ASSERTIVENESS: ITS RELATIONSHIP TO SYMPTOMS OF PHYSICAL ILLNESS

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We hereby recommend that the thesis prepared under our supervision by Joan Corley entitled "Assertiveness: Its Relationship to Symptoms of Physical Illness"

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JOAN CORLEY

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CHAPTER I

INTRODUCTION

For years scientific research has concentrated on the disease, its causal organism, and methods to abate it. Since the discovery of the microscope, scientists have been able to isolate the invading organism and develop vaccines and antibiotics to prevent and control the infectious diseases and their spread. Because of this exploration of the germ theory, such diseases as small pox, typhus, diphtheria, and polio have virtually disappeared from the list of twentieth century killers.

Despite these advances in medical science, there continues to be increased incidences of illness and disease as evidenced by our overcrowded hospitals. Why does this situation persist?

Today many researchers are looking at the individual to examine what part he or she might play in the development of illness. This concept is not new. Sir William Osler, a famous Canadian clinician, once said, "It is more important to know what sort of person has a disease than to know what sort of disease a

person has." What role might personality factors have in the development of illness?

This study examined the above question by looking at the personality variable of assertiveness and exploring its relationship to the development of symptoms of physical illness. Female graduate nursing students, who had been exposed to a common stressor, were investigated as to their levels of assertiveness and range of symptoms of physical illness experienced since the announcement of the common stressor.

Statement of Problem

What relationship existed between assertive and unassertive female graduate nursing students, experiencing a common stressor, and the range of their reported symptoms of physical illness?

Statement of Purposes

The purposes of this descriptive study were:

1. To determine the students' levels of assertiveness
2. To determine the range of symptoms of physical illnesses experienced after the announcement of the common stressor

3. To examine any significant relationship between number one and number two

Background and Significance

Hans Selye's studies concerning the body's response to a perceived stressor has shown that the stress reaction depresses the immune response leading to increased susceptibility to disease (Selye 1956; Selye 1974).

Holmes and Rahe's research into stressful life change events have produced an overall significant positive relationship between the amount of life change experienced and the seriousness of physical illnesses reported (Holmes and Masuda 1974). However, not all individuals experiencing the equivalent amounts of stress become ill.

> A major question, and for some investigators the central problem concerning the effects of stressful life events, grow out of the observation that one individual may become ill and another remain healthy after both experience the same life event. The most general formulation of the research question generated by these individuals is: What are the factors that mediate the impact of stressful life events on the individual? (Dohrenwend and Dohrenwend 1974, p. 316).

Kenneth Pelletier (1977, p. 117) states:

> Personality clearly affects the way a person handles stress. Stress experienced early in life may lead to the adoption of certain methods of

> coping with problems. Certain psychological and behavioral defenses are then integrated into the adult personality, and determine the way the individual attempts to manage stress throughout his life.

There is increasing evidence that implicates the overly aggressive personality and the person who internalizes emotions with the development of physical illness (Pelletier 1977; Freidman and Rosenmann 1974). Gildea's study (1949) relates the personality variable of subnormal assertiveness with the diseases of hypertension, hyperthyroidism, rheumatoid arthritis, and peptic ulcer.

Assertive behavior is defined by Alberti and Emmons (1974, p. 10) as,

> . . . behavior which enables a person to act in his own best interest, to stand up for himself without undue anxiety, to express his honest feelings comfortably, or to exercise his own rights without denying the rights of others.

Unassertive behavior is defined as behavior which the person is:

> . . . typically denying himself, and is inhibited from expressing his or her actual feelings. He often feels hurt and anxious as a result of his inadequate behavior. Allowing others to choose for him, he seldom achieves his own desired goals (Alberti and Emmons 1974, p. 10).

The literature alludes to a relationship between assertiveness and a decreased incidence of the development of illness (Alberti and Emmons (1974, p. 3):

> Even such bodily complaints as headache, general fatigue, stomach disturbances, rashes, and asthma are often the result of failure to develop assertive behavior. The assertive individual is fully in charge of himself in interpersonal relationships, feels confident and capable without cockiness or hostility, is basically spontaneous in the expression of feeling and emotions, and is generally looked up to and admired by others.

In this study the personality variable of assertiveness was investigated in order to explore its relationship to the development of symptoms of physical illness. This was an exciting area of research, since the opportunity for preventive intervention through assertiveness training is available.

Questions

The following questions were explored:

1. Can the level of assertiveness in female graduate nursing students be assessed?
2. Can the number of types of symptoms of physical illness be determined following a common stressor?

3. Is there any relationship between the levels of assertiveness and the development of symptoms of physical illness?

One hypothesis which was dependent on the outcomes of the above questions was examined:

H_o - There is no significant difference between assertive and unassertive female graduate nursing students experiencing a common stressor and the range of their reported symptoms of physical illness.

Definition of Terms

1. Common stressor refers to the announcement on February 2, 1978, of the closing of a small extension center of a major university in the central Texas area.
2. Female graduate nursing student refers to all females currently enrolled in the Spring 1978 semester of the extension center.
3. Assertiveness for the purposes of this study is a score of 135 or above as measured by the Adult Self Expression Scale (Appendix C).

4. Unassertiveness for the purposes of this study is a score of 95 or below as measured by the Adult Self Expression Scale (Appendix C).
5. Range of symptoms of physical illness refers to whether the subject experienced the deviations from health that occur on the Checklist of Physical Symptoms. This does not refer to how many times the subject experienced each symptom (Appendix E).

Limitations

Variables not controlled for by design were:

1. Recent life events that may be stressful for the subject
2. The intensity of the common stressor upon each subject
3. Genetic weaknesses of the subjects

Variables not controlled for by design, but described were:

1. Age
2. Race or culture
3. Religion

4. Marital status
5. Socioeconomic status
6. Support groups available--individuals in whom the subject can confide
7. Number of hours employed per week
8. Full or part time status as a student
9. Time frame of ten weeks in which the stressor could affect the subjects

Delimitations

The present study was limited to the female graduate nursing students who were enrolled in a small extension center of a major university in the Central Texas area during the Spring 1978 semester.

Assumptions

It was assumed that:

1. All subjects would answer the Adult Self Expression Scale and the Checklist of Physical Symptoms honestly
2. All pertinent symptoms of illness incurred since the announcement of the closing of the school on February 2, 1978, would be

remembered and would be reported on the Checklist of Physical Symptoms

3. The announcement of the closing of a small extension center of a major university in Central Texas was a common stressor for those currently enrolled female graduate nursing students
4. All female graduate nursing students volunteering to participate in this study would know the definition of the symptoms on the Checklist of Physical Symptoms and would know if they had experienced those symptoms

Summary and Overview of Succeeding Chapters

Many investigators are concerned with the increasing amounts of illness in our society despite the advances that have been made in medical science during this century. Many of these illnesses are contributed to environmental and life change stress. The fact remains that not all people exposed to the same amount and type of stress become ill. Today there are many researchers who are looking at the ill person himself in terms of personality and coping mechanisms to see what part these might play in the development of physical illness.

The purpose of this research paper was to explore the personality variable of assertiveness and its mediating relationship on the development of symptoms of physical illness in a population experiencing a common stressor.

The second chapter reviews literature concerning Hans Selye's theory of stress, and its resultant immune system depression. The personality variables of those with chronic illness states are reviewed. Finally, the personality variables of assertiveness are explained and the implications for health are explored.

The third chapter is concerned with the collection of data and their treatment. It describes the setting for the study and the sample population. The tools used for the collection of data are described. Details of how the data were collected are described. Finally, the ways in which the data were treated are explained.

A description of the sample population and the analysis and interpretation of data outcomes are described in Chapter Four. In the final chapter of this thesis, a review of the entire study is presented.

Conclusions and implications which were derived from the study are given. Suggestions for further research which were generated by this study are offered.

CHAPTER II

REVIEW OF LITERATURE

Introduction

In this chapter Hans Selye's theory of stress and the physiological changes that occur in the body as a result of stress will be reviewed. Next, the personality variables of those who have developed psychosomatic or stress-related diseases will be surveyed. Finally, the assertive personality will be explained, differentiating it from unassertiveness and aggressiveness. Assertiveness training will be an alternative presented for an individual's development of assertiveness.

Stress and Disease

Hans Selye, a great pioneer in psychosomatic research, has spent many years experimenting with stress and its effects on physiological functioning. Selye developed two definitions for stress: a simple earlier one, ". . . the rate of wear and tear on the body," (Selye 1956, p. 311) and later, a more complex one, ". . . the nonspecific response of the body to any demand placed upon it" (Selye 1974, p. 14). Stress is how the

body reacts in adapting to something outside requiring it to change in some manner. Selye (1974, p. 13) defines these ". . . stress producing factors as stressors."

Glass and Singer (1972, p. 12), who have studied the effect of urban stressors on the individual, support Selye's view with their definition, " . . . the force in stimuli disrupting the homeostatic equilibrium is a stressor, the need or drive is a stress, and the return to equilibrium is adaptation."

Selye believes that stressors are responsible for a variety of maladies in our society, including physical illness and disease. Many researchers have validated Selye's hypothesis. McQuade and Aikman (1974, p. 5) state: "The basic cause of much twentieth century disease is a shadow which has slowly darkened our lives, like the smog that has darkened our cities. This shadow is stress."

Holmes and Masuda (1972) report in their studies that there is a strong relationship between prior stressful life events and illness onset. Benson (1975, p. 18) in his book on stress and hypertension believes that, ". . . stress physically determines your health."

Lacey (1965, p. 14) reports that some of the harmful effects which may be evoked by stress are the ". . . multiplicity of somatic responses." Pelletier (1977, p. 6) in his recent book writes,

> Stress in our culture is becoming a dangerously cumulative phenomenon, unremitting in its effects. Stress related. . . physiological disorders have become the number one social and health problem of this last decade.

Selye (1974, p. 25) discovered early in his career that when laboratory animals were exposed to a constant amount of stress, they developed a syndrome characterized by "the enlargement or hyperactivity of the adrenal cortex, shrinkage (or atrophy) of the thymus gland and lymph nodes, and the appearance of gastro-intestinal ulcers." Selye found this syndrome no matter what constant stressors the animals were exposed to.

With further research into this syndrome, Selye (1956) developed his well known "General Adaptation Syndrome." The General Adaptation Syndrome (G.A.S.) has three stages:

> A. Alarm reaction. The body shows changes characteristic of a first exposure to a stressor. At the same time, its resistance is diminished and, if the stressor is sufficiently strong. . ., death may result.
>
> B. Stage of resistance. Resistance ensues if continued exposure to the stressor is compatible with adaptation. The bodily signs characteristic of the alarm reaction have virtually disappeared, and resistance rises above normal.
>
> C. Stage of exhaustion. Following long-continued exposure to the same stressor, to which the body has become adjusted, eventually adaptational energy is exhausted. The signs of the alarm reaction reappear, but now they are irreversible, and the individual dies (Selye 1974, p. 27).

In the "alarm reaction," the catecholamine, epinephrine, is increased and has many physical effects. It increases the rate and force of the heart beat; increases blood pressure, especially the systolic pressure, by contracting many arterioles; affects most smooth muscles either by stimulation or inhibition; causes a marked excitement of the central nervous system; increases the power of the skeletal muscles; causes increased oxygen consumption, heat production, and blood sugar levels; and it causes the adipose tissue to release free fatty acids (Schottelius and Schottelius 1973, pp. 484-486).

Selye's stress model places heavy emphasis on the role of the pituitary hormone ACTH which stimulates the adrenal cortex to release its corticoid hormones into the system and initiates general stress reactivity. Raab (1968) and Rahe et al. (1974) in their research have also shown that blood cortisol levels increase in response to stress. Selye (1974, p. 30) found that this increase in corticoids, ". . . elicit thymus shrinkage . . . atrophy of the lymph nodes, inhibition of inflammatory reactions. . ."

Solomon (1969, p. 335) has done much research in the area of stress and its impact on the immune system. He has found that, ". . . stress and emotional distress may influence the function of the immune system." In Solomon's research, he found that laboratory induced stress and pharmacologic levels of adrenocortical hormones had been reported to suppress the synthesis of interferon in rats, thus reducing the primary and secondary antibody responses in rats (Solomon 1969, p. 340).

Pelletier's (1977, p. 66) research finds that, ". . . during prolonged exposure to stress, lymphocytes and eosinophiles are depressed."

McQuade and Aikman (1974, p. 68) support these research findings. They have a succinct explanation of the physical pathway by which stress weakens the immune response:

> . . . emotional (stressors) rouse the hypothalamus in the brain. The hypothalamus then rouses the pituitary glands. And the adrenals start sending out increased amounts of. . . glucocorticoids. It is these excess glucocorticoids that do the damage. Under their influence a person produces fewer antibodies, and his inflammatory (immune) response dwindles.

Psychosomatic Disease and Personality

Literature has been reviewed that implicates the stress response with the development of physical illness. Hans Selye's research has revealed that the body generally reacts to prolonged stress by an elevation of adrenocorticoid hormones and a resultant depression of the body's defenses, especially that of the immune system.

It has been noted, however, that not all who are subjected to similar stressful conditions become ill. Dohrenwend and Dohrenwend's (1974, p. 317) has directed attention to this fact:

> A major question, and for some investigators, the central problem concerning the effects of stressful life events grows out of the observation that one individual may become ill and another remain healthy after both experience the same life event. The most general formulation of the research question generated by these individual differences is: What are the factors that mediate the impact of stressful life events?

These researchers have offered the suggestion that, ". . . personality differences probably mediate the effect of stressful life events" (Dohrenwend and Dohrenwend 1974, p. 317). Pelletier (1977, p. 117) in his recent book about personality and illness supports this belief:

> Personality clearly affects the way a person handles stress. Stress experienced early in life may lead to the adoption of certain methods of coping with problems. Certain psychological and behavioral defenses are then integrated into the adult personality, and determines the way the individual attempts to manage stress throughout his life.

As early as 1949, Gildea (1949, p. 274) examined eight personality variables and their presence in patients having various chronic illnesses. He examined personalities of patients having the chronic diseases of ulcerative colitis, hypertension, hyperthyroidism, rheumatoid arthritis, coronary disease, peptic ulcer, bronchial asthma, and warts. The personality components of obsessive-compulsion, inward expression of emotions, and

insecure feelings of inferiority were common to all the personalities of all the illnesses except warts, while repressed hostile emotions were common to all but those with hyperthyroidism.

Other researchers have found similar variables when examining the personalities of those with specific disease entities. Hoffman (1974, p. 225) explored the psychological factors associated with rheumatoid arthritis. She found the specific characteristics identified included the inability to express aggression, contained or repressed hostility, and ambivalence towards parents.

Dunbar (1955, p. 148) has described the person with hypertension as having low self-esteem, the inability to express anger, and anxious to please. Gentry (1974) assessed the effect of anger expression and the inhibition of emotional expression and guilt on elevations of diastolic blood pressure on black and white females residing in high and low socioeconomic stress areas of Detroit. The results of his study indicate that the failure to express anger and feeling guilty about expressing it is associated with higher levels of diastolic blood pressure in both groups. The opposite was found true, that overt displays of anger and an absence of guilt feelings are associated with lower levels of

diastolic blood pressure (Gentry 1973, p. 116). Gressel et al. (1949, p. 269) found that in hypertensive persons, statistically significant degrees of association are found for, ". . . obsessive compulsive behavior and for subnormal assertiveness."

McQuade and Aikman (1974, p. 56) describe the personality of those with ulcerative colitis as, ". . . very tidy restrained people, frequently a little prim, notably mild and mannerly, conscientious and punctual, and inhibited in the normal pattern of their lives." He also reports that they fear rejection and are seemingly submissive. Moschowitz (1935, p. 609) and Morrison and Feldman (1942, p. 739) claim hyper-irritability and hyposensitivity are among the important factors in ulcer etiology. Szaz (1947, p. 335) saw unvented hostility as important in his ulcer patients. Winklestein and Rothschild (1943, p. 101) state that their ulcer patients suffered from a chronic state of inward tension resulting from chronic frustration and an inward direction of repressed strong emotional stimuli. Ruesch (1948, p. 140) reported ulcer patients to be extremely socially conforming and very reluctant to express emotions openly. Zedlwitz (1967, p. 71) states:

> The ulcus duodeni corresponds with resignation, but simultaneously with provocation to aggression. These patients are trained in childhood to keep their mouths shut even when they are right. Lacking in the self assertion which requires an adequate aggressivity accepted and tolerated by society, they show a mouse like docility their entire life. These patients fall continually into ulcerogenic situations through their defenselessness.

De Araujo et al. (1973, p. 362) examined the association between coping ability, comparable degrees of life stress, and the amount of adrenocortico steroids required to control chronic intrinsic asthma. His results showed that the patients with chronic intrinsic asthma and high psychosocial assets were found to require low doses of steroids regardless of the amount of life stress present. McQuade and Aikman (1974, p. 71) describes the person with asthma as people who, ". . . find it hard to express their feelings. Their longing to be taken care of prevents them from acting independent, so they become almost immobilized emotionally."

LeShan and Worthington (1956, p. 462) reported that their patients with cancer are often unable to give normal expression to hostile and assertive feelings. It was reported by LeShan and Worthington (1956, p. 313) that Evans found that:

> . . . mixed assertive-submissive feelings were more frequently found in cancer than in non-cancer subjects, and it was concluded that ambivalence in that area may constitute a source of conflict in men with cancer.

LeShan (1961, p. 464) and Simonton and Simonton (1975, p. 45) both report finding that people who develop cancer have the inability to express emotion especially those of anger, resentment, jealousy, and hostility.

Bastiaan (1969, p. 311) discussed the role of repressed aggression in the development of psychosomatic diseases. He arrived at the following conclusion:

> It is a hard clinical fact that psychosomatic syndromes do not arise when activated aggression has not been suppressed or repressed beyond a certain degree.

Psychosomatic illness serves the function of warding off this aggressive impulse. It arises because the person is not able to express these feelings directly (Bach and Goldberg 1975, p. 26).

Assertive Behavior

Assertive behavior has been implicated by many researchers (Gildea 1948; Gressel et al. 1949; Alexander 1950) as the behavior most people with psychosomatic illnesses lack. Many writers discussing the value of

developing assertive behavior through assertive training speculate that the development of assertiveness will decrease the occurrence of somatic complaints. Alberti and Emmons (1974, p. 27) state:

> Another facet which motivates many to becoming assertive is the liklihood that somatic ailments will be reduced as assertion progresses. Complaints such as headaches, asthma, gastric disorders, and general fatigue oftentimes clear up.

Fensterheim and Baer (1975, p. 18) support this stance:

> Unquestionably. . . people suffer the sad consequences of their unassertiveness: lack of personal growth and success, undeveloped relationships, mental anguish, and psychosomatic symptoms that rangefrom fatigue and migraines to ulcers and impotence.

Jakubowski-Spector (1974, p. 2), who has developed a training program for women in assertion, defines assertive behavior as:

> . . . that type of interpersonal behavior in which a person stands up for her legitimate rights in such a way that the rights of another are not violated. Assertive behavior is direct, honest, and appropriate expressions of one's feelings, opinions, and beliefs.

This definition is supported by Alberti and Emmons (1974), Lazarus (1973), and Fensterheim and Baer (1975).

Assertive behavior is many times confused with aggressive behavior. Aggressive behavior is that type of interpersonal behavior in which a person,". . . stands up for her rights in such a way that the rights of others are violated" (Jakubowski-Spector 1974, p. 3). Alberti and Emmons (1974, p. 21) define it as behavior in which a person is, "putting himself up by putting others down." The purpose of aggressive behavior is to dominate, humiliate, or put the other person down rather than to simply express one's honest emotions or thoughts. It is an attack on the person rather than on the person's behavior. Aggressive behavior is often a hostile over-reaction or an outburst which results from past pent-up anger (Alberti and Emmons 1974, pp. 21-22).

Non-assertive or unassertive behavior is defined as:

> . . . that type of interpersonal behavior which enables the person's rights to be violated in one of two ways: (a) the person violates her own rights when she permits herself to ignore personal rights which are actually very important to her or (b) the person permits others to infringe upon her rights (Jakubowski-Spector 1974, p. 2).

Alberti and Emmons (1974, p. 10) also agree that unassertive behavior is behavior in which the person is, ". . . typically denying himself and is inhibited from expressing his or her actual feelings."

As early as 1969, a study was reported of the benefits of assertive training for patients who in interpersonal contexts have unadaptive anxiety responses that prevent them from saying or doing what is reasonably right, ". . . suppression of feelings may lead to a continuing inner turmoil which may produce somatic symptoms and even pathological changes in predisposed organs" (Wolpe 1969, p. 61).

Assertiveness training is a behavior therapy intervention in which a person develops the skills necessary in becoming assertive: (1) the ability to say no, (2) the ability to ask for favors or to make requests, (3) the ability to express positive and negative feelings, and (4) the ability to initiate, continue, and terminate general conversation (Lazarus 1973, p. 697).

Assertiveness training is usually implemented in a group setting and uses the modalities of education, modeling, role playing, behavior rehearsal, and actual practice outside the group in developing these skills

(Wolpe 1969; Alberti and Emmons 1974; Jakubowski-Spector 1974; Dawley 1976).

There is a paucity of empirical studies using assertiveness training as one of the modes of treatment or prevention of illness. Mitchell (1969, pp. 533-534) did a study in which he treated sixteen migraine subjects using a combination of three specific behavior therapy techniques, mainly applied relaxation training, desensitization, and assertiveness training. Migraine episodes for the treatment subjects decreased by an average of 89.5 percent when compared with their no treatment baseline rates. No studies could be found that dealt with assertion itself and the development of physical illness.

Implications for Nurses

Hellman (1974, p.166) states that two of the roles of any clinical specialist is to serve as a change agent and as a role model. All nurses, not just the clinical specialist, are role models in health care practices for their clients and will need to intervene to effect changes in their clients' health care practices.

With the rise in popularity and demand for assertiveness training, all nurses would be wise to be

aware of the possibility of assertiveness training as one of the modes of treatment as he or she strives in assisting clients in attaining their highest level of wellness. Developing assertive behavior in himself or herself would serve as a means for coping with stresses and would serve as a role model for clients.

Summary

This chapter has been a survey of stress as it relates to the development of illness and disease. Personality factors that mediate the effects of stress and personality components common to those who have chronic psychosomatic illnesses have also been discussed. The assertive, aggressive, and unassertive personalities have been defined and distinguished from each other. It has been briefly mentioned how assertiveness training develops assertive behaviors, the opposite of those behaviors found in the personalities of those who develop psychosomatic illnesses. Finally, nursing implications have been presented.

CHAPTER III

PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

Introduction

This descriptive study investigated the levels of assertiveness of female graduate nursing students, experiencing a common stressor, through the use of the Adult Self-Expression Scale. It also ascertained the range of the reported symptoms of physical illness, as measured by the Checklist of Physical Symptoms, experienced by the subjects during the ten weeks after February 2, 1978. This information was gathered by the use of a questionnaire. After analyzing the collected data, the relationship between assertiveness levels and range of symptoms of physical illness was examined. This study was limited in time from February 2, 1978, to May 9, 1978, which was the last day of the Spring 1978 semester.

A descriptive study is the method of research that simply "looks with intense accuracy at the phenomena . . . and then describes precisely what the researcher sees" (Leedy 1974, p. 79). According to Kerlinger (1973, p. 406), the purposes of a descriptive study are: 1) to discover significant variables in the field situation;

2) to discover relations among variables; and 3) to lay groundwork for later more systematic and rigorous testing of hypotheses.

Setting

The setting for this research was a small extension center of a major university located in a Central Texas city with the population of approximately 35,000. The center is located in a building consisting of eight rooms, three of which are classrooms. The center educates registered nurses at the Master's level. In addition to the coordinator of the campus, there are two full-time instructors and one secretary. This study was conducted in the central room of this center.

Population

The enrollment of this extension campus is approximately 150 students, 11 percent of which are full time, the remainder being part time. The population is approximately 96 percent Caucasian, 2 percent Black, and 2 percent Mexican-American. The vast majority of the population is female; approximately five males were enrolled in the program at the time of this study. The male students were not included as subjects, as their

number was too few to constitute a sample. The population of female graduate nursing students averaged between the ages of 23 and 50 years. The majority were married and worked full or part time in a variety of nursing settings. The population lived within a wide radius of the center, with the majority commuting from other towns and cities of Central Texas.

The sample population was a convenience sampling drawn from the total population of enrolled female students. This convenience sampling was obtained from the above setting.

Tools

The questionnaire used in gathering data from the sample population (Appendix A) consisted of three parts: 1) Demographic data, 2) the Adult Self Expression Scale (ASES), and 3) the Checklist of Physical Symptoms (CPS).

Demographic Data

Fourteen questions were asked to obtain general demographic data (Appendix B). These included age, marital status, race, present income, the religion in which the subjects were raised, and their present

religion, number of hours employed, number of credit hours in which enrolled, how the subject heard of the closing of the school, and four questions concerning the subject's support system, which consisted of individuals to whom emotions could be expressed.

Adult Self Expression Scale (ASES) (Appendix C)

This 48-item self-report measure of assertiveness is designed for use in the general adult population. The scale was given to 464 adults ranging in age from 18 to 60 in a large community college setting. Please refer to Appendix D for means and standard deviations established according to sex and marital status (Gay et al. 1975, p. 340).

High test-retest reliability was established by administering the test at two and five-week intervals, obtaining reliability coefficients of .88 and .91, respectively (Gay et al. 1975, p. 340).

Moderate to high construct validity was established by correlations with the Adjective Check List Scales and by a discriminate analysis procedure. Table 2 (Appendix D) represents the correlation coefficients for all 24 Adjective Check List Scales with the ASES (Gay et al. 1975, p. 342).

> The discriminate analysis procedure resulted in a significant F value, $F(3,54)=9.56$, $p<.001$. Inspection of the univariate tests for the three variables revealed that while anxiety $F(1,56)=17.86$, $p<.001$, and self confidence, $F(1,56)=20.51$, $p<.001$, significantly discriminated between the low- and high-assertive groups, locus of control did not, $F(1,56)=1.14$, $p<.291$ (Gay et al. 1975, p. 342).

The ASES has been employed as a measure for assessing an individual's level of assertiveness, especially in an older college population.

Checklist of Physical Symptoms (CPS) (Appendix E)

This tool was developed by James W. Rosen, Ph.D., (1977) who is a lecturer and clinician in the field of psychosomatics. The CPS has 47 symptoms of physical illness listed according to eight bodily systems: 1) General, 2) Eye, Ear, Nose, and Throat, 3) Respiratory, 4) Cardio-vascular, 5) Musculo-Skeletal, 6) Gastro-intestinal, 7) Genito-urinary, and 8) Skin.

Content validity was established by the developer by the use of a panel of experts. Of this panel, two members were Ph.D. psychologists and two were registered nurses prepared at the master's level.

Reliability was established by the assumption that registered nurses prepared at the Master's level know the medical definitions of all symptoms of physical illness on the CPS and will know when they have experienced those symptoms. Reliability will also be established by the use of the tool in this study.

Data Collection

Certain steps were taken before this investigation began. They included the purchase of the Adult Self Expression Scale from Melvin L. Gay, Ph.D., for use in this study as a measure of assertiveness, and obtaining verbal permission from James Rosen, Ph.D., to use the Checklist of Physical Symptoms as the measure for the range of symptoms of physical illness. Next, permission to implement this investigation was granted by the Human Research Review Committee and thesis committee of the Texas Woman's University and by the agency involved (Appendix F).

A booth was set up in a central room of the center building where students gathered in between

classes to socialize. This booth was set up each day and evening from April 26, 1978, to May 9, 1978, which was the last day of classes of the Spring 1978 semester.

As students entered the room, the investigator would approach them and obtain verbal permission to explain the study. The investigator then would explain the research study, enumerating the possible risks and benefits involved in participating in the study. Anonymity was insured by the use of numbered computer answer sheets requiring no identifying information, such as name or social security number. The students were insured that they could withdraw from participation in the investigation at any time they desired and that their data would be destroyed. Time was then allowed for any questions that the students had concerning the study or participation in it.

The investigator then asked for volunteers and obtained their written consent as evidenced by their signature on Form B (Appendix F) to participate in the study. The questionnaire was then distributed along with the numbered computer answer sheets. The investigator was available in order to answer any questions that arose. The subjects were instructed to deposit their completed answer sheets into a sealed box located in

the room. The answer sheets were collected at the end of each day by the investigator.

It was first anticipated that approximately 100 students would volunteer to participate for this research study. However, only 35 volunteered to participate. One of these subjects did not complete the questionnaire, leaving only 34 participants eligible as subjects for the study.

Rationale for the sample number could be explained by the fact that the data were collected during the last two weeks of the semester, a very busy time for most students.

Treatment of Data

One segment of the data was gathered using the Adult Self Expression Scale. It was scored according to the instructions accompanying the scale. A Likert-type range was used to answer the ASES with 28 of these questions having to be reverse-scored. Another segment of the data was gathered using the Checklist of Physical Symptoms. The subjects were asked to indicate if they had experienced any of the 47 symptoms since February 2, 1978, to the day they answered the questionnaire. They

were not asked to indicate how many times the symptom had occurred. This was scored by summing the range of symptoms experienced by each subject during the time limitation.

It was initially proposed that ordinal level data would be obtained consequently requiring the use of Spearman's Rank Order Correlation. However, further consultation with statisticians in the social sciences revealed that the data were not interval level data and that it could be strongly argued that the collected data were approaching interval level. Therefore, the data were analyzed by subjecting it to a two-tailed Pearson's Correlation. A two-tailed test was used because this is a descriptive study and the entire population needs to be examined, as opposed to the one-tailed test used in a predictive study. The level of significance for this study was arbitrarily set at $\alpha = .05$.

Summary

A descriptive study was done to determine if a significant relationship existed between the subjects' levels of assertiveness and their range of symptoms of physical illness experienced from the time of the

announcement of the common stressor on February 2, 1978, to the last two weeks of the Spring 1978 semester. Thirty-four subjects, all experiencing the common stressor, comprised the sample population. Data were collected using a questionnaire containing three parts: demographic data, the Adult Self Expression Scale, and the Checklist of Physical Symptoms. The data were analyzed using a two-tailed Pearson's correlation. The results of this test will be discussed in the following chapter, Chapter IV, Analysis of Data.

CHAPTER IV

ANALYSIS OF DATA

Introduction

The problem which this study investigated was: What relationship existed between assertive and unassertive female graduate nursing students, experiencing a common stressor, and the range of their reported symptoms of physical illness? This chapter is a report of what was found when the collected data were subjected to computer analysis.

Description of Sample Population

In this sample population 76 percent of the subjects were married, 9 percent were divorced, and 12 percent were single. This is a reflection of the total population of female graduate nursing students who were examined. Table 1 presents the information concerning marital status.

TABLE 1

MARITAL STATUS OF SAMPLE POPULATION BY PERCENTAGE

Marital Status	N	Percentage
Married	26	76
Single	4	12
Divorced	3	9
Cohabitating	1	3
Separated	0	0
Total	34	100

The ethnic origins of the sample popuation were predominately Caucasian, 79 percent. The Black students comprised 12 percent, while there was no representation of the Mexican-American nursing students. This is not representative of the total population sampled, as there was approximately a 2 percent Mexican-American enrollment. Table 2 reveals the breakdown of ethnicity of the sample population.

TABLE 2

ETHNIC ORIGINS OF SAMPLE POPULATION
BY PERCENTAGE

Ethnic Origins	N	Percentage
Caucasian	27	79
Black	4	12
Mexican-American	0	0
German or Czech	2	6
Other	1	3
Total	34	100

The religious status of the sample population was predominately Protestant, as 62 percent of the population was raised in this religion, and 59 percent considered themselves to be currently Protestant. Of the other religions, 32 percent were raised Catholic, with 21 percent presently Catholic. There were no Jewish subjects in the sample population, which is not consistent with the general student population. Therefore, this sample was not representative of the total population as a whole. Table 3 represents the religions in which the subjects were raised and considered themselves to be now.

TABLE 3

RELIGIONS OF SAMPLE POPULATION
BY PERCENTAGE

Religion	Raised		Now	
	N	Percentage	N	Percentage
Protestant	21	62	20	59
Catholic	11	32	7	21
Jewish	0	0	0	0
Atheist or Agnostic	0	0	1	3
Other	2	6	6	18
Total	34	100	34	100

Of the 34 volunteer subjects obtained, 29 percent were full-time students, with 56 percent working full-time. The mean income, hours of employment, credit hours enrolled, and number of friends, close friends, and people in whom positive and negative feelings could be confided are presented in Table 4.

TABLE 4

SAMPLE POPULATION INCOME, HOURS OF EMPLOYMENT, CREDIT HOURS ENROLLED, NUMBER OF FRIENDS, CLOSE FRIENDS, AND INDIVIDUALS IN WHOM POSITIVE AND NEGATIVE FEELINGS COULD BE CONFIDED BY MEANS

Data	N	$\bar{X}$
Present Income	34	$15,000
Hours of Employment	34	20 hrs/wk
Credit Hours Enrolled	34	8 hours
Friends	34	4
Close Friends	34	3
Positive Feelings	34	3.6
Negative Feelings	34	2.8

The range of assertiveness scores was from a high of 167 to a low of 75. The maximal amount of points possible was 192. Using the cut-off points of 95 or below for low assertiveness and 135 or above for high assertiveness, only 9 percent of the population were considered to be low assertive, with the mean score of 82.3. Thirty-five percent of the population had assertiveness scores of 135 or above, with the mean score of 143.1. Fifty-six percent fell into the middle range with a mean of 117.7. The mean ASES score was 123.6,

which is three-fourths of a standard deviation higher than that of the population in general (Gay et al. 1975). This could possibly be due to the fact that the study population consisted of graduate students and by the fact that child-rearing practices have become more permissive during the past three decades. Table 5 summarizes the assertiveness levels and the means.

TABLE 5

ASSERTIVE LEVELS OF SAMPLE POPULATION BY MEAN SCORE AND PERCENTAGE

Assertiveness Levels	$\bar{X}$	n	Percentage
Low Assertive	82.3	3	9
Medium Assertive	117.7	12	35
High Assertive	143.1	19	56
Total Mean	123.6	34	100

The mean total range of symptoms was 7.2. Table 6 presents a comparison of mean assertive and range of symptoms scores.

TABLE 6

COMPARISON OF ASSERTIVENESS LEVELS OF SAMPLE POPULATION BY MEAN ASSERTIVE AND SYMPTOM SCORES

Assertive Level	Assertive $\bar{X}$	Symptom $\bar{X}$
Low Assertive	82.3	10.7
Medium Assertive	117.7	7.7
High Assertive	143.1	5.3
Total Sample Population	123.6	7.2

It should be noted that as the mean assertive levels become higher, the mean number of symptoms becomes lower.

Analysis and Interpretation of Data

A Pearson's two-tailed correlation of the relationship between the independent variable, level of assertiveness, and the dependent variable, range of illness scores, was computed. Analysis revealed a coefficient of $r = -.26$ ($p = .13$). The null hypothesis:

> There is no significant difference between assertive and unassertive female graduate nursing students experiencing a common stressor, and the range of symptoms of physical illness

was not rejected, as the significance level was not at or below the $\alpha = .05$ level. The $p = .13$ was arrived at by the use of a two-tailed Pearson's Correlation. Had this been a predictive study instead of a descriptive study, a one-tailed Pearson's Correlation could have been used. The significance level of a one-tailed test is half that of a two-tailed test. Therefore, the one-tailed significance level of $p = .065$ would have been a stronger approach to the $\alpha = .05$ level than that of the two-tailed significance level of $p = .13$.

The negative relationship of the variables indicates that as the independent variable of assertiveness goes up, the dependent variable of symptoms goes down. This indicates that, although the significance level is not at the $\alpha \neq .05$, the relationship of the two variables is definitely in a negative direction, which is supported by the psychosomatic theorists in the review of literature. Had the two-tailed Pearson's Correlation revealed a coefficient of $r = +.26$ ($p = .13$) a positive coefficient, it would have indicated that as assertiveness goes up, symptoms also would go up. This would not have been supported by the theories presented in the review of literature.

This negative or inverse relationship and close approach to significance, $r = -.26$ ($p = .13$) indicates a possible trend of having less symptoms of physical illness as assertive levels rise. One possible reason for this is that those who are more assertive are better able to express their emotions appropriately and to stand up for their rights than those who are less assertive. The less assertive individuals have a tendency to hold in their emotions and not to stand up for their rights, thus creating a poor self image and a repressed emotional state.

The investigator and another rater identified six social areas of assertiveness covered in the ASES, which were accepted on face validity. Independently, and in separate rooms, both assigned each of the 48 questions into one of the six categories. The inter-rater reliability for this was 1.00. The six social categories were: Assertiveness with Friends, Family, Authority, Spouse/Boyfriend, Stranger, and General.

A Pearson's two-tailed correlation was done by computer analysis. The variables that were investigated were: Total assertive scores, the six assertive categories, the total range of symptoms, and each of the

eight bodily systems range of symptoms (Appendix E), and the demographic data including the number of friends in whom the subject could confide their most positive and their most negative feelings. These variables were all correlated with themselves. Many correlation coefficients were generated.

Two major statistically significant hypotheses were generated by the analysis. These are listed and discussed separately.

H_o1 There is no significant relationship between the total symptoms and assertiveness with strangers.

The relationship of the category of assertiveness with strangers and the total range of symptoms was $r = -.42$ ($p = .01$). This indicates that in this sample population, those who were less assertive with strangers developed significantly more illness symptoms. So significant that this may have occurred only one time in 100 by chance. Table 7 gives the correlation coefficients of the total symptoms score with the six assertiveness categories.

TABLE 7

CORRELATION COEFFICIENTS OF THE TOTAL SYMPTOMS SCORE WITH THE SIX ASSERTIVENESS CATEGORIES

Assertiveness Categories	Correlation Coefficients of Total Symptoms Score
Friends	-.27
Family	-.25
Authority	-.05
Spouse/Boyfriend	-.10
Stranger	-.42*
General	-.21

*$p \leq .01$

A further look at the bodily systems revealed that some systems were significantly affected by this type of unassertiveness: Miscellaneous, $r = -.33$ ($p = .05$); Respiratory, $r = -.34$ ($p = .05$); and Gastro-Intestinal, $r = -.44$ ($p = .01$).

Refer to Table 8 for the correlation coefficients between the category of assertiveness with strangers and the eight bodily systems of the Checklist of Physical Symptoms.

TABLE 8

CORRELATION COEFFICIENTS OF ASSERTIVENESS WITH STRANGERS AND THE EIGHT BODY SYSTEMS OF THE CPS

Eight Body Systems of the CPS	Correlation Coefficients of Assertiveness with Strangers
Miscellaneous	-.33**
EENT	-.22
Musculo-Skeletal	-.19
Respiratory	-.34**
Cardio-Vascular	-.18
Gastro-Intestinal	-.50*
Genito-Urinary	-.17
Skin	-.23

*p $\leq$ .01

**p $\leq$ .05

$H_o 2$ There is no significant relationship between the number of individuals in whom a person can confide their most negative feelings and the range of symptoms experienced.

A correlation of $r = -.36$ ($p = .03$) was found between these two variables, indicating that in this sample population, as the number of individuals in whom the subjects could confide with their most negative feelings decreased, their total range of symptoms significantly increased.

This finding supports theories that the suppression of emotions, especially negative ones, can be implicated in the development of physical illness (McQuade and Aikman 1974; Bach and Goldberg 1974; and Pelletier 1977).

When the different body systems were examined, two of them correlated significantly with the number of friends in whom the subjects could confide their most negative feelings: Gastro-Intestinal, $r = -.48$ ($p = .004$); Respiratory, $r = -.37$ ($p = .03$). This indicates a strong trend in this sample population to the development of gastro-intestinal and respiratory symptoms where there are few friends in whom negative feelings can be confided.

TABLE 9

CORRELATION COEFFICIENTS OF THE EIGHT BODY SYSTEMS OF THE CPS AND NUMBER OF INDIVIDUALS IN WHOM NEGATIVE FEELINGS CAN BE CONFIDED

Eight Body Systems of CPS	Correlation Coefficients of Number of Individuals in Whom Negative Feelings Can Be Confided
Miscellaneous	-.16
EENT	-.17
Musculo-Skeletal	-.17
Respiratory	-.38**
Cardio-Vascular	-.16
Gastro-Intestinal	-.48*
Genito-Urinary	-.06
Skin	-.14

* $p \leq .01$

** $p \leq .05$

Summary

In this descriptive study the purpose was to examine the relationship between the levels of assertiveness in a population of female graduate nursing students who were experiencing a common stressor and the range of symptoms of physical illness they experienced. The time frame was ten weeks, the time that elapsed from the announced closing of their school to the end of the semester. A two-tailed Pearson's Correlation was the statistical test used to analyze the collected data.

The null hypothesis was not rejected. However, the direction of the relationship was inverse and the correlation was approaching significance. This indicates a trend in this sample population of having less symptoms of physical illness as assertive levels rise.

The significant negative relationship between the development of illness symptoms and the number of friends in whom the subjects could confide their most negative feelings supports some of the psychosomatic theorists' assertions that the inhibition of emotional expression, especially of negative emotions, can lead to the development of physical illness.

The nursing profession is slowly beginning to recognize that stress does influence the development of disease. In order to assist clients in attaining the highest level of wellness possible, nurses must also begin to recognize the role that personality can play in the development of illness.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Introduction

This chapter presents a summary of the entire study, with the conclusions that resulted from this study, the significant elements derived from the results of the study, and the recommendations for further research.

Summary

Human beings are being subjected to increasingly higher levels of stress in our society today. Stress has been strongly implicated as one of the major causes of physical illness and disease. However, not all of those who are subjected to equivalent amounts of stress develop physical illnesses. Because of this many researchers are looking at the persons themselves, to identify what part personality might play in the development of physical illness.

The purpose of this study was to examine the personality variable of assertiveness as a mediating factor between a common stressor and the development of symptoms of physical illness in a population of female graduate nursing students.

The review of literature considers the fact that stress has been shown to be one of the causative factors in the development of physical illness. Hans Selye's theory of physiological changes that develop under the influence of stress was examined. Since not all of those subjected to similar amounts of stress experience bodily breakdown, some of the personality variables of those who have developed stress-related illnesses are reviewed. Many of their personality variables were found to be compatible with the unassertive personality. Assertive, unassertive, and aggressive personalities were differentiated. It was briefly discussed how assertiveness training helps individuals with unassertive personalities develop assertive personalities.

This was a descriptive study. The aim was to examine the relationship between levels of assertiveness in female graduate nursing students who were all experiencing a common stressor and the development of symptoms of physical illness during the ten weeks of exposure to

the common stressor. The common stressor was the announcement on February 2, 1978, of the closing of the campus at the end of the Spring 1978 semester.

A three-part questionnaire was administered to a convenience sampling of thirty-four volunteer subjects. The Adult Self Expression Scale was the tool used to measure assertiveness levels, while the Checklist of Physical Symptoms was used to measure the range of symptoms of physical illness.

The data gathered from the subjects were statistically analyzed by computer using a two-tailed Pearson's Correlation. On the basis of this test, the null hypothesis, "There is no significant difference between assertive and unassertive female graduate nursing students, experiencing a common stressor, and the range of their reported symptoms of physical illness" was not rejected. The correlation coefficient, $r = -.26$ ($p = .13$) was, however, inverse between the two variables, and approaching significance.

The computer analysis of all variables correlated with each other did generate other statistical hypotheses that were rejected.

Conclusions

The conclusions which resulted from this study were:

1. The assertiveness levels of female graduate nursing students can be measured and were in this study using the Adult Self Expression Scale.
2. The symptoms of physical illness can be measured in a population of female graduate nursing students experiencing a common stressor, and this was done using the Checklist of Physical Symptoms.
3. There was not a significant relationship found between the independent variable of levels of assertiveness and the development of symptoms of physical illness, the dependent variable. The relationship, however, was inverse and approaching significance, indicating a strong trend to the development of symptoms of physical illness as assertiveness levels decline.

4. The female graduate nursing students who were subjects in this study had an average assertiveness level that was three-fourths of a standard deviation above the average established for women in this age group.
5. There was a significant relationship between assertiveness with strangers and the development of the total number of symptoms of physical illness, $r = -.42$ ($p = .01$), especially the symptoms in the CPS categories of Miscellaneous, $r = -.33$ ($p = .05$), Respiratory, $r = -.34$ ($p = .05$), and Gastro-Intestinal $r = -.44$ ($p = .01$).
6. There was a significant relationship between the number of people in whom the subjects could confide their most negative feelings and the total range of symptoms experienced, $r = -.36$ ($p = .03$), especially in the body categories of Gastro-Intestinal, $r = -.48$ ($p = .004$), and Respiratory, $r = -.37$, ($p = .03$).

Implications

As a result of the findings of this study, it is suggested that:

1. Nurses conscientiously begin to assess the stressors that those who become ill are subjected to, and actively utilize measures in their nursing practice to assist in the elimination of particular causative stressors.
2. Nurses begin to be aware of the components of the unassertive personality in their holistic assessment and approach to client care.
3. Nurses become more aware of the assertiveness training programs offered in their community, and the use of these as one of the intervention modalities with those who become ill.
4. Assertiveness and Assertiveness Training be recognized by nursing educators, administrators, researchers, and practitioners of nursing.
5. Assertiveness Training should be incorporated into nursing curricula to enable nurses:

(a) to become aware of what assertiveness is and be able to assess their client's behavior in this area

(b) to assimilate these skills themselves in order to attain a higher level of wellness in themselves

(c) to be a role model in healthful behavior for their clients

6. Nurses become aware of the importance of the expression of negative feelings in themselves and in their clients, as one of the intervention modalities in the treatment of physical illnesses.

Recommendations

The recommendations generated from this study are:

1. That a similar study be carried out using a much larger sample population, including male subjects. Life change units could be the measurement of stress if a common stressor was unavailable. The time factor should be longer than ten weeks, preferably one or two years

2. That empirical studies be designed to further define and explore the area of negative feelings:

   (a) What emotions are considered negative by the general population?

   (b) How are negative feelings dealt with by the person having them? Does the direct expression of negative feelings (expressing them to the person to whom the feelings are felt at the time they are felt) have a different impact on the development of illness symptoms than their indirect expression (talking about the negative feelings with friends who will listen at a later time)?

   (c) How are negative feelings expressed at the time they are being felt? Does expressing them <u>without</u> holding the other person responsible for them differ in impact on the development of physical illness, than expressing them and <u>holding</u> the other person responsible for them?

3. That studies measuring illness symptoms before assertiveness training and at timed intervals after the training be implemented, thus showing what impact assertiveness training might have as an intervention mode in the treatment of physical illness.

APPENDIX A

THE QUESTIONNAIRE AS IT WAS USED IN THE STUDY

APPENDIX A - THE QUESTIONNAIRE AS IT WAS USED IN THE STUDY

The following questionnaire was presented to the subjects. The demographic data were developed by the investigator. In the ASES, the Likert-type weight to the questions were deleted, and the questions were renumbered. In the CPS, the instructions were adapted to this study and the questions were renumbered.

QUESTIONNAIRE

Do not place any markings on this questionnaire. Use the numbered computer answer sheet provided to mark your answers. Do not put your name or any other identifying data on the answer sheet. Use a #2 or soft lead pencil to mark your response next to the corresponding number on the answer sheet. Please blacken the entire area provided for your answer.

Part I -- Demographic Data

1. Sex
   a. Female
   b. Male

2. Age
   a. 20 - 25 yrs.
   b. 26 - 30
   c. 31 - 35
   d. 36 - 40
   e. 41 or over

3. Marital status
   a. Single
   b. Divorced
   c. Separated
   d. Cohabitating
   e. Married

4. Religion (the one in which you were raised as a child)
   a. Jewish
   b. Protestant
   c. Catholic
   d. Atheist or Agnostic
   e. Other

5. Present Religion
   a. Jewish
   b. Protestant
   c. Catholic
   d. Atheist or Agnostic
   e. Other

6. Race or Ethnic origin
   a. Black
   b. Mexican American
   c. German or Czechoslovakian
   d. Anglo
   e. Other

7. Present family annual income
   a. $6,000 or below
   b. $6,001 to $10,000
   c. $10,001 to $20,000
   d. $20,001 to $30,000
   e. $30,001 or above

8. Number of outside employment hours per week

   a. 1 to 8 hrs./wk.
   b. 9 to 16 hrs./wk.
   c. 17 to 24 hrs./wk.
   d. 25 to 36 hrs./wk.
   e. 37 hrs./wk. or above

9. How many semester hours are you enrolled this semester (Spring, 1978)?

   a. 3 credit hours
   b. 6 credit hours
   c. 9 credit hours
   d. 12 credit hours
   e. 15 or more credit hours

10. How did you hear of the closing of the school?

   a. Directly, when it was officially announced on February 2, 1978.
   b. Indirectly, from a fellow student, instructor, friend, TV or newspaper.

11. How many people do you consider friends?

   a. 0
   b. 1
   c. 2
   d. 3
   e. 4 or more

12. How many people do you consider to be your close friends?

   a. 0
   b. 1
   c. 2
   d. 3
   e. 4 or more

13. When something good has happened to you, how many people can you confide in with your most positive feelings (for example: excitement, happiness)?

   a. 0
   b. 1
   c. 2
   d. 3
   e. 4 or more

14. When something very bad has happened to you, how many people can you confide in with your most negative feelings (for example: frustration, anger)?

   a. 0
   b. 1
   c. 2
   d. 3
   e. 4 or more

Part II -- Adult Self Expression Scale (Assertiveness Scale)

The following inventory is designed to provide information about the way in which you express yourself. Please answer the questions by blackening the appropriate space from a. to e. Your answer should indicate how you generally express yourself in a variety of situations. If a particular situation does not apply to you, answer as you think you would respond to that situation. Your answer should not reflect how you feel you ought to act or how you would like to act. Do not deliberate over any individual question. Your first response is probably is probably your most accurate one.

a.	b.	c.	d.	e.
Almost Always or Always	Usually	Sometimes	Seldom	Never or Rarely

15. Do you ignore it when someone pushes in front of you in line?

16. Do you find it difficult to ask a friend to do a favor for you?

17. If your boss or supervisor makes what you consider to be an unreasonable request, do you have difficulty saying "No"?

18. Are you reluctant to speak to an attractive acquaintance of the opposite sex?

19. Is it difficult for you to refuse unreasonable requests from your parents?

20. Do you find it difficult to accept compliments from your boss or supervisor?

21. Do you express your negative feelings to others when it is appropriate?

22. Do you freely volunteer information or opinions in discussions with people whom you do not know very well?

23. If there was a public figure whom you greatly admired and respected at a large public gathering, would you make an effort to introduce yourself?

a.	b.	c.	d.	e.
Almost Always or Always	Usually	Sometimes	Seldom	Never or Rarely

24. How often do you openly express justified feelings of anger to your parents?

25. If you have a friend of whom your parents do not approve, do you make an effort to help them get to know one another better?

26. If you were watching a TV program in which you were very interested and a close relative was disturbing you, would you ask them to be quiet?

27. Do you play an important part in deciding how you and your close friends spend your leisure time together?

28. If you are angry at your spouse/boyfriend or girlfriend, is it difficult for you to tell them?

29. If a friend who is supposed to pick you up for an important engagement calls fifteen minutes before s(he) is supposed to be there and says that they cannot make it, do you express your annoyance?

30. If you approve of some thing your parents do, do you express your approval?

31. If in a rush you stop by a supermarket to pick up a few items, would you ask to go before someone in the checkout line?

32. Do you find it difficult to refuse the requests of others?

33. If your boss or supervisor expresses opinions with which you strongly disagree, do you venture to state your own point of view?

34. If you have a close friend whom your spouse/boyfriend or girlfriend dislikes and constantly criticizes, would you inform them that you disagree and tell them of your friend's assets?

35. Do you find it difficult to ask favors of others?

36. If food which was not to your satisfaction was served in a good restaurant, would you bring it to the waiter's attention?

37. Do you tend to drag out your apologies?

38. When necessary, do you find it difficult to ask favors of your parents?

39. Do you insist that others do their fair share of the work?

40. Do you have difficulty saying no to a salesman?

a.	b.	c.	d.	e.
Almost Always or Always	Usually	Sometimes	Seldom	Never or Rarely

41. Are you reluctant to speak up in a discussion with a small group of friends?

42. Do you express anger or annoyance to your boss or supervisor when it is justified?

43. Do you compliment or praise others?

44. Do you have difficulty asking a close friend to do an important favor even though it will cause them some inconvenience?

45. If a close relative makes what you consider to be an unresonable request, do you have difficulty saying no?

46. If your boss or supervisor makes a statement that you consider untrue, do you question it aloud?

47. If you find yourself becoming fond of a friend, do you have difficulty expressing these feelings to that friend?

48. Do you have difficulty exchanging a purchase with which you are dissatisfied?

49. If someone in authority interrupts you in the middle of an important conversation, do you request that the person wait until you have finished?

50. If a person of the opposite sex whom you have been waiting to meet directs attention to you at a party, do you take the initiative in beginning the conversation?

51. Do you hesitate to express resentment to a friend who has unjustifiably criticized you?

52. If your parents wanted you to come home for a weekend visit and you had made important plans, would you change your plans?

53. Are you reluctant to speak up in a discussion or debate?

54. If a friend who has borrowed $5.00 from you seems to have forgotten about it, is it difficult for you to remind this person?

55. If your boss or supervisor teases you to the point that it is no longer fun, do you have difficulty expressing your displeasure?

a.	b.	c.	d.	e.
Almost Always or Always	Usually	Sometimes	Seldom	Never or Rarely

56. If your spouse/boyfriend or girlfriend is blatantly unfair, do you find it difficult to say something about it to them?
57. If a clerk in a store waits on someone who has come in after you when you are in a rush, do you call his attention to the matter?
58. If you lived in an apartment and the landlord failed to make certain repairs after it had been brought to his attention, would you insist on it?
59. Do you find it difficult to ask your boss or supervisor to let you off early?
60. Do you have difficulty verbally expressing love and affection to your spouse/girlfriend or boyfriend?
61. Do you readily express your opinions to others?
62. If a friend makes what you consider to be an unreasonable request, are you able to refuse?

Part III -- Checklist of Physical Symptoms

Please mark a(yes) or b(no) for any of the following symptoms you have experienced since February 2, 1978 up to the present time.

a. Yes

b. No

A. General

63. noticeable weight change (not due to diet)
64. dizziness, fainting or blackout
65. rash or abnormal itching any where on body
66. allergy or sinus attack
67. common cold or virus
68. fever or chills

B. Eye, Ear, Nose, and Throat

69. visual change
70. hearing loss

a. Yes
b. No

71. ear discharge
72. nose bleed
73. bleeding gums
74. sore throat
75. laryngitis

C. Musculo-Skeletal

76. backache
77. joint swelling
78. joint pain
79. stiffness in neck or elsewhere
80. tension headache
81. toothache

D. Respiratory

82. cough
83. wheezing or asthma attack
84. shortness of breath
85. sputum (spittle from lungs or trachea)
86. frequent need to clear throat

E. Cardio-Vascular

87. migraine headache
88. chest pain
89. palpitations
90. swelling due to excessive fluid
91. cramping in leg when walking
92. a visable blood clot (<u>not</u> due to injury)

F. Gastro-Intestinal

93. nausea or vomiting
94. constipation
95. diarrhea
96. heartburn(a burning sensation from the stomach or esophagus)
97. abdominal pains or cramps
98. black, tarry bowel movement

a. Yes

b. No

G. Genito-Urinary

99. abnormally frequent urination
100. painful or difficult urination
101. incontinence (losing urine accidently)
102. abnormally large volume of urine
103. abnormal discharge from penis or vagina

H. Skin

104. flair-up of an existing skin ailment (acne, dermatitis, eczema, etc.)
105. boils
106. sty
107. cold sore or canker sore
108. ringworm
109. loss of hair
110. dandruff

Thank you for volunteering for this study. Please place your answer sheet in the sealed box located in this room.

APPENDIX B

DEMOGRAPHIC DATA

Demographic Data

Do not place any markings on this questionnaire. Use the numbered computer answer sheet provided to mark your answers. Do not put your name or any other identifying data on the answer sheet. Use a #2 or soft lead pencil to mark your response next to the corresponding letter on the answer sheet. Please blacken the entire area provided for your answer.

1. Sex
   a. female
   b. male

2. Age
   a. 20 - 25 years
   b. 26 - 30 years
   c. 31 - 35 years
   d. 36 - 40 years
   e. 41 or over

3. Marital Status
   a. single
   b. divorced
   c. separated
   d. cohabitating
   e. married

4. The religion in which you were raised as a child
   a. Jewish
   b. Protestant
   c. Catholic
   d. Atheist or Agnostic
   e. Other

5. Your religious belief now
   a. Jewish
   b. Protestant
   c. Catholic
   d. Atheist or Agnostic
   e. Other

6. Race or Ethnic origin
   a. Black
   b. German or Czechoslovakian
   c. Mexican American
   d. Anglo
   e. Other

7. Present family income

   a. $6,000 or below
   b. $6,001 to $10,000
   c. $10,001 to $20,000
   d. $20,001 to $30,000
   e. $30,001 or above

8. Number of outside employment hours per week

   a. 1 to 8 hrs./wk.
   b. 9 to 16 hrs./wk.
   c. 17 to 24 hrs./wk.
   d. 25 to 36 hrs./wk.
   e. 37 hrs./wk. or above

9. How did you hear of the closing of the school?

   a. Directly; when it was officially announced on February 2, 1978.
   b. Indirectly; from a fellow student, instructor, friend, TV, or Newspaper.

10. How many semester hours are you enrolled this semester (Spring, 1978)?

   a. 3 credit hours
   b. 6 credit hours
   c 9 credit hours
   d. 12 credit hours
   e. 15 credit hours

11. How many people do you consider friends?

   a. 0
   b. 1
   c. 2
   d. 3
   e. 4 or more

12. How many people do you consider your close friends?

   a. 0
   b. 1
   c. 2
   d. 3
   e. 4 or more

13. When something very good has happened to you, how many people can you confide in with your most positive feelings (for example: excitement, happiness)?

    a. 0
    b. 1
    c. 2
    d. 3
    e. 4 or more

14. When something very bad has happened to you, how many people can you confide in with your most negative feelings (for example: frustration, anger)?

    a. 0
    b. 1
    c. 2
    d. 3
    e. 4 or more

APPENDIX C

SCORING INSTRUCTIONS FOR THE ADULT SELF EXPRESSION SCALE AND THE ADULT SELF EXPRESSION SCALE

APPENDIX C

The following scoring instructions and Adult Self Expression Scale are the exact replications obtained from Melvin L. Gay, Central Piedmont College, P.O. Box 4009, Charlotte, North Carolina 28204.

SCORING INSTRUCTIONS

THE ADULT SELF EXPRESSION SCALE

A total score for the Adult Self Expression Scale (ASES) can range from 0 to 192. Each item response can vary from 0 to 4. Twenty-three of the items are worded in such a way that they must be reverse-scored prior to calculating the total score. An easy-to-use, hand-scored answer sheet is available for the ASES which automatically takes care of this scoring requirement. The individual taking the ASES completes the answer sheet according to the directions. The ASES score is then calculated using the second or yellow page of the answer sheet. A sample of this answer sheet is enclosed.

The mean total ASES score obtained from 640 adults ranging in age from 18 to 60 was approximately 115, with the standard deviation of approximately 20. This would mean that ASES scores falling above 135 could be considered as high scores, while those falling below 95 could be considered low scores.

Although it appears that scores on the ASES vary somewhat according to age and sex, for general use these differences may not be of practical importance. More specific information concerning means and standard deviations can be found in Gay, M.L., Hollandsworth, J.G., Jr., and Galassi, J.P. An assertiveness inventory for adults. Journal of Counseling Psychology, 1975, 22, 340-344, and Hollandsworth, J.G., Jr., Galassi, J.P., and Gay, M.L. The Adult Self Expression Scale: Validation using the multitrait-multimethod procedure. Journal of Clinical Psychology, 1977, 33, 407-415.

APPENDIX C

THE ADULT SELF EXPRESSION SCALE

The following inventory is designed to provide information about the way in which you express yourself. Please answer the questions by blackening the appropriate box from 0 to 4 on the answer sheet. Your answer should indicate how you generally express yourself in a variety of situations. If a particular situation does not apply to you, answer as you think you would respond in that situation. Your answer should not reflect how you feel you ought to act or how you would like to act. Do not deliberate over any individual question. Please work quickly. Your first response to the question is probably your most accurate one.

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Almost Always or Always (0)	Usually (1)	Sometimes (2)	Seldom (3)	Never or Rarely (4)

1. Do you ignore it when someone pushes in front of you in line?

2. Do you find it difficult to ask a friend to do a favor for you?

3. If your boss or supervisor makes what you consider to be an unreasonable request, do you have difficulty saying "no"?

4. Are you reluctant to speak to an attractive acquaintance of the opposite sex?

5. It is difficult for you to refuse unreasonable requests from your parents?

6. Do you find it difficult to accept compliments from your boss or supervisor?

7. Do you express your negative feelings to others when it is appropriate?

8. Do you freely volunteer information of opinions in discussions with people you do not know very well?

APPENDIX C

9. If there was a public figure whom you greatly admired and respected at a large public gathering, would you make an effort to introduce yourself?

10. How often do you openly express judtified feelings of anger to your parents?

11. Ifyou have a friend of whom your parents do not approve, do you make an effort to help them get to know one another better?

12. If you were watching a TV program in which you were very interested and a close relative was disturbing you, would you ask them to be quiet?

13. Do you play an important part in deciding how you and your close friends spend your leisure time together?

14. If you are angry at your spouse/boyfriend of girl-friend, is it difficult for you to tell them?

15. If a friend who is supposed to pick you up for an important engagement calls fifteen minutes before s(he) is supposed to be there and says that they cannot make it, do you express your annoyance?

16. If you approve of something your parents do, do you express your approval?

17. If in a rush you stop by a supermarket to pick up a few items, would you ask to go before someone in the checkout line?

18. Do you find it difficult to refuse the requests of others?

19. If your boss or supervisor expresses opinions with which you strongly disagree, do you venture to state your own point of view?

20. If you have a close friend whom your spouse/boyfriend or girlfriend dislikes and constantly criticizes, would you inform them that you disagree and tell them of your friend's assets?

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21. Do you find it difficult to ask favors of others?

22. If food which was not to your satisfaction was served in a good restaurant, would you bring it to the waiter's attention?

23. Do you tend to drag out your apologies?

24. When necessary do you find it difficult to ask favors of your parents?

25. Do you insist that others do their fair share of the work?

26. Do you have difficulty saying no to a salesman?

27. Are you reluctant to speak up in a discussion with a small group of friends?

28. Do you express anger or annoyance to your boss or supervisor when it is justified?

29. Do you compliment or praise others?

30. Do you have difficulty asking a close friend to do an important favor even though it will cause them some inconvenience?

31. If a close relative makes what you consider to be an unreasonable request, do you have difficulty saying no?

32. If your boss or supervisor makes a statement that you consider untrue, do you question it aloud?

33. If you find yourself becoming fond of a friend, do you have difficulty expressing these feelings to that friend?

34. Do you have difficulty exchanging a purchase with which you are dissatisfied?

35. If someone in authority interrupts you in the middle of an important conversation, do you request that the person wait until you have finished?

APPENDIX C

36. If a person of the opposite sex whom you have been waiting to meet directs attention to you at a party, do you take the initiative in beginning the conversation?

37. Do you hesitate to express resentment to a friend who has unjustifiably criticized you?

38. If your parents wanted you to come home for a weekend visit and you had made important plans, would you change your plans?

39. Are you reluctant to speak up in a discussion or debate?

40. If a friend who has borrowed $5.00 from you seems to have forgotten about it, is it difficult for you to remind this person?

41. If your boss or supervisor teases you to the point that is is no longer fun, do you have difficulty expressing your displeasure?

42. If your spouse/boyfriend or girlfriend is blatantly unfair, do you find it difficult to say something about it to them?

43. If a clerk in a store waits on someone who has come in after you when you are in a rush, do you call his attention to the matter?

44. If you lived in an apartment and the landlord failed to make certain repairs after it had been brought to his attention, would you insist on it?

45. Do you find it difficult to ask your boss or supervisor to let you off early?

46. Do you have difficult verbally expressing love and affection to your spouse/boyfriend or girlfriend?

47. Do you readily express your opinions to others?

APPENDIX C

48. If a friend makes what you consider to be an unreasonable request, are you able to refuse?

The above tool is an exact replication of the ASES obtained from Melvin L. Gay, Central Piedmont College, P.O. Box 4009, Charlotte, North Carolina 28204.

APPENDIX D

* TABLE I - MEANS AND STANDARD DEVIATIONS FOR THE ADULT SELF EXPRESSION SCALE

* TABLE II- CORRELATION COEFFICIENTS FOR ADULT SELF EXPRESSION SCALE WITH ADJECTIVE CHECK LIST SCALES (ACLS)

*Both of these tables are the exact replication of Tables 1 and 2 on page 342 of Gay, M., Hollandsworth, J., and Galassi, J. "An Assertiveness Inventory for Adults." Journal of Counseling Psychology, 22(4), 1975, pp. 340-344.

TABLE 1

Means and Standard Deviations for the Adult Self Expression Scale

Sample	n	M	SD
Sex			
Male	192	118.56	18.57
Female	268	114.78	21.22
Age			
19 yrs. or less	117	113.74	19.35
20-24 yrs.	149	115.48	21.21
25-29 yrs.	89	120.73	20.76
30 yrs. or more	105	116.77	18.76
Marital Status			
Single	229	114.26	20.60
Married, separated or divorced	217	118.47	19.62

TABLE 2

Correlation Coeffecients for Adult Self Expression Scale with Adjective Check List Scales (ACLS)

*p .01
**p .001

ACLS	r		r
Number of Adjectives Checked	.19**	Intraception	.13
Defensiveness	.21**	Nurturance	.00
Number of Favorable Adjectives	.23**	Affeliation	.20**
Number of Unfavorable Adjectives	-.13	Heterosexuality	.29**
Self-Confidence	.44**	Exhibition	.36**
Lability	.23**	Autonomy	.34**
Personal Adjustment	.11	Aggression	.23**
Achievement	.34**	Change	.36**
Dominance	.44**	Succorance	-.37**
Endurance	.11	Abasement	-.50**
Order	.05	Deference	-.36**
Self Control	-.16*	Counseling Readiness	-.14*

APPENDIX E

CHECKLIST OF PHYSICAL SYMPTOMS

APPENDIX E - CHECKLIST OF PHYSICAL SYMPTOMS

The following Checklist of Physical Symptoms is an exact replication of the one obtained from its developer, James W. Rosen, Ph.D., 2813 Rio Grande, Austin, Tx. 78705.

Instructions: Please mark a(yes) or b(no) for each physical symptom listed below. Mark a(yes) for those symptoms you have experienced at any time during the past twelve months.

a. Yes
b. No

A. General

1. noticeable weight change (not due to diet)
2. dizziness, fainting, or blackout
3. rash or abnormal itching
4. allergy or sinus attack
5. common cold or virus
6. fever or chills.

B. Eye, Ear, Nose, and Throat

7. visual change (for example blurred or double vision)
8. hearing loss
9. ear discharge
10. nose bleed
11. bleeding gums
12. sore throat
13. laryngitis

C. Musculo-Skeletal

14. backache
15. joint pain
16. joint swelling
17. Stiffness in neck or elsewhere
18. tension headache
19. toothache

APPENDIX E - CHECKLIST OF PHYSICAL SYMPTOMS

D. Respiratory

20. cough
21. wheezing or asthma attack
22. shortness of breath
23. sputum (i.e., spittle from lungs or trachea)
24. frequent need to clear throat

E. Cardio-Vascular

25. migraine headache
26. chest pain
27. palpitations (i.e., rapid heartbeat which you can feel)
28. swelling due to excessive fluid
29. cramping in legs when walking
30. a visible blood clot (<u>not</u> due to injury)

F. Gastro-Intestinal

31. nausea or vomiting
32. constipation
33. diarrhea
34. heartburn (a burning sensation from the stomach to esophagus)
35. abdominal pain or cramps
36. black, tarry bowel movements

G. Genito-Urinary

37. abnormally frequent urination
38. painful or difficult urination
39. incontinence (i.e., losing urine accidentally)
40. abnormally large volume of urine
41. abnormal discharge from penis or vagina

H. Skin

42. flare-up of an existing skin ailment (acne, dermatitis, eczema, etc.)
43. boils
44. sty
45. cold sore or canker sore
46. ringworm
47. loss of hair
48. dandruff

APPENDIX F

PERMISSION FOR THE STUDY

TEXAS WOMAN'S UNIVERSITY
COLLEGE OF NURSING

Consent to Act as a Subject for Research and Investigation:

I have received an oral description of this study, including a fair explanation of the procedures and their purpose, any associated discomforts or risks, and a description of the possible benefits. An offer has been made to me to answer all questions about the study. I understand that my name will not be used in any release of the data and that I am free to withdraw at any time.

_____
Signature Date

_____
Witness Date

Certification by Person Explaining the Study:

This is to certify that I have fully informed and explained to the above named person a description of the listed elements of informed consent.

_____
Signature Date

_____
Position

_____
Witness Date

TEXAS WOMAN'S UNIVERSITY

Human Research Committee

Name of Investigator: Joan Corley Center: Denton

Address: 3915 South 31st , Apt. 305 Date: 4-25-78

Temple, Texas 76501

Dear Ms. Corley:

Your study entitled Assertiveness: Its Relationship to Symptoms of Physical Illness has been reviewed by a committee of the Human Research Review Committee and it appears to meet our requirements in regard to protection of the individual's rights.

Please be reminded that both the University and the Department of Health, Education and Welfare regulations require that written consents must be obtained from all human subjects in your studies. These forms must be kept on file by you.

Furthermore, should your project change, another review by the Committee is required, according to DHEW regulations.

Sincerely,

C. K. Rozier

Chairman, Human Research Review Committee at Denton.

cc: Graduate Office

TEXAS WOMAN'S UNIVERSITY
COLLEGE OF NURSING
DENTON, TEXAS

DALLAS CENTER
1810 Inwood Road
Dallas, Texas 75235

HOUSTON CENTER
1130 M.D. Anderson Blvd.
Houston, Texas 77025

AGENCY PERMISSION FOR CONDUCTING STUDY*

THE TEXAS WOMAN'S UNIVERSITY

GRANTS TO JOAN CORLEY

a student enrolled in a program of nursing leading to a Master's Degree at Texas Woman's University the privilege of its facilities in order to study the following problem:

ASSERTIVENESS: ITS RELATIONSHIP TO SYMPTOMS OF PHYSICAL ILLNESS

The conditions mutually agreed upon are as follows:

1. The agency (may) (may not) be identified in the final report.
2. The names of consultative or administrative personnel in the agency (may) (may not) be identified in the final report.
3. The agency (wants) (~~does not want~~) a conference with the student when the report is completed.
4. The agency is (willing) (~~unwilling~~) to allow the completed report to be circulated through interlibrary loan.
5. Other: _____

Date May 3, 1978

Signature of Agency Personnel

Signature of student

Signature of Faculty Advisor

*Fill out and sign three copies to be distributed as follows: Original - Student; first copy - agency; second copy - T.W.U. College of Nursing.

REFERENCES CITED

Alberti, R. and Emmons, M. 1974. Your perfect right. San Luis Obispo: Impact Publishers, Inc.

Alexander, F. 1950. Psychosomatic medicine. New York: W. W. Norton, Inc.

De Araujo, G.; Van Arsdale, P.; Holmes, T.; and Dudley, P. 1973. Life change, coping ability, and chronic intrinsic asthma. Journal of Psychosomatic Research. 17: 359-363.

Bach, G. and Goldberg, H. 1975. Creative aggression: the art of assertive living. New York: Doubleday and Company, Inc.

Bastiaan, J. 1969. The role of aggression in the genesis of psychosomatic disease. Journal of Psychosomatic Research. 13: 307-314.

Benson, H. 1975. The relaxation response. New York: Avon Books.

Dawley, H. 1976. Achieving assertive behavior: a guide to assertive training. Monterrey, California: Brooks/Cole Publishing Company.

Dohrenwend, B.S. and Dohrenwend, B.P. 1974. Overview and prospects for research on stressful life events. In Dohrenwend, B.S. and Dohrenwend, B.P. (eds.), Stressful life events: their nature and effects. New York: John Wiley and Sons. pp. 313-331.

Dunbar, F. 1955. Mind and body, psychosomatic medicine. New York: Random House.

Evans, R.; Stern, E.; Marmorston, B. 1964. Some psychological characteristics of men with cancer. Cancer. 17(3): 307-313.

Fensterheim, H. and Baer, J. 1975. Don't say yes when you want to say no. New York: Dell Publishing Company, Inc.

Freidman, M. and Rosenman, R. 1974. Type A behavior and your heart. New York: Knopf, Inc.

Gay, M.; Hollandsworth, J.; and Galassi, J. 1975. An assertiveness inventory for adults. Journal of Counseling Psychology. 22(4): 310-344.

Gentry, W. 1973. Effects of anger expression/inhibition and guilt on elevated diastolic blood pressure in high/low stress and black/white females. Proceedings, 81st Annual Convention, APA, pp. 115-116.

Gildea, E. 1949. Special features of personality which are common to certain psychosomatic disorders. Journal of Psychosomatic Research. 11(7): 273-274.

Glass, D. and Singer, J. 1972. Urban stress. New York: Academic Press.

Gressel, G.; Shobe, F.; Saslow, G.; DuBois, P.; and Schroeder, H. 1949. Personality factors in arterial hypertension. Journal of the American Medical Association. 40: 265-272.

Hellman, C. 1974. The makings of a clinical specialist. Nursing Outlook. 22(3): 165-167.

Hoffman, A. 1974. Psychological factors associated with rheumatoid arthritis. Nursing Research. 23: 218-234.

Holmes, T. and Masuda, M. 1974. Life change and illness susceptibility. In Dohrenwend, B.S. and Dohrenwend, B.P. (eds), Stressful life events: their nature and effects. New York: John Wiley and Sons. pp. 45-72.

Holmes, T. and Rahe, R. 1967. The social readjustment scale. Journal of Psychosomatic Research. 11: 213-218.

Jakubowski-Spector, P. 1974. A monogram accompanying the film: Jakubowski-Spector, P.; Perlman, J.; and Coburn, K. 1974. Assertive training for women: a stimulus film. Washington, D.C.: American Personnel and Guidance Association.

Kerlinger, F. 1964. Foundations of behavioral research. New York: Holt, Rinehart, and Winston, Inc.

Lacey, J. 1965. Somatic response patterning and stress. (ed.) Apply, M. and Trumbull, R. New York: Appleton-Century-Crofts, pp. 14-37.

Lazarus, A. 1973. On assertive behavior: a brief note. Behavior Therapy, pp. 690-701.

Leedy, P. 1974. Practical research: planning and design. New York: Macmillan Publishing Co., Inc.

LeShan, L. 1961. A basic psychological orientation apparently associated with malignant disease. The Psychiatric Quarterly. 36: 314-330.

LeShan, L. and Worthington, R. 1956. Some recurrent life history patterns observed in patients with malignant disease. Journal of Nervous and Mental Disorders. 124: 460-465.

McQuade, W. and Aikman, A. 1974. Stress. New York: E.P. Dutton and Company, Inc.

Mitchell, K. 1969. A psychological approach to the treatment of migraine. British Journal of Psychiatry. 119: 533-534.

Morrison, S. and Feldman, M. 1942. Psychosomatic correlations of duodenal ulcers. Journal of the American Medical Association. 120: 738-740.

Moschowitz, E. 1935. The psychogenic origin of organic disease. New England Journal of Medicine. 212: 603-611.

Pelletier, K. 1977. Mind as healer, mind as slayer. New York: Dell Publishing Company.

Raab, A. 1968. Correlated cardiovascular adrenocortical responses to sensory and mental annoyances in man. Psychosomatic Medicine. 30(6): 258-268.

Rahe, R.; Rubin, R.; Arthur, R. 1974. The three investigators study serum uric acid, cholesterol, and cortisol variability during stresses of everyday life. Psychosomatic Medicine. 30(3): 258-268.

Ruesch, J. 1948. The infantile personality. Psychosomatic Medicine. 10: 134-144.

Selye, H. 1956. The stress of life. New York: McGraw-Hill Book Company.

_____. 1974. Stress without distress. New York: J.B. Lippincott Company.

Simonton, C. and Simonton, S. 1975. Belief systems and management of emotional aspects of malignancy. Journal of Transpersonal Psychology. 7(1): 29-48.

Schottelius, B. and Schottelius, D. 1973. Textbook of Physiology. St. Louis: C.V. Mosby Company.

Soloman, G. 1969. Emotional stress, the central nervous system, and immunity. Annuals of the New York Academy of Science. 164(2): 335-343.

Szaz, T. 1947. The role of hostility in the pathogenesis of peptic ulcer: theoretical considerations with the report of a case. Psychosomatic Medicine. 9: 331-336.

Winklestein, A. and Rothschild, L. 1943. Some clinical studies on the psycho-somatic background of peptic ulcer. Journal of Digestive Disturbance. 10: 99-102.

Wolpe, J. 1969. The practice of behavior therapy. New York: Perganon Press.

Zedlwitz, J. 1967. Etiology of peptic ulcer and its localization. Proceedings of the First International Congress of the Academy of Psychosomatic Medicine. Dunlap, E. and Weisman, M. (eds). New York: Exerpta Medica Foundation.