to review your data, and asking that you complete one other questionnaire, "The Duke Health Profile." The 1988 data will used as baseline information. I will use only the test scores for the research. A code will be developed to assure complete confidentiality.

The research data will be used for my Doctoral Dissertation from Western Michigan University. I have been working on my doctoral studies since 1986, and I need your help in this the final stages. Please feel free to call me anytime if you have any questions or concerns. Thank you very much for the time it takes to complete, and return your release of information and the "Duke Health Profile" questionnaire.

After the research is complete, I will be happy to send you a copy of your scores compared to others in the HRM class you attended. Again, thank you in advance for your assistance.

Thank you,

Howard A. White, M.S.W., C.S.W., A.C.S.W.

cc: Dr. Charles Warfield, W.M.U.
    Dr. Carl thornton, G.M.I.

Enclosures: Duke Health Profile
            Release of Information form

HAW/pg

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Appendix H

Duke Questionnaire - 1993

391
# Duke Health Profile

**Instructions:**
Here are a number of questions about your health and feelings. Please read each question carefully and check (X) your best answer. You should answer the questions in your own way, there are no right or wrong answers. (Please ignore the small scoring numbers next to each blank.)

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes, describes me exactly</th>
<th>Somewhat describes me</th>
<th>No, doesn't describe me at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I like who I am</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I am not an easy person to get along with</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I am basically a healthy person</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I give up too easily</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I have difficulty concentrating</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I am happy with my family relationships</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. I am comfortable being around people</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Today’s physical trouble or difficulty:**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Some</th>
<th>None</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Walking up a flight of stairs</td>
<td>none</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Running the length of a football field</td>
<td>none</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**During the past week:**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Some</th>
<th>None</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. Sleeping</td>
<td>none</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Hurting or aching in any part of your body</td>
<td>none</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Getting tired easily</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Feeling depressed or sad</td>
<td>none</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Nervousness</td>
<td>none</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**During the past week:**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Some</th>
<th>None</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>15. Socialize with other people (talk or visit with friends or relatives)</td>
<td>none</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. Take part in social, religious, or recreation activities (meetings, church, movies, sports, parties)</td>
<td>none</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**During the past week:**

<table>
<thead>
<tr>
<th>Activity</th>
<th>1-4 days</th>
<th>5-7 days</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. Stay in your home, a nursing home, or hospital because of sickness, injury, or other health problems</td>
<td>none</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix I

Release of Information -
1993
Release of Information

I have read and understand the foregoing letter. Questions concerning the procedures have been answered to my satisfaction. I also understand no privacy rights will be violated. I am free to discontinue participation at any time. I have been informed that the information derived in this research is confidential, and will not be used for any other purpose other than the doctoral dissertation. All data will be under the supervision of Carl Thornton, Ph.D, and will be destroyed upon completion of the study. Other safeguards will be an individual identifiers will be used which cannot be linked to an individual participant outside the research database.

Signature: ____________________________ Date: ___________

Request General Summary: Yes ______ No ________
Appendix J

Duke Questionnaire: Cover Letter for Second Mailing - 1993
March 23, 1993

This is a copy of my previous correspondence requesting your assistance with this project. Your immediate response will be appreciated. Thank you. Howard A. White (April 16, 1993)

(Individual's name)
(Individual's address)

Dear (Individual's name):

During the winter term of 1988 while you were taking the Human Resources Management course at G.M.I., you provided information on several health related surveys. (Individual's name), if you would like a general summary of your scores on these surveys, please so note on the enclosed release of information form. A stamped return envelope is enclosed.

I am asking your permission to review your data, and asking that you complete one other questionnaire, "The Duke Health Profile." The 1988 data will used as baseline information. I will use only the test scores for the research. A code will be developed to assure complete confidentiality.

The research data will be used for my Doctoral Dissertation from Western Michigan University. I have been working on my doctoral studies since 1986, and I need your help in this the final stages. Please feel free to call me anytime if you have any questions or concerns. Thank you very much for the time it takes to complete, and return your release of information and the "Duke Health Profile" questionnaire.

After the research is complete, I will be happy to send you a copy of your scores compared to others in the HRM class you attended. Again, thank you in advance for your assistance.

Thank you,

Howard A. White, M.S.W., C.S.W., A.C.S.W.

cc: Dr. Charles Warfield, W.M.U.
Dr. Carl thornton, G.M.I.

Enclosures: Duke Health Profile
Release of Information form

HAW/pg
Appendix K

Duke Questionnaire: Method of Scoring - 1993
MANUAL METHOD OF SCORING THE DUKE

Physical Health Score
Item Raw Score
1-  
2-  
3-  
4-  
5-  
6-  
7-  
8-  
9-  
10- 
11- 
12- 
Sum = / 10 = X 100 = 

Mental Health Score
Item Raw Score
1-  
2-  
3-  
4-  
5-  
6-  
7-  
8-  
9-  
10- 
11- 
12- 
13- 
14- 
Sum = / 10 = X 100 = 

Social Health Score
Item Raw Score
1-  
2-  
3-  
4-  
5-  
6-  
7-  
8-  
9-  
10- 
11- 
12- 
13- 
14- 
15- 
16- 
Sum = / 10 = X 100 = 

General Health Score
Physical Health Score
Mental Health Score
Social Health Score
Sum = / 3 = 

Perceived Health Score
Item Raw Score
1- 
2- 
3- 
4- 
5- 
6- 
7- 
8- 
9- 
10- 
11- 
12- 
13- 
14- 
15- 
16- 
Sum = / 10 = X 100 = 

Anxiety Score
(Change these 6 item raw scores as follows: if 0, change to 2; if 2, change to 0; if 1, no change)
Item Raw Score Revised
1- 
2- 
3- 
4- 
5- 
6- 
7- 
8- 
9- 
10- 
11- 
12- 
13- 
14- 
Sum = / 12 = X 100 = 

Depression Score
(Change these 5 item raw scores as follows: if 0 change to 2; if 2 change to 0, if 1, no change)
Item Raw Score Revised
1- 
2- 
3- 
4- 
5- 
6- 
7- 
8- 
9- 
10- 
11- 
12- 
13- 
14- 
Sum = / 10 = X 100 = 

Pain Score
(Change this raw item score as follows: if 0, change to 3; if 2, change to 0; if 1, no change)
Item Raw Score Revised
1- 
2- 
3- 
4- 
5- 
6- 
7- 
8- 
9- 
10- 
11- 
12- 
13- 
14- 
Sum = / 10 = X 100 = 

Disability Score
(Change this raw item score as follows: if 0, change to 2; if 2 change to 0; if 1, no change)
Item Raw Score Revised
1- 
2- 
3- 
4- 
5- 
6- 
7- 
8- 
9- 
10- 
11- 
12- 
13- 
14- 
15- 
16- 
17- 
18- 
19- 
20- 
Sum = / 2 = X 100 = 

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Appendix L

Western Michigan University - Human Subjects Institutional Review Board Protocol Clearance Form
Date: January 13, 1993
To: Howard White
From: M. Michele Burnette, Chair
Re: HSIRB Project Number 92-10-25

This letter will serve as confirmation that your research protocol, "Stress and health wellness, a longitudinal study" has been approved under the exempt category of review by the HSIRB. The conditions and duration of this approval are specified in the Policies of Western Michigan University. You may now begin to implement the research as described in the approval application.

You must seek reapproval for any changes in this design. You must also seek reapproval if the project extends beyond the termination date.

The Board wishes you success in the pursuit of your research goals.

Approval Termination: January 13, 1994

xc: Warfield, EL
Appendix M

Dr. Walter Hudson’s Permission Letter to Utilize and Include Copyright Material in Dissertation
Dear Mr. White:

Thank you for your interest in the Hudson Scales used in your dissertation, the Generalized Contentment Scale, the Index of Peer Relations and the Index of Family Relations. You have my permission to use the Hudson Scales in your dissertation research study. I would appreciate reviewing the results of your study.

I understand that University Microfilms, Inc., sell single copies on demand of dissertation. Therefore you have my permission to utilize and include in your dissertation and for microfilming the Hudson Scales as described above. You may also use information and the table, IFR Factorial Validity Data as presented in "The Clinical Measurement Package, A Field Manual".

Sincerely,

[Signature]

Wallie Hudson, PhD.
School of Social Work
Arizona State University
Box 871802
Tempe, Arizona 85287-1802
1-602-639-1040

April 27, 1994

Howard A. White
8305 Groveland Road
Holly, Michigan 48442-9469
1-810-634-7478
Appendix N

Dr. Carl Thornton's Permission Letter to Utilize and Include Copyright Material in Dissertation
Lear Mr. White:

You have my permission to use the Wright State Measure of Burnout Questionnaire in your dissertation research study. I understand that University Microfilms, Inc, sell single copies on demand of dissertations. You have my permission to utilize and include in your dissertation and for microfilming the Wright State Measure of Burnout Questionnaire and information included in the "Assessing Burnout: An Instrument For Evaluation".

Sincerely,

Carl Thornton, PhD.
GMI Engineering and Management Institute
Management Department
1700 west Third Avenue
Flint, Michigan 48502-2276
1-810-762-9500
Appendix O

Dr. George Parkerson Permission Letter to Utilize and Include Copyright Material in Dissertation
Howard White
8305 Groveland Road
Holly, Michigan 48442-9469

Dear Mr. White:

Thank you for your interest in the Duke Health Profile (DUKE). You have our permission to use the DUKE in your dissertation research study. We would appreciate your sharing the data with us at some point in time.

Also I am sending some more recent reprints on the DUKE and also on the Duke Social Support and Stress Scale (DUSOCS).

Best of luck with your dissertation.

Sincerely,

George R. Parkerson, Jr, MD, MPH
Professor and Chairman

GRP:kbg

Enclosures
BIBLIOGRAPHY


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April 26, 1994

Howard White
8305 Groveland Road
Holly, Michigan 48442-9469

Dear Mr. White:

Thank you for your interest in the Duke Health Profile (DUKE). You have our permission to use the DUKE in your dissertation research study. We would appreciate your sharing the data with us at some point in time.

Also I am sending some more recent reprints on the DUKE and also on the Duke Social Support and Stress Scale (DUSOCS).

Best of luck with your dissertation.

Sincerely,

George R. Parkerson, Jr, MD, MPH
Professor and Chairman

GRP:kbg

Enclosures
Howard A. While  
8305 Groveland Road  
Holly, Michigan 48442-9469  
1-810-634-7478  

Dear Mr. White:

Thank you for your interest in the Hudson Scales used in your dissertation, the Generalized Contentment Scale, the Index of Peer Relations and the Index of Family Relations. You have my permission to use the Hudson Scales in your dissertation research study. I would appreciate reviewing the results of your study.

I understand that University Microfilms, Inc., sell single copies on demand of dissertation. Therefore you have my permission to utilize and include in your dissertation and for Microfilming the Hudson Scales as described above. You may also use information and the table, IFR Factorial Validity Data as presented in "The Clinical Measurement Package, A Field Manual".

Sincerely,

Walter Hudson, PhD.  
School of Social Work  
Arizona State University  
Box 871802  
Tempe, Arizona 85287-1802  
1-602-897-1040
Howard A. White
8305 Groveland Rd.
Holly, Michigan 48442-9469

April 18, 1994

Dear Mr. White:

You have my permission to use the Wright State Measure of Burnout Questionnaire in your dissertation research study. I understand that University Microfilms, Inc, sell single copies on demand of dissertations. You have my permission to utilize and include in your dissertation and for microfilming the Wright State Measure of Burnout Questionnaire and information included in the "Assessing Burnout: An Instrument For Evaluation".

Sincerely,

Carl Thornton, PhD.
GMI Engineering and Management Institute
Management Department
1700 west Third Avenue
Flint, Michigan 48502-2276
1-810-762-9500