A Case Study of the Effectiveness of Assertive Communication Training on Hypertension in College-Age Males

Kay Currey
University of Nebraska at Omaha
A CASE STUDY OF THE EFFECTIVENESS OF ASSERTIVE COMMUNICATION TRAINING ON HYPERTENSION IN COLLEGE-AGE MALES

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by
Kay Currey
May 1979
THESIS ACCEPTANCE

Accepted for the faculty of the Graduate College University of Nebraska in partial fulfillment of the requirements for the degree, Master of Arts, University of Nebraska at Omaha.

THESIS COMMITTEE

<table>
<thead>
<tr>
<th>NAME</th>
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<tr>
<td>Robert L. Griswold</td>
<td>Internal Medicine, Coll. of Med</td>
</tr>
<tr>
<td>Hugh O. Cowdin</td>
<td>Communication</td>
</tr>
<tr>
<td>Robert E. Neilson</td>
<td>(offic. Comm.)</td>
</tr>
</tbody>
</table>

Chairman:  
Date:  
__May 11, 1959__
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With appreciation to...

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Thanks for not letting me give up.

Kay Currey
May 1979
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INTRODUCTION

The fact that the mind rules the body is, in spite of its neglect by biology and medicine, the most fundamental fact which we know about the process of life....All our emotions we express through physiological processes: sorrow, by weeping; amusement, by laughter; and shame, by blushing. All emotions are accompanied by physiological changes: fear, by palpitation of the heart; anger, by increased heart activity, elevation of blood pressure and changes in carbohydrate metabolism....All these physiological phenomena are the results of complex muscular interactions under the influence of nervous impulses....The nervous impulses arise in certain emotional situations which in turn originate from our interaction with other people. The originating psychological situations can be understood only in terms of psychology—as total responses of the organism to its environment (Alexander, 1950, pp. 37-38).

In the medical world Hippocrates was perhaps the first to recognize that the body may sometimes heal itself and that the physician's role may not always be one of intervention but often should be that of advisor, assisting in the self-healing process.

Today, medical education and practice and behavioral psychology research are coming together in the recognition of and belief in the concept of mind-body relationships. That an individual might be able to self-regulate certain bodily functions formerly thought to be wholly uncontrollable by the conscious mind is beginning to be accepted as research progresses in biofeedback, meditation, cognitive-behavior modification,
relaxation response, and yoga, among others.

The Cardiovascular Center at the University of Nebraska Medical Center (UNMC) is gaining international recognition for research into the relationships between stress, as perceived by the mind, and physiological reactions in the body's vascular system. This writer and her advisor sought the advice and cooperation of Robert Eliot, M.D., Director of the UNMC Cardiovascular Center and medical director of the International Stress Foundation, in a study of the possible relationship between stress, occasioned by the inability to communicate as assertively as one might like, and levels of hypertension. Robert Grissom, M.D., Chief of the Hypertension Clinic in the Cardiovascular Center and Professor of Internal Medicine, agreed to act as a consultant to the project.
REVIEW OF LITERATURE

The review of literature is divided into three sections: first, consisting of literature bearing on hypertension; second, reports concerning the concept of stress and stress in relation to hypertension; third, assertiveness and assertive communication. Throughout, the research literature is concentrated on studies of communication style and stress-related hypertension.

Hypertension

Essential hypertension is a clinical syndrome characterized by a chronic elevation of the blood pressure in the absence of a discernible organic cause. This syndrome has a progressive course from an early phase in which the blood pressure shows great lability and fluctuates markedly, to a later state in which the blood pressure becomes stabilized at a high level, frequently with associated vascular and renal damage (Alexander, 1939).

It is well to be concerned about the prevalence of hypertension and its effects. The American Heart Association believes that more than 33,000,000 people in the U.S. are suffering from high blood pressure. Of those who know they have the disease many are untreated or inadequately controlled; only a small minority have it under control.
For 90% of those who have high blood pressure, medical scientists do not know the cause. However, high blood pressure is easily detected and usually controllable (AHA, 1979). Even though uncertainty exists as to the exact cause, scientists have uncovered several factors that are almost surely a part of essential hypertension: obesity, heredity, diet, race and stress. Therapies include weight loss, dietary restrictions, meditation, biofeedback, exercise, and the most frequent "treatment of choice," antihypertensive drugs (Feinman and Wilson, 1977). While treatment for hypertension cannot undo the damage that has been done, it can prevent the disorder from getting worse.

There appears to be little question but that neurogenic factors play an important role in the genesis and maintenance of hypertension. The majority of psychiatric studies emphasize that inhibited hostile tendencies are important, a fact which is in accord with Cannon's (1953) observations in the 1920's that fear and rage produce an increase in the blood pressure of the experimental animal. Recent animal studies have established a link between tendencies toward aggression and high blood pressure. Elias et al. (1975) found that aggressive social behavior and blood pressure in mice were influenced by the same genes or linked genes. Smookler and Buckley (1969) subjected rats to environmental stress producing
stress-related hypertension. Nonstressed control rats showed lower corticosterone levels and less increase in brain norepinephrine (NE) than did stressed rats. Administering an antihypertensive agent (ALPHA-MD) to the stressed rats proved effective in returning NE levels to normal values and prevented the stress-induced elevation in systolic blood pressure.

A possible connection between hypertension and non-assertiveness has been established. Alexander (1950, p. 147) reported:

"Chronic inhibited aggressive tendencies which are always associated with anxiety markedly influence blood pressure level. In spite of the fact that the group of patients consisted of individuals with many different types of personality, a common characteristic was their inability to express their aggressive impulses freely."

Alexander claimed that hypertensives often improve when they feel permitted to express pent-up hostile impulses during interviews, or are encouraged to a greater amount of self-assertion in occupational situations or in relation to the family. The analysis of guilt feelings and dependent needs in these cases contributes greatly to the patient's ability to express his self-assertive tendencies with greater freedom and to find suitable outlets for his tensions (p. 271). Wolf and Wolff (1951) used stress interviews to determine that
hypertensives, despite an affable exterior, showed a greater rise in blood pressure than normotensives. Baumann (1973) studied male hypertensives, ages 15 to 25, and a control group of normotensives. Subjects in psychic stress situations (mental arithmetic under time pressure) revealed that in contrast to the controls the adaptation of hypertensives to repeated experiment stress situations was markedly disturbed. That hypertension may be related to the aggressive impulses or suppression of those impulses was also confirmed by Gambaro and Rabin's (1969) research. They found that diastolic pressure was elevated in subjects who participated in frustration exercises, but that those who showed low-guilt feelings did not experience a significant rise while those who had high-guilt feelings did. In Germany, a study of students chosen on the basis of extreme anxiety and aggressivity indicated a significant correlation between blood pressure values and aggressivity scores, and a high correlation between extreme aggression scores and high diastolic reaction scores (Mayer, 1972). Forrest and Kroth (1971) found a significant relationship between the Trait Anxiety Index and diastolic blood pressure.

Several training therapies have been developed as alternates to drug therapy for hypertensives with somewhat contradictory results. Among the best known alternative therapies are those of Benson (1975), advocating
relaxation response, and Patel (1977) who used combinations of relaxation, yoga and biofeedback. Taylor et al. (1977) studied 31 patients with essential hypertension, all receiving medical treatment. Randomly divided into three groups, relaxation therapy, nonspecific therapy, and medical treatment only, the subjects in relaxation therapy showed a significant reduction in blood pressure compared with the other groups. However, at follow-up six months later the relaxation group showed a slight decrement in treatment effects, while both the other groups showed continued improvement; there was no longer a significant difference between groups.

Deabler et al. (1973) also tried relaxation therapy and hypnosis in lowering patients' blood pressure. Three groups were established: (1) a control group of nonmedicated hypertensive patients, (2) muscular relaxation and hypnosis patients, and (3) patients stabilized on antihypertensive drugs who also received muscular relaxation and hypnosis procedures. Significant lowering was obtained of systolic and diastolic pressures in both groups receiving treatment but there was no reduction in the control group. Hypertensive levels were reduced through muscular relaxation and completely eliminated during hypnosis. Tasto and Huebner (1976) studied the use of muscle relaxation with both hypertensive and normotensive patients, assigned either to a relaxation group or a
stress group. Results showed that relaxation lowers the blood pressure levels of hypertensives but not of normotensives to any significant degree. Edelman (1970), on the other hand, did not find that progressive relaxation stimuli could alter autonomic processes. Shapiro et al. (1972) and many others have reported on the feasibility of teaching patients to raise or lower their blood pressure.

Other researchers claim there is no relationship between high blood pressure and emotional levels. Wheatley (1975) reported that anxiety symptoms were more common in hypertensive patients than in normotensives, but not significantly so. Cochrane (1973) studied hostility and neuroticism among essential hypertensives and found no evidence that high blood pressure was related to emotional instability or the repression of hostility.

Despite these rather contradictory reports, other numerous positive reports, such as Ellerbroek's (1978), lead this writer to the opinion that there is a relationship between emotional feelings and blood pressure levels. Ellerbroek found that hypertensive patients consistently showed anxiety, which he considered to be an awareness of the existence of ambiguity and a depressive reaction to this awareness. "More simply," he said, "it means that you don't know what is going to happen and you are unhappy about it." He believed that people with high blood pressure have an incredible intolerance of
ambiguity, that early hypertension can be treated while still "labile," and that fixed levels of later hypertension can be prevented by teaching specific mental attitudes toward oneself and one's communication with others.

Possibly the apparent contradictory findings regarding alternative therapies are due to different effects of such treatment programs on persons different in yet undefined characteristics, such as degrees of assertiveness and rhetorical sensitivity.

**Stress**

Understanding stress-related hypertension requires some knowledge of stress itself. Without stress not much would be accomplished. Any physical or mental effort requires stress of one degree or another. Stress makes us "reach beyond our grasp" and thus makes us more aware of our achievement potential. Response to stress may be emotional, behavioral or physiological or combinations of all three (Tanner, 1976).

Selye (1956) defined stress as the nonspecific response by the body to any demand made upon it. It is a stereotyped reaction to such essentially different stimuli as cold, heat, drugs, hormones, sorrow, or joy. The nonspecific demand for activity as such is the essence of stress. It is immaterial whether the agent or situation is pleasant or unpleasant; all that counts is the inten-
sity of the demand for readjustment or adaptation. Selye (1974) cautioned that stress is not merely nervous tension, and that stress should not be confused with distress (negative stress), nor is it something to be avoided. Complete freedom from stress could only mean death, since all bodily functions are maintained by the energy required to sustain life; the heart pumps blood, muscles tense and relax for breathing, intestines digest food—all activity proceeds in one form of stress or another, even while one sleeps. What is usually meant by "stress" is really the body's automatic, natural reaction to change, challenge and the demands of life. Stress sets in motion a complicated outpouring of hormones and brain chemicals which influence the nervous system, heart, blood vessels, muscles and other organs. Under the right conditions these reactions may alter immunity and aggravate or precipitate attacks of arthritis, high blood pressure, frigidity, cancer, asthma, backpain, cystitis, acne and a host of other disorders. Without alleviation of the stress reaction the body may turn the impact of repeated stress into chronic disease.

Selye believes that the body's adaptability, or adaptation energy, is finite, and that like the family fortune it may be inherited and withdrawals may be made, but there is no proof we can make additional deposits. Spent recklessly, our adaptation energy supply may
be exhausted because we are unable to alter behavior to accommodate stress.

Most people adjust their behavior to the everyday strains of human life. What is it that converts "normal" stress into a crisis that precipitates the fight-or-flight reaction? Drastic change, expected or unexpected, favorable or unfavorable, seems to be the common element in all occasions which make stress a crisis event. The Holmes and Rahe (1967) Social Readjustment Rating Scale assigns numerical values to various stressful events and suggests that over 300 total points in a year's time leaves the person vulnerable to major illness. When the source of stress is not known, if there are several sources, or if the stress is prolonged, then the person is unlikely to return to a normal mental and physical state as rapidly as one should. Under these conditions elevated blood pressure may become hypertension; accelerated heart rate may become tachycardia; and a blood shift away from the stomach may result in loss of appetite. Thus stress is seen as a major element, along with diet and environmental contamination, in the so-called afflictions of civilization: cardiac disease (including hypertension), cancer, arthritis and respiratory diseases. As Alexander (1950, p. 44) commented:

"There are indications that emotional conflicts may cause continued fluctuations in blood pressure which in time overtax the vascular system. This
functional phase of fluctuating blood pressure may in time cause organic vascular changes, and finally an irreversible malignant form of hypertension may ensue."

Other researchers have noted that there is a significant difference between stress and stressors. The antecedent stressor is a necessary prerequisite to the experience of stress, but the stress response does not necessarily follow from a stressor. The majority of stress research has attempted to link stressors with outcomes, which may be an oversimplistic view of the role of stress and account in part for contradictory findings. For an antecedent stressor to be stress-provoking depends to a great degree upon the perception of the individual exposed to it. The importance of perceived stress was recognized by Lazarus (1966) in his work on psychological stress when he concluded that "the important role of personality factors in producing stress reactions requires that we define stress in terms of transactions between individuals and situations, rather than of either one in isolation." Chan (1977) made a similar distinction when he concluded: "A life event or situation becomes stressful only when it is perceived as such by the implicated persons." Thus the relationship between stressors and perceived stress is far from direct. One individual views a potential stressor as a challenge and source of growth and satisfaction while another perceives and
reacts to this same potential stressor as a threatening situation resulting in frustration and anxiety. Witte (1979) reported a relationship between perceived stress and resulting diseases of the body. His work showed that by altering an individual's self-talk, the internal conversation each of us has concerning the events in our lives, one can alter the state of illness and bring about feelings of well-being.

It is well, also, to consider the source of the perceptions. The individual knows most clearly the source of his interpretations of interactions. However, second parties may be better observers of behavior and degree of stress an individual is undergoing and can offer valid inputs in the process of assessing total stress. Cummings and DeCotiis (1973) in their study of perceived stress identified several stressors, such as role ambiguity, degree of goal consensus, adequacy of authority and work flow. The evidence is growing in the behavioral and medical literature that there is an association between certain stressors such as role overload and role conflict, group climate and task characteristics, and certain physiological outcomes such as elevated blood pressure and blood glucose.

Eliot (1976) concluded that the relationship between excessive emotional stress and coronary heart disease is real. He recommended various methods for
management of prolonged emotional stress, including: establishment of priorities; identifying objective, realistic and attainable goals; attempting behavior modification of Type A personality; reducing the frequency of stressful life change events; using the daily technique of relaxation response; aerobic physical exercise; group therapy, and adrenergic blockage with propranolol hydrochloride.

Assertive and Non-assertive Behavior

A theoretical link between level of assertive behavior and experienced stress or anxiety has been established. Salter (1949) identified the characteristics of an "inhibitory personality." He theorized that positive reinforcement of non-assertive behavior in childhood builds a repertoire of such responses. Later, when the individual finds those responses to be non-rewarding, discomfort is experienced. Low self-esteem, poor self-concept and interpersonal anxiety were found to be related to non-assertive behaviors. In contrast, Salter found an "excitatory personality," an individual who responds spontaneously to life and so achieves satisfying goals. Wolpe (1954) researched the problem of anxiety and found that certain responses excluded anxiety. He assumed that responses which implicate the parasympathetic division of the autonomic nervous system would more likely be
incompatible with the predominantly sympathetic responses of anxiety. Sexual responses reciprocally inhibit anxiety as do the physiological responses of deep muscle relaxation. Wolpe then identified a class of responses that would reciprocally inhibit anxiety in the same way that sexual and relaxation responses did and termed them "assertive." Thus, through training, an individual could build a repertoire of assertive responses that would inhibit anxiety. Wolpe was the first to popularize the term "assertion." His work with A. A. Lazarus (1969) led to their studies of unexpressed impulses which might produce somatic symptoms and pathological changes in pre-disposed organs (e.g., atopic dermatitis, asthma, migraine, peptic ulceration, and hypertension). An experimental approach made by Schwartz and Gottman (1976) analyzed heart rate along with other variables in subjects tested as low-, moderate-, and high-assertive. No significant differences in heart rate were found, though the low-assertives reported a greater number of negative and fewer positive self statements, along with higher self-perceived tension.

Perhaps the clearest definition of assertive behavior was given by Alberti and Emmons (1971) who stated that the assertive person is one who stands up for legitimate rights without denying the rights of others, and who can act spontaneously in his own best interest.
without relying on aggressive responses to achieve objectives. Aggressive behavior is that which threatens reduction of the status of another. Meichenbaum (1977) proposed two major assumptions to explain unassertive behavior: (1) nonadaptive anxiety inhibits the expression of assertion, and (2) a lack of a repertoire of necessary skills prevents assertive behavior. Fiedler and Beach (1976), working with college populations, arrived at the conclusion that expectancies about consequences following on behavioral acts more adequately explain unassertiveness. The perceived risk of asserting creates internal conflict: the person may know what to do but cannot do it. Meichenbaum agreed: "If both high-assertives and low-assertives know what to do and can do it...what is the nature of the initial behavior deficit?" Using the Assertiveness Self Statement Test, Meichenbaum found that low-assertives experience conflicting internal dialogue, that positive and negative self-statements competed against one another, interfering with interpersonal behavior. Thus it may be that changing internal self-talk is essential to increasing assertiveness.

A growing body of literature, with some mixed results, reports the effectiveness of training in assertive behavior. Rathus (1972) reported, as did others, that experimental evidence was lacking to support the
widely held belief that assertive training can increase assertive behavior or decrease the fear experienced during social confrontation. Henderson (1976) reported on the effectiveness of assertive training on self-actualization. Peak (1975) explored the use of assertive training in overcoming interpersonal fears and found it effective. Witte (1979) used assertive communication training in his work with cardiovascular patients to help establish the skills needed to carry out changes in the person's self-talk, a component of cognitive-behavior modification. Brockway (1976) used assertive training in a special program for professional women who scored average to above-average on assertiveness. The training improved assertive behavior and, of equal importance, lowered anxiety levels.

Several other investigators have found that subjects can be taught to be more assertive. Boland's (1974) work at the University of Nebraska-Lincoln showed that a tendency to be assertive can be increased by training. In his subjects the results of that training persisted over a year's time. Rose (1975) found that many specific behaviors could be selected for retraining assertively; of those selected for retraining, 39 were successfully treated and only two were not.
Summary

Essential hypertension has been studied in relation to anxiety, inhibited hostility and aggressive tendencies. The research studied, while sometimes contradictory, offers evidence that reducing stress, altering the perception of stress, and releasing inhibited feelings may well help reduce high blood pressure, especially in the early or labile stage.

Assertive communication training as a therapy for hypertension has not been reported in the literature to date, although several studies show that such training can help alleviate anxiety and promote self-assertiveness. A theoretical basis for linking level of assertiveness and blood pressure, at least in some persons, has been established.

As a result of this study of the literature, this writer believes there is a possibility that a person who learns to communicate more openly with his close associates, to deal more honestly with stress-producing situations by expressing his feelings appropriately, and who learns to assess his potential for achievement realistically, will have a good chance to reduce his blood pressure levels.
PROBLEM

If the research relating hypertension and stress is correct, the question arises as to whether hypertension can be controlled or reduced by teaching sufferers to accept and express personal needs and wants in a self-assertive way. Although an exhaustive search of the literature revealed no reports describing the use of assertive communication training in the treatment of hypertension, it seems possible that learning to say more clearly, at appropriate times, what one thinks and feels, could help relieve many stressful situations, at least for low-assertives. Therefore the problem to be studied was this: does a relationship exist between levels of blood pressure and the ability to communicate assertively? If so, the low-assertive hypertensive person might be able to release pent-up feelings, reach desired goals, and lower blood pressure if taught to be more self-assertive.

Training in assertive communication was selected as the means to test this question. Even though there were no reports of closely related studies, there were the studies that related hypertension to low self-esteem and to suppressed rage which might, in turn, lead to certain personality characteristics, either overly aggressive or overly compliant. These studies indicate sufficient
interest in the search for alternative or adjunctive therapies in the treatment of hypertension to warrant a project designed to test the assumption that a relationship exists between the inability to communicate assertively and elevated blood pressure levels.

The specific hypothesis investigated was: "There will be a significant decrease in blood pressure in low-assertives following assertive communication training."

Definitions
1. Elevated blood pressure for the college-age population was designated as approximately 140 systolic over 90 diastolic mm Hg, as measured by an electronic device. All subjects so designated were above the mean for the subjects tested on both pressures. Ideally, "elevated blood pressure" would have been defined as 140/90, but very few such subjects were willing or able to participate. There is some variance of opinion on the determination of 140/90 as being elevated blood pressure for this age group; many insurance companies define hypertension for this age as 135/85 mm Hg.
2. Assertiveness was established by the use of the Wolpe-Lazarus Assertiveness Questionnaire, with a score of 16-26 being classified as "low-assertive;" under 10 was classified as "high-assertive."
METHODS AND PROCEDURES

Design

This clinical study undertook to establish the effectiveness of assertive communication training on subjects who showed evidence of hypertension at the fairly early college age and who also scored low on a test for assertiveness.

The selected subjects were given six two-hour sessions of training in assertive communication. Blood pressure was checked prior to the first session, at one week after the sixth session, and three months later. Assertiveness measures were administered before the first session and one week after completion of the sixth. Statistical measures were then applied to determine the extent and direction of change in blood pressure and assertiveness.

Subjects

The initial hope had been to use freshmen medical students at UNMC because previous blood pressure studies of earlier freshmen classes had shown that the incidence of hypertension is greater among medical students than the general population: approximately 30% as compared to
However, this plan proved to be impractical due to the schedules of all concerned. Instead, students enrolled in Communication 101 and 111 at the University of Nebraska at Omaha (UNO) in the fall semester of 1978 were screened for possible participation in the project (see Appendix A). The 534 students, plus two referred by the UNO Student Health Center were given the Assertiveness Questionnaire (Appendix B). Scores ranged from 2 to 26. Analysis of 415 scores showed a mean of 13.34 and a standard deviation (SD) of 5.78. The distribution of scores was divided into quartiles, with the top fourth (16 and above) designated as "low-assertives;" those scoring in the bottom fourth (10 and below) were considered "high-assertives." Of the 536 tested, 144 were low-assertives and were asked to have blood pressure checks. One hundred twenty-nine (89%) responded and 20 (15%) were found to have elevated blood pressure.

Because there was a possibility that high assertiveness might indicate an overly aggressive personality with high blood pressure, 31 high-assertives were asked to have blood pressure checks; 15 (48.3%) responded; only 2 (13%) of these high-assertives were found to have somewhat elevated blood pressure, so no further study of this was done.

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Thus, of the 175 whose blood pressure was screened, 20 low-assertives and 2 high-assertives were invited to become subjects for the study. Initially, twelve agreed but work schedules reduced this number; two others dropped out of school. Eight students completed the training, six low-assertives and two high-assertives. All were male, white, between the ages of 18 and 30. Blood pressure ranged from 132-184 systolic, 66-98 diastolic. None were taking blood pressure medication.

Table 1 reports the screening scores for assertiveness and blood pressure measures.

**TABLE 1**  
SUBJECTS' ASSERTIVENESS AND BLOOD PRESSURE SCORES

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<th>Subject</th>
<th>Screening scores</th>
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<tr>
<td></td>
<td>AQ</td>
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<tr>
<td>1(^a)</td>
<td>7</td>
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<tr>
<td>2</td>
<td>19</td>
</tr>
<tr>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>4(^a)</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>17</td>
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<tr>
<td>6</td>
<td>17</td>
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<td>7</td>
<td>16</td>
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\(^a\)These Ss were high-assertives on the AQ screening scale.
Although only one student fit the 140/90 or higher blood pressure range generally accepted as hypertensive, the Ss were high among the population tested and therefore were deemed the most suitable available subjects for the study. (Ss Release Form, Appendix C.)

It is interesting, and perhaps relevant to this and further similar studies, that the students scoring as least assertive did not respond to the invitation for blood pressure checks. Several with the highest blood pressure measures obtained would not volunteer to enter the training program.

None of the female students identified as low-assertive/hypertensive would either agree or were able to participate in the training. Several members of the football team who scored low-assertive/hypertensive refused to participate, although they were taking medication and reported being aware of the risks of hypertension to their well-being.

Instruments

Arteriosonde: Blood pressures were measured using the Arteriosonde Model 1010, manufactured by Roche Medical Electronics Division of Hoffman La Roche, Inc., Cranberry, New Jersey. The persons checking blood pressures were trained by a senior nurse in the UNMC Cardiology
Center. Repeated practice and independent readings were conducted until the two persons' readings would rarely be more than two points apart. The investigators did find, however, that the Arteriosonde tends to yield low readings on the diastolic pressure. Thus a diastolic reading of 80 might be 90 or higher if taken with the sphygmomanometer and stethoscope. The Arteriosonde was chosen because of the greater reliability of readings taken with it over those taken with the sphygmomanometer.

Subjects were required to sit down and rest for about five minutes before blood pressure readings.

Assertiveness Questionnaire (AQ): The Wolpe-Lazarus Scale was used for initial screening in this project. This scale emerged from several earlier versions developed independently. The 1966 Wolpe-Lazarus (Cimino et al., 1977) was originally designed for administration in clinical situations but has also been used to measure assertiveness in college students. Wolpe stated that although most of the scales in use are concerned with the expression of both positive and negative feelings, the items in this scale predominantly reflect the expressions of "hostile assertion" rather than "commendatory assertion." Inability to adequately assert negative feelings was related to stress in the literature much more than difficulty in expressing positive affect. Because "assertive" is a behavioral construct
having a great deal of conceptual ambiguity further work is needed in developing a clear and parsimonious definition of this construct. Reliability and validity data are not available for this Wolpe-Lazarus Assertiveness Questionnaire. However, it has been the most frequently used scale based on a compilation of intuitively generated items.

The 35 items on the AQ required forced-choice answers, "yes" or "no." The questionnaire is scored by comparing the student's answers to correct answers (see Appendix B). The higher the score, the lower the assertiveness. The scores ranged from 2 (high-assertive) to 26 (low-assertive) with a median score of 13.3. The original intent was to use Ss ranging from 18-26 but when so few of the high-scoring low-assertives responded the decision was made to accept Ss scoring 16 and above.

Rathus Assertiveness Schedule (RAS): The Rathus Assertiveness Schedule (Rathus, 1973) (see Appendix B) contains 30 items based on work done by Allport, Guilford and Zimmerman, Wolpe and Lazarus, and on diary notes maintained by college juniors and seniors. This scale was used to measure changes in assertiveness by subjects. It was administered at the initial training session and one week after the final session.

Test and re-test reliability for a group of male and female undergraduates was .78 over a two-month
period. Split-half reliability based on odd-even item score was .77. Validity data were obtained by correlating subjects' scores on RAS with ratings by others who knew them. Self-rating corresponded positively with others' ratings on factors of boldness, outspokenness, assertiveness, aggressiveness and confidence. RAS scores correlated negatively on ratings of "niceness" and did not correlate with scales indicative of intelligence, happiness and fairness. The correlation was .70 in a second validity study of the correlation between self-ratings and RAS scores. The RAS has previously been used to assess the effects of assertive training on college students (Ciminero, et al., 1977).

The Spearman Rank Correlation between the AQ and initial RAS was found to be .92 for the 8 Ss in the present study.

Training Program

The training consisted of six weekly consecutive 2-hour sessions, with four students in a Monday group and a group of four meeting on Tuesdays, October 16, 1978 to November 21, 1978. Dr. John K. Brilhart designed the training and conducted all the sessions. The design of the training program was based on work published by Dawley and Wenrich (1976), Cotler and Guerra (1976), and Adler (1977). After the first session, each succeeding session
began with a review of the previous week's material and a group discussion of the problems the students had encountered during the week. (For a complete outline of the training program see Appendix D).

The training program met the goals criteria tested by Boland's (1974) study: to improve effectiveness in achieving personal goals; improve satisfaction with interpersonal behavior; decrease depressed or anxious behavior; and increase the frequency of positive self-referent responses.

Recognition of the work done in recent years in the field of cognitive-behavior modification is implicit in this training program in that the students were continually asked to modify their internal dialogue, to re-think and discuss their behaviors as they searched for alternatives to previous practices, in contrast to some assertive training programs which rely solely on skills training. As Mahoney (1974) has indicated, behavior modification is shifting in emphasis from a focus on discrete, situation-specific responses and problem-specific procedures to a coping skills model which can be applied across situations and problems. The six sessions with the students in this project presented a combination of skills training, cognitive restructuring, relaxation training and conscious efforts at transfer in order to promote generalization.
The first session included blood pressure readings and the pre-test RAS. A brief lecture followed, defining assertiveness as distinguished from aggressiveness. The point was made that assertive training is behavior modification, not basic "personality" change. Handouts included a reading list, a list of basic human rights, and the assertive behavior checklist and recording form. Discussion centered on one's personal rights as a human being, a table of situations, and initiating and responding. Behavior myths were examined and the Subjective Discomfort (SD) scale presented. The SD is formulated by each individual subject, who imagines the most uncomfortable interpersonal situation in which he could find himself and gives that a rating of 100, then imagines the most comfortable and rates that as 0. During training sessions and role play, and in actual life situations, the subjects were able to rate their feelings of social comfort or discomfort.

In session 2 the students were asked to list and rank-order social scenes that create subjective discomfort. This was followed by relaxation training and a review of the SD list. Ways to meet people and initiate conversation were explained and role-played. Practice was given in expressing positive affect for others.

Session 3 reviewed relaxation techniques and students discussed their progress in meeting people, exchanging greetings and compliments. Defenses against
criticisms and aggressive people were presented: the broken record and selective ignoring. Role playing, both overt and covert, reinforced the trainer's presentation of these defenses.

At session 4 the students reported in vivo experiences using compliments, expression of positive feelings and the defenses of the broken record and selective ignoring. Students exchanged compliments and each "bragged" about himself. Major emphasis in this session was on handling criticism, along with a review of the basic human rights.

Session 5 reviewed the use of the recording forms and defensive skills, then provided training in disarming anger, including role playing of conflict situations.

At the final session the trainees were given the "Assertiveness Skills and Techniques Summary" hand-out. Discussion and role playing demonstrated how to deal with a hostile or aggressive response to an assertive communication; with a guilt-provoking response; "impossible" people; and what to do when assertiveness doesn't work or is inappropriate to the situation. Students expressed personal goals for the future, agreed to meet the following week for blood pressure measures and the posttest RAS, and to return in February, 1979, for follow-up blood pressure tests.
Tests of Inference

The Wilcoxon matched-pairs signed-ranks test (Siegel, 1956) was chosen for inferential tests since the sample was small without definable parameters, and blood pressure measures are subject to variation among measurers and from momentary changes in subject status. The researcher chose to be conservative and treat these as ordinal measures. When the Wilcoxon test could not be interpreted due to values not indicated in the tables, the sign test was employed (Siegel, 1956).

The level of significance adopted for this study was $p < .10$, since it was an exploratory study with a small number of subjects.
RESULTS

RAS Scores

Table 2 shows the changes on the RAS for the eight subjects who underwent assertiveness training. It can be seen that all six low-assertives made large gains and even one of the high-assertives made an increase on this score.

TABLE 2
RATHUS ASSERTIVENESS SCHEDULE SCORES

<table>
<thead>
<tr>
<th>S</th>
<th>Pre</th>
<th>Post</th>
<th>Change</th>
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</thead>
<tbody>
<tr>
<td>1b</td>
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<td>+38</td>
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<tr>
<td>7</td>
<td>- 7</td>
<td>+46</td>
<td>+53</td>
</tr>
<tr>
<td>8</td>
<td>-22</td>
<td>+40</td>
<td>+62</td>
</tr>
</tbody>
</table>

The national norm for college males has been reported as 12 with a SD of 22. (Dawley and Wenrich, 1976).

Applying the Wilcoxon test to these data yielded a T of 1, associated with a p of < .01 for all 8 Ss, and a T of 0 for the six low-assertives, associated with a p of < .025 (one-tailed tests).
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<table>
<thead>
<tr>
<th>S</th>
<th>Pre</th>
<th>Post</th>
<th>+ Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (^b)</td>
<td>+41</td>
<td>+39</td>
<td>- 2</td>
</tr>
<tr>
<td>2</td>
<td>-33</td>
<td>+ 9</td>
<td>+42</td>
</tr>
<tr>
<td>3</td>
<td>+14</td>
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<td>+17</td>
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<td>+ 9</td>
</tr>
<tr>
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<tr>
<td>8</td>
<td>-22</td>
<td>+40</td>
<td>+62</td>
</tr>
</tbody>
</table>

\(^a\)The national norm for college males has been reported as 12 with a SD of 22. (Dawley and Wenrich, 1976).
\(^b\)High-assertive Ss.

Applying the Wilcoxon test to these data yielded a T of 1, associated with a p of <.01 for all 8 Ss, and a T of 0 for the six low-assertives, associated with a p of <.025 (one-tailed tests).
Blood Pressures

Table 3 shows pre, post and change measures for systolic blood pressures. It can be seen that 7 of the 8 Ss showed a decrease in systolic pressure. The one showing an increase had just undergone an algebra examination which he reported to have been quite difficult, and he had very recently broken up with his fiancee and moved out of his family home to an apartment, both reported by him to have been likely due to becoming more assertive.

**TABLE 3**

**SYSTOLIC BLOOD PRESSURE (BP) CHANGES**

<table>
<thead>
<tr>
<th></th>
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<th>Post</th>
<th>± Change</th>
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<td>126</td>
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<tr>
<td>2</td>
<td>154</td>
<td>136</td>
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</tr>
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<td>184</td>
<td>152</td>
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<td>140</td>
<td>-4</td>
</tr>
<tr>
<td>8</td>
<td>138</td>
<td>172</td>
<td>+34</td>
</tr>
</tbody>
</table>

*aHigh assertive Ss.*

*bThis student was experiencing stress from personal problems.*

The sign test for 7+ and 1- (T on the Wilcoxon
test was 8, not interpretable from the available tables) was significant at \( p = 0.035 \), thus significant for the one-tailed test. For the 6 low-assertives, the sign test was associated with a \( p \) of 0.109, approaching the level of significance set for this exploratory study, \( (p < 0.10) \).

Table 4 reports pre, post and change measures for diastolic pressures. This is an especially important measure for it is considered to be less subject to variation due to immediate changes in circumstances.

**TABLE 4**

**DIASTOLIC BLOOD PRESSURE CHANGES**

<table>
<thead>
<tr>
<th>S</th>
<th>Pre</th>
<th>Post</th>
<th>( \pm ) Change</th>
</tr>
</thead>
<tbody>
<tr>
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<td>82</td>
<td>74</td>
<td>-7</td>
</tr>
<tr>
<td>2</td>
<td>78</td>
<td>66</td>
<td>-12</td>
</tr>
<tr>
<td>3</td>
<td>76</td>
<td>74</td>
<td>-2</td>
</tr>
<tr>
<td>4(^a)</td>
<td>98</td>
<td>88</td>
<td>-10</td>
</tr>
<tr>
<td>5</td>
<td>76</td>
<td>64</td>
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<td>6</td>
<td>67</td>
<td>58</td>
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</tr>
<tr>
<td>7</td>
<td>66</td>
<td>72</td>
<td>+6</td>
</tr>
<tr>
<td>8</td>
<td>68</td>
<td>70</td>
<td>+2</td>
</tr>
</tbody>
</table>

\(^a\)High-Assertive Ss.

For all 8 subjects the \( T \) value was 4.5 on the Wilcoxon test, significant at \( p < .05 \). The \( T \) value for the 6 low-assertives was also 4.5, not significant.
DISCUSSION

The results showed that the training increased the subjects' ability to communicate assertively as measured by the RAS ($p < .01$). For the six low-assertive Ss the change approached significance. The program can be called valid as training in assertive communication.

Subjective comments from the students at the 3-month follow-up discussion indicated that each had found the training helpful in his own life. For example, one who had been in an uncomfortable romantic relationship was able to break the engagement. This same man (in his early twenties) had felt overly-controlled while living at home with his parents; he was able to move out to his own apartment and still maintain strong ties with his family. Another student found it easier to get along with his boss and to work more effectively. He also was able to ask a girl for a date—someone he had long wanted to know. Each had some personal success to report.

Equally important, the UNO instructors in Communication 101 and 111 who were teaching these eight students all independently reported that the students' speech-anxiety appeared to have lessened and their public speeches in class were very well-done following the training.

Given these reports it seems to be apparent that
the training program met the criteria established by Jakubowski and Lacks (1973) for evaluation of the effectiveness of cognitive-behavior modification programs for non-assertives: (1) to learn to distinguish assertiveness from aggression and non-assertiveness from politeness; (2) to develop a belief system to support assertive behavior; (3) to develop skills for dealing with excessive emotions that interfere with assertive behavior and other internal obstacles to assertive behavior; and (4) to develop assertive skills through actual practice methods. Jakubowski said: "When people learn how to be assertive, more is involved than a simple change in behavior; they are also changing the way they feel about themselves, indeed their whole value structure may change."

One of the high-assertives' RAS score decreased, perhaps due to a lessening of aggressivity. However, the scales presently available seem only to measure assertiveness or non-assertiveness and do not take into account the concept of "aggressiveness." An ideal scale might place aggressiveness at one end, assertiveness in the middle and non-assertiveness at the other end.

**Hypothesis**

The specific hypothesis investigated was: "There will be a significant decrease in blood pressure (BP) of low-assertives following completion of training in
assertive communication." This research hypothesis was supported by the results.

Systolic pressure decreased to a level significant at $p = .035$ for the 8 Ss, and for the 6 low-assertives Ss, $p = .109$ approaches significance.

Diastolic measures decreased significantly at the $p < .05$ level for all 8 Ss. This is an important finding because, while the systolic reading is the reactive part of the pressure, signalling stress due to illness, fear, and so forth, the diastolic pressure is non-reactive, more consistent and stable. This study showed that the diastolic reading does change with assertive communication training.

**Conclusion**

Despite a very small sample of subjects whose blood pressure was not critically high and who were not among the least assertive, the study found that effective assertive communication training can reduce blood pressure. This adds credence to the belief that assertiveness training can be an effective therapeutic tool for the control of blood pressure, at least with college-age males who are low-assertives.

These findings agree with Alexander's premise that learning to express aggressive impulses acceptably could
alter blood pressure, and with the work of Patel, Benson, Tasto and Huebner, Ellerbroek, Eliot and Witte.

Recommendations

Certainly a small-scale study such as this cannot be considered definitive, and yet there is sufficient evidence to raise several researachable questions:

1. The study should be repeated with medical students in this age group whose blood pressure (checked over a period of time) meets the criterion of 140/90 mm Hg. If there is indeed a greater incidence of hypertension among medical students every possible assistance for them should be explored.

2. A control group of normotensive/moderate-assertives should be used in this and other further studies.

3. A group of low-assertive/hypertensive women students should be studied.

4. The project should be repeated with older patients who are on medication. The possibility might be that their communication style would not change, due to fixed attitudes toward role and self, unless cognitive-behavior modification was included in the training.

5. Long-range studies should be done to determine
if the results of assertive communication training are lasting.

6. Contact should be established with athletic coaches whose team players are low-assertive/hypertensive to explain the possible advantages of assertive communication training for these young men and women.

7. Given the Meichenbaum hypothesis (that low-assertives have an adequate repertoire of assertive responses but do not use their skills because of conflicting internal dialogue) it might be interesting to study the relationship between assertive/non-assertive communication behavior and communication orientation as measured by the Rhetsen Scale, measuring rhetorical sensitivity (Carlson, 1978). Could assertive communication training help resolve conflicting self-talk and enable one to speak more appropriately, with a greater degree of rhetorical sensitivity, in one's various roles and daily interactions?

8. Future studies of assertive communication training should include black subjects. Dr. Frank Beckles, associate chief of psychiatry and director of psychophysiological medicine service at the U.S. Public Health Service,
Baltimore, recently claimed that the higher death rate among black hypertensives (compared to the rate for white hypertensives) is in part due to the greater stress of living conditions and the inability to express feelings.\(^2\)

If training in assertive communication should continue to prove to be helpful in the control of high blood pressure, then several practical applications of this technique seem worthy of attention. The training could be offered to the staff in hypertension clinics, to physicians in private practice, clinical psychologists, biofeedback technicians, teachers of yoga and meditation—to the several places in the world of medical and behavioral science where hypertensive patients present concurrent mental and emotional problems. Training the professionals who treat these patients to identify the need for assertive communication and referring the patients to assertive communication instructors might be one way to spread the idea quickly so that more patients benefit more rapidly.

Practitioners of family therapy should be informed of this research and alerted to the possibility of

\(^2\)Omaha World Herald, April 15, 1979 report of Dr. Beckles' presentation to the 3rd Annual UNMC Minority Health Emphasis Conference.
recommending assertive communication training for families with one or more members who are hypertensive. "Unblocking" familial communication is often one of the most important goals for these therapists and their clients. The training could prove a vital means for the release of pent-up feelings too often expressed with hostility within the confines of a family.

Because hypertension is occurring with greater incidence at younger ages than formerly thought possible, a concentrated program could be directed at junior-high and high-school age children, still learning to inhibit and repress their real feelings, thus setting the stage for the development of stress-related hypertension. At such an early age training might be quite effective.

Perhaps, most of all, a new term needs to be coined, other than "assertive." There is little doubt in this writer's mind of the reason none of the women who were selected as subjects, and none of the football team members who qualified as subjects, would volunteer for the training program. Of late, the courses called "Assertive Training for Women" connote teaching women to be aggressive. And how could a football player justify to himself (much less openly acknowledge) the label "low-assertive?" Because the training program used in this research combined a careful selection of components designed to create a cognitive-behavioral change, as well as teach
specific assertive communication skills, it really should not be called simply "assertive training." Called by another name, it might be more appealing to the people who need it most but are wary of attaching to themselves labels that further diminish an already damaged self-image.

One could borrow the term Witte (1979) used, "self-talk," and include in a course in interpersonal communication the needed cognitive-behavior restructuring. If the background research studied for this project relating hypertension to lowered self-esteem and poor self-concept is valid, then one must really consider the need for helping people see themselves more positively. Many recent magazine articles and news stories have pointed out the distressing rise in suicide among young people. In the opinion of many educators, such suicides are directly related to the young person's belief that he cannot meet perceived expectations. Why not aim at this age group with training that can help them correct internal self-talk, help them be less fearful of the imagined consequences of risk-taking behavior, help them feel more self-confident and better satisfied with realistic goals? Not every young person is depressed, anxious, suicidal or hypertensive, but such feelings and symptoms occur frequently enough to call for preventive programs to help forestall the development of stress-related diseases.
and tragedies. This is not an unrealistic goal, given the imaginative use of tested and proven training principles.

Furtherance of the application of the central idea of this research project into the effectiveness of assertive communication training in the control of hypertension, and any research studies to extend its applicability, largely depend on the availability of funding.

Current news reports that the widely-used antihypertensive drug reserpine has caused cancer in animals and may do so in humans adds urgency to the search for alternative therapies.3

The intriguing question remains: is assertive communication training a possible alternative or adjunctive therapy in the treatment of hypertension? Could young people already exhibiting high blood pressure be helped to control it, without the prospect of a lifetime of medication and the possible side effects of long-term drug therapy? Based on the present study, the answer seems to be a qualified "yes."

It is this writer's earnest hope that such will prove to be the case for many types of people.

3The Atlantic Journal and Constitution, April 29, 1979, Associated Press report of joint statement issued by the National Cancer Institute and the National Heart, Lung and Blood Institute.
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Chan, K. Individual differences in reactions to stress and their personality and situational determinants. Social Science and Medicine, 1977, 11, 89-103.


August 30, 1978

Dear (Faculty Member)

Attached are envelopes containing sufficient copies of both the "Communication Survey" and the "Research Questionnaire" for each student enrolled in your communication class, Call No. , meeting at on . These are the questionnaires I previously asked you to administer for research being conducted by Dr. Carlson, Dr. Robert Grissom (UNMC), Ms. Kay Currey and me. Involved are several studies, two of which are evaluative of the benefits of taking a course such as 101 or 111 (I hope to demonstrate some benefit, but we'll have to see about that). Your assistance in getting students to complete these questionnaires honestly is vital to us, and greatly appreciated. I certainly know how precious every minute of class time is. Do not tell your students that they will be given these questionnaires again at a later date.

Please distribute the questionnaires to your class at the earliest convenient date. They are to be completed at once in the classroom, collected by you, put back in the envelope, and delivered as quickly as feasible to me (we need every single copy, as we may be short some of the scales).

Be sure to take No. 2 pencils with you when you are ready to administer the scales. Get the pencils from Mrs. Penton. The "Communication Survey" will be machine scored, so must be done with No. 2 pencil. The questionnaires are in sets, so you can distribute them quickly.

Read or paraphrase the following instructions and see that students follow them as closely as you can:

1. Faculty members and graduate students in the Department of Communication are doing a number of research investigations of what students can and do accomplish in this course. We need your assistance in completing two questionnaires which I will now distribute. You should receive two sheets, one headed "Communication Survey" and one headed "Research Questionnaire."

2. All marks on the "Communication Survey" must be made with No. 2 pencil, as they will be machine scored. Please raise your hand if you do not have such a pencil so I can lend you one (now do so). Do not write anything on the questionnaires until I give further instructions--I repeat, do not write anything until I give further directions.
(As soon as everyone has the questionnaires and is looking up for further instructions, proceed to instruction 3).

3. The researchers do not need or want to know your name, but they must be able to compare your responses on these forms to some other data. So please write first the call number of this class, _____, on the back of the "Communication Survey" under "special identification #1" and where it says "Instructor" on the "Research Questionnaire."

4. Now write the last 4 digits of your social security number on the back of the "Communication Survey" where it says "Special Identification #2" and where it says "Name" on the "Research Questionnaire."

(Check to see if everyone understood and has complied).

5. Please be completely frank and honest in responding to all questions so that the research data are as valid and dependable as possible—do not try to give the "good" or right answer! I will not see results of your questionnaires. The researchers will never let anyone but you know your individual scores. Later, if you want, you can get your individual scores from Dr. Brilhart in Annex 1.

6. Do you have any questions? (Answer if about how to complete the questionnaires, but if about the purposes of the questionnaires or the research, you do not know.

7. As soon as everyone has finished, put all questionnaires back in the envelope, collect the pencils, and return as soon as possible to me, Mrs. Penton, or Kay Currey.

We greatly appreciate your assistance!
The Department of Communication is conducting a study of relationships between communicative style and high blood pressure. You were given this memo because your blood pressure has just been measured, and at this time was relatively high. We would like very much to have you consider being a subject in this research. If you are interested, please read on. It may be to your benefit as well as ours.

Under the supervision of Dr. Jack Brilhart, Department of Communication; Dr. Robert Grissom, Department of Cardiology, UNMC; and Ms. Kay Currey, the purpose of the research is to assess the benefits of training in assertive communication to persons with hypertension (high blood pressure). Although there is reason to suspect that for persons low in assertiveness specific training in assertive communication may be of benefit, no one has previously conducted any research to determine if this may be so. If you volunteer and are selected as a subject, you may be assigned to either a control or experimental group. Control group subjects will have their blood pressure checked several times between now and final exams, at their convenience, in Annex 2 (east of Adm. building). If placed in the experimental group, you will also be given a six-session course in assertive communication at no charge to you. All training will be done in small groups at a time convenient to you. Of course your blood pressure will also be measured on several occasions. Control subjects will be offered the chance to participate in the training next semester, also at no charge.

The knowledge to be gained from this research may be of very real benefit to some sufferers of hypertension. Even if it is not, training in assertiveness has proven helpful in interpersonal relationships to thousands of persons. Please note: assertiveness is not aggressiveness or pushiness, but a quiet, yet forceful way of insisting on being given fair treatment, of making your wants and feelings known to important other persons. All training will be done by Dr. Jack Brilhart, Professor of Communication.

If interested, please contact Dr. Brilhart at your earliest convenience in Annex 1, Room H (east of Adm. Building). You can make an appointment by calling extension 2600 or going to the secretary in Annex 1. Please do so as soon as possible if you are interested!

Jack Brilhart
Professor of Communication
Dear Fellow Student #__________________:

Faculty members of the UNO Department of Communication and I, a graduate student in that department, in conjunction with the Department of Cardiology at the University of Nebraska Medical Center, are engaged in a research project to determine if there may be a link between high blood pressure and the degree to which an individual can communicate wants, needs, etc. effectively.

We need YOU to assist in this project. Please come to Annex 2 (east of the Administration Building), the room marked "Blood Pressure Testing," for a blood pressure reading. At the time your blood pressure is measured we will determine if you have the qualifications for participation in this research. Please come at your earliest convenience at any of the following times:

- Monday, Sept. 25—10:00 a.m. to 2:00 p.m.
- Tuesday, Sept. 26—9:00 a.m. to 3:30 p.m.
- Wednesday, Sept. 27—8:00 a.m. to 4:00 p.m.
- Thursday, Sept. 28—9:00 a.m. to 2:00 p.m.
- Friday, Sept. 29—10:00 a.m. to 3:00 p.m.

If you cannot come during the above hours, please contact Dr. John K. Brilhart, Annex 1, extension 2600, to arrange for a blood pressure reading at a different time. It is very important that you have this blood pressure reading as soon as possible.

I will greatly appreciate your help in this project which will result in my thesis study for the Master's degree, and important research which may be of service to many people. Results will be published in medical journals. Thanks so much! Additionally, your instructor will be advised to credit you with participation in research in communication for 101 or 111.

Kay Currey
Graduate Student, Department of Communication

(If you have any questions, please call me at 571-3103, evenings between 6 and 7 p.m.)

Faculty Advisor: Dr. J. Brilhart
Annex 1, 554-2600

September 20, 1978
APPENDIX B

WOLPE-LAZARUS ASSERTIVENESS QUESTIONNAIRE

RATHUS ASSERTIVENESS SCHEDULE
Circle the answer that is true or most generally true:

1. When a person is blatantly unfair, do you usually fail to say something about it to him? YES NO

2. Do you often avoid social contacts for fear of doing or saying the wrong thing? YES NO

3. If you had a roommate, would you insist that he or she do a fair share of cleaning? YES NO

4. When a clerk in a store waits on someone who has come in after you, do you call his attention to the matter? YES NO

5. If someone who has borrowed $5 from you seems to have forgotten about it, would you remind this person? YES NO

6. If a person keeps on teasing you, do you have difficulty expressing your annoyance or displeasure? YES NO

7. Would you remain standing at the rear of a crowded auditorium rather than look for a seat up front? YES NO

8. If someone keeps kicking the back of your chair in a movie, would you ask him to stop? YES NO

9. If a friend keeps calling you very late each evening, would you ask him or her not to call after a certain time? YES NO

10. If someone starts talking to someone else right in the middle of your conversation, do you express your irritation? YES NO

11. In a plush restaurant, if you order a medium steak and find it too raw, would you ask the waiter to have it recooked? YES NO

12. If someone you respect expresses opinions with which you strongly disagree, would you venture to state your own point of view? YES NO

13. Are you usually able to say "no" if people make unreasonable requests? YES NO
14. Do you protest out loud when someone pushes in front of you in a line?  

15. Is it difficult for you to upbraid a subordinate?  

16. Are you inclined to be overapologetic?  

17. Would you be very reluctant to change a garment bought a few days previously which you discover to be faulty?  

18. If a friend unjustifiably criticized you, do you express your resentment there and then?  

19. Do you usually try to avoid "bossy" people?  

20. If a salesman has gone to considerable trouble to show you some merchandise which is not quite suitable, do you have difficulty in saying "no"?  

21. Do you generally express what you feel?  

22. If you heard that one of your friends was spreading false rumors about you, would you hesitate to "have it out" with him?  

23. Do you usually keep your opinions to yourself?  

24. Do you find it difficult to begin a conversation with a stranger?  

25. Are you able openly to express love and affection?  

26. Are you careful to avoid hurting other people's feelings?  

27. If you were at a lecture and the speaker made a statement that you considered erroneous, would you question it?  

28. If an older and respected person made a statement with which you strongly disagreed, would you express your own point of view?  

29. Do you usually keep quiet "for the sake of peace"?  

30. If a friend makes what you consider to be an unreasonable request, are you able to refuse?
31. If after leaving a shop you notice that you have been given short change, do you go back and point out the error? YES NO

32. If a close and respected relative were annoying you, would you smother your feelings rather than express your annoyance? YES NO

33. Do you find it easier to show anger towards people of your own sex than to members of the opposite sex? YES NO

34. Is it difficult for you to compliment and praise others? YES NO

35. Do you admire people who justifiably strike back when they have been wronged? YES NO
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RAS NAME ____________

Using the code below, indicate how characteristic or descriptive of you each of the following statements is.

+3 very characteristic, extremely descriptive
+2 rather characteristic, quite descriptive
+1 somewhat characteristic, slightly descriptive
-1 somewhat uncharacteristic, slightly nondescriptive
-2 rather uncharacteristic, quite nondescriptive
-3 very uncharacteristic, extremely nondescriptive

____ 1. Most people seem to be more aggressive and assertive than I am.
____ 2. I have hesitated to make or accept dates because of "shyness."
____ 3. When food served in a restaurant is not done to my satisfaction I complain about it to the waiter or waitress.
____ 4. I am careful to avoid hurting other people's feelings even when I feel that I have been injured.
____ 5. If a salesman has gone to considerable trouble to show me merchandise that is not quite suitable, I have a difficult time saying "no."
____ 6. When I am asked to do something I insist on knowing why.
____ 7. There are times when I look for a good, vigorous argument.
____ 8. I strive to get ahead as well as most people in my position.
____ 9. To be honest, people often take advantage of me.
____ 10. I enjoy starting conversations with new acquaintances or strangers.
____ 11. I often don't know what to say to attractive persons of the opposite sex.
____ 12. I will hesitate to make phone calls to business establishments or institutions.
13. I would rather apply for a job or admission to a college by writing letters than by going through with personal interviews.

14. I find it embarrassing to return merchandise.

15. If a close and respected relative were annoying me, I would smother my feelings rather than express my annoyance.

16. I have avoided asking questions for fear of sounding stupid.

17. During an argument I am sometimes afraid that I will get so upset that I will shake all over.

18. If a famous and respected lecturer makes a statement that I think is incorrect, I will have the audience hear my point of view as well.

19. I avoid arguing over prices with clerks and salesmen.

20. If I have done something important and worthwhile I manage to let others know about it.

21. I am open and frank about my feelings.

22. If someone has been spreading false and bad stories about me I see him (her) as soon as possible to "have a talk" about it.

23. I often have a hard time saying "no."

24. I tend to bottle up my emotions rather than make a scene.

25. I complain about poor service in a restaurant and elsewhere.

26. When I am given a compliment I sometimes just don't know what to say.

27. If a couple near me in a theater or at a lecture were conversing rather loudly, I would ask them to be quiet or to take their conversation elsewhere.

28. Anyone attempting to push ahead of me in a line is in for a good battle.

29. I am quick to express an opinion.

30. There are times when I just can't say anything.
RATHUS ASSERTIVENESS SCALE

Scoring Key

To score the RAS, reverse the scores on the following numbered questions:

1
2
4
5
9
11
12
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16
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18
23
24
26
30
APPENDIX C

SUBJECTS' RELEASE FORM
You are invited to participate in a study of the possible relationship between high blood pressure and the ability to communicate effectively. We hope to learn whether or not improved communication can lower an elevated blood pressure. You were selected as a possible participant in this study because your blood pressure is somewhat elevated.

If you decide to participate, Dr. John K. Brilhart and/or other members of the Department of Communication faculty or students will ask you to enroll in six weeks training course designed to help overcome barriers to communication, or to be one of the control group who will not receive such training. The training group will meet once a week for about two hours, for the six weeks of the course. The course will be given from about mid-October to the end of November. We cannot and do not guarantee or promise that you will receive any benefits from this study.

If you are presently receiving any medication for high blood pressure we certainly want you to continue taking it.

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission. If you give us your permission by signing this document, we plan to use the information only in publications in professional journals and as data to be used in further studies in this joint project.

Your decision whether or not to participate will not prejudice future relations with the University of Nebraska at Omaha or the UNMC. If you decide to participate you are free to withdraw your consent and discontinue participation at any time without prejudice.

If you have any questions we expect you to ask us. If you have any additional questions later, Dr. Brilhart, UNO Annex 1, 554-2600 will be happy to answer them.

You will be given a copy of this form to keep.

YOU ARE MAKING A DECISION WHETHER OR NOT TO PARTICIPATE. YOUR SIGNATURE INDICATES THAT YOU HAVE DECIDED TO PARTICIPATE HAVING READ THE INFORMATION PROVIDED ABOVE.

Date  Signature

Witness  Investigator
APPENDIX D

TRAINING PROGRAM
TRAINING PROGRAM

Session 1
1. Greetings, names, introductions
2. BP measures and RAS pre-test
3. Lecture

What is assertive communication (Dawley and Wenrich)

A. The ability to secure and maintain one's rights while respecting the rights of others. Assertive behavior as such involves the accurate expression of one's thoughts and feelings in a frank and open manner.

B. The continuum, from aggressive to nonassertive, hostility to patsy or phony.

Emotional honesty, self-respect, and respect for others

Effective and open communication

C. Adaptive, as opposed to nonadaptive (nonassertive)

What is Assertive Training

A. Behavioral as opposed to psychiatric or analytic

B. Acceptance of self as one is; anxiety, lack of skills

Your basic rights—handout

A. Many women, minority persons, Christians, have been taught not to assert self

"The meek shall inherit the earth"
"Children should be seen...."
"You shouldn't feel angry, rage, sexy, irritable, negative....."

B. Read and discuss the list of rights

Nonassertiveness can be situational or general. Aggressiveness can be confused with assertiveness, but aggressiveness is offensive, hostile action against another, in disregard for his or her rights. Aggression is characterized by the desire to pursue one's goals at whatever cost to the rights and welfare of others.
4. Behavioral analysis (Checklist) and Assertive Behavior record form

5. Behavioral myths

Modesty: "It pays to be modest at all costs...."

Use of "I" is egocentric

Myth of the good friend...." Anyone who is a good friend, spouse, relative, neighbor, boss, etc., should be able to anticipate our needs, feelings, thoughts, and give us what we would like to have, without our clearly saying what those needs are."

Myth of anxiety..."To feel and reveal anxiety is to be terribly wrong and weak."

Myth of obligation..."If you ask a friend for a favor, he is obligated to do it...or if a friend asks you for something you must answer 'yes'."

6. Subjective Discomfort (SD) scale

Think of place, situation, conditions when totally relaxed, with SD at 0. Feel it, fantasize, describe how you feel....

Now imagine most uncomfortable, stressful, anxiety-ridden scene you ever experienced or could imagine. This is 100 on the SD scale.

Imagine these situations and rate them on SD scale:

Meeting a stranger on bus or plane
Asking boss for a raise
Asking waitress to have a steak done over
Telling person who cuts in front of you in a line to go to end of line
Telling a stranger sitting on hood of your car to get off

Session 2

1. Problems, questions, issues, review of rights

2. Assertive Behavior Record Form

3. List several scenes in order that caused you to experience SD, then rank-order them.

4. Relaxation training

5. Review rank-ordered SD scenes
6. Starting conversations

   With family, acquaintances—any problems?

   Read paper, listen to radio, initiate comments about current events.


Session 3

1. Review of relaxation techniques

2. Review of problems causing SD, success of meeting people and initiating conversation

3. Making statements

   A. To group, tell three things about yourself you're proud of. Group responds, "I like your...."

   B. Start conversation with another, tell of something you enjoyed last summer, last week, that you're pleased with.

   C. Give compliments to others.

4. Developing defenses against criticism, aggression, "pushy people"

   A. Broken record (Cotler and Guerra)

   B. Selective ignoring (Cotler and Guerra)

5. Role playing in use of defenses

Session 4

1. Review of expressing positive feelings, compliments, meeting people, starting and carrying on conversations

2. Review of use of "broken record" defense to succeed in getting what you want.

3. Practice in simple asserting:

   A. Situations: a friend comes in, wants to talk, just as you are leaving a bit late for an important appointment

   Asking for directions to another city
Asking for a certain color shirt

Waitress beings french fries but you had asked for and want hash browns.

4. Practice in selective ignoring

You want to talk about how to prepare a speech and instructor talks about 3 papers still due, etc.

Describe scenes where selective ignoring would be useful and practice in pairs.

5. Handling criticism without getting defensive, arguing, fighting, feeling guilty, etc.

How to respond when critic is a family member, friend, teacher, stranger.

Three usual response patterns: withdraw, justify, anger.

Why is criticism hard to accept? (Adler)

Coping methods: ask for specifics, paraphrase, ask about consequences to other, ask if there are additional complaints, agreeing or fogging.

Session 5

1. Review use of record forms.

Review occasions when you were positive or negative in friendship or intimate relationship

When you were positive or negative with a stranger or in a situational relationship

2. Goal setting, consulting with each other

3. Review of defensive skills (broken record, selective ignoring, fogging)

4. Disarming anger (Cotler and Guerra)

5. Handling conflict assertively: four styles: nonassertive, directly aggressive, indirectly aggressive, assertive (Adler)

6. Negative or critical inquiry
Session 6

1. Review of past week's use of assertive skills

3. Review of handout, "Assertive Communication Principles and Techniques"

4. Review of societal myths

5. Troubleshooting and handling problems in future as you strive to be more open, honest, assertive
   A. An acquaintance or intimate gets hostile, aggressive or withdrawn when you become assertive
   B. Above person tries to make you feel guilty
   C. "Impossible" people
   D. When assertiveness doesn't work

6. New goals for the future

7. Sorting issues

8. Handling conflicts

9. BP and posttest RAS date set for following week
Suggested Readings for Assertiveness Trainees


Bloom, Lynn Z.; and Coburn, Karen; and Pearlman, Joan.  *The New Assertive Woman.*


Fensterheim, Herbert, and Baer, Joan.  *Don't Say Yes When You Want to Say No.*  1975.


SOME BASIC HUMAN RIGHTS

I have a right to:

1. judge my own behavior, thoughts and emotions.
2. to my own needs, and to accept these as being as important as those of any other person.
3. refuse requests without having to feel guilty or selfish.
4. to feel and express both anger and positive affect, and not to be logical.
5. to feel and express competitiveness and achievement drives.
6. to decide which of my needs are most important to me at the moment.
7. to make mistakes, and to offer no excuses for my behavior.
8. to stay out of other people's affairs.
9. to be treated as a capable adult, not patronized or treated as a child.
10. to change my mind.
11. to say "I don't know."
12. to decide when to be assertive.
13. not to understand.
Initiating and Responding Assertively at Different Relationship Levels: A Classification of Behaviors

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<tr>
<th>Initiating: social approach or request behaviors</th>
<th>Responding: Protective and refusal responses</th>
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<tbody>
<tr>
<td><strong>Strangers &amp; Situational Relationships</strong></td>
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<tr>
<td><strong>Friendship &amp; Intimate Relationships</strong></td>
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ASSERTIVE BEHAVIOR CHECKLIST

I. VERBAL BEHAVIOR

A. Loudness of voice
   Adaptive  Unadaptive  Not sure
   1________  2_________  3________

B. Fluency of speech
   Adaptive  Unadaptive  Not sure
   1________  2_________  3________

C. Use of personal pronoun "I"
   Adaptive  Unadaptive  Not sure
   1________  2_________  3________

D. Expressing positive feelings
   a. Paying compliments
      Adaptive  Unadaptive  Not sure
      1________  2_________  3________
   b. Expressing Affection
      Adaptive  Unadaptive  Not sure
      1________  2_________  3________
   c. Expressing empathy
      Adaptive  Unadaptive  Not sure
      1________  2_________  3________
   d. Giving and encouraging greeting expressions
      Adaptive  Unadaptive  Not sure
      1________  2_________  3________

E. Initiating conversation
   Adaptive  Unadaptive  Not sure
   1________  2_________  3________

F. Maintaining control of conversation
   Adaptive  Unadaptive  Not sure
   1________  2_________  3________

G. Impromptu Talking
   Adaptive  Unadaptive  Not sure
   1________  2_________  3________

H. Expressing Emotions
   Adaptive  Unadaptive  Not sure
   1________  2_________  3________
### I. Talking about Oneself

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### J. Feeling talk and Emotional Honesty

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### K. Agreeing with Compliments

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### L. Disagreeing Passively

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### M. Disagreeing Actively

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### N. Terminating Conversation

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### O. Asking Why

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### Q. Saying No

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### II. NONVERBAL BEHAVIOR

#### A. Postural Stance

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#### B. Distance from People When Talking

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#### C. Facial Expressions

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D. Eye Contact
   Adaptive     Unadaptive     Not sure
   1           2            3

E. Hand and other Body Movements
   Adaptive     Unadaptive     Not sure
   1           2            3

Particular behavior(s) in need of assertive training. (Write on a separate sheet of paper if more space is needed).
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<th>DATE</th>
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1. Initiating interaction (getting acquainted) with a stranger or slight acquaintance.
   A. By commenting on something in the environment, as "Isn't this a lovely building!" "Do you feel cold in here as I do?" "Did you see that dog?"
   B. By commenting on something about the other person (should usually be positive), as "I really like your dress." "I see you have a copy of *Shogun*. I've been wanting to read it. Are you enjoying it?"
   C. By describing how you feel, an existential comment, as "I don't know anyone at this party, and feel sort of left out." "I'm getting tired of waiting for this plane."
   D. By asking for assistance or a favor, as "Could you please tell me what time it is?" "Do you know any good places to eat in this city?"

2. Direct, open, honest communication of personal feelings and desires (instead of dropping hints or making demands), putting them in the form of "I" statements. Examples: "I like you." "I'm upset that . . . ." "I want hashbrowns, not french fries." "I want the money before Tuesday." "No, I don't want to see *Star Wars* again."

3. The broken record, or quietly restating as often as necessary what you want, don't want, will or will not do, feel, mean, etc. as a means of getting your point across, keeping other person from changing issue, refusing to be manipulated, etc. When doing this, your manner should be as in 2. Example: "I want an electric range, not gas." "No, I don't want a gas stove; I want an electric range."

4. Selective ignoring/reinforcement. After explaining what you want, feel, etc. in a direct, open way, then say you will not respond to aggressive, accusative, name calling, probing, or other behavior which you feel violates your rights. Then do not respond at all, verbally or nonverbally if the person continues. If the other asks why you are not responding, or asks you to do so, say you will whenever he or she respects what you said or asked. Then be sure to respond very fully and openly if the other changes.

5. "Workable compromise" or negotiating a contract—you propose or accept a proposal for a way of relating which meets your needs and rights as well as those of the other person.

6. Disarming the angry person, or refusing to interact with a person while he or she acts aggressively toward you. Remain calm, and state that you will be glad to discuss the issue(s) only when the other person will sit down, and talk without screaming, shouting,
accusing, name calling, or behaving aggressively in violation of your rights as a person. If the other won't or can't seem to do so, break off interaction, saying you'll be glad to talk and listen at a later date when you can talk about it calmly and objectively. It is always important to deal with one issue at a time.

7. "Critical Inquiry" or "negative inquiry" as a way of responding to criticism, direct or implied. Ask for specifics, paraphrase what you think the other person meant and ask if that is right, ask about consequences, or ask if there is anything else bothering the other. For example: "What specifically have I done that you see as neglecting you?" "Why does this matter to you?" "What else is bothering you about my sloppiness, as you call it?"

8. "Fogging," or agreeing in principle or with specifics as a way of responding to criticism (not a blanket or total agreement). For example: "Yes, I did arrive late." "You may be right that I could get killed on a motorcycle." "Yes, skiers do break bones." "Yes, I did mail your card late."