

The Relationship of Leader Style on Blood Pressure
of Clients Enrolled in Hypertension
Group Education Classes

by

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Abstract

This study examined leadership style of facilitators providing "IT'S UP TO ME" hypertension group education classes in local health departments in a midwestern state. Fiedler's Contingency Model was used to determine leadership style. The two styles of leadership investigated were task oriented and relationship oriented. The hypothesis was stated as follows: There will be no statistical difference between pre and post test blood pressure in a hypertension group education class, "IT'S UP TO ME", that may be attributable to leadership style of the facilitator.

There were 12 facilitators from 12 local health departments and 68 subjects participating in the classes. Data collection was accomplished by written instruments and instructions that were sent through the mail. Data collected from the facilitators included: demographic data, the Least Preferred Coworker Scale, the Group Atmosphere Scale, and blood pressures on each subject. Data collected from subjects included: demographic information and the Group Atmosphere Scale. The task oriented group included 10 facilitators and 58 subjects. The relationship oriented group had 2 facilitators and 9 subjects.

The null hypothesis was accepted at the 0.05 level. The one way analysis of variance revealed no statistical significance between the two groups' blood pressures. The between group systolic blood pressure probability was 0.6356; the diastolic blood pressure

probability was 0.7781. Due to this lack of between group significance, it was determined that leadership style was not a factor that impacted on blood pressure change.

Since the change within both groups was statistically significant at the 0.05 level, it indicated that the blood pressure decrease in both groups was statistically significant. The systolic blood pressure revealed a 0.0005 probability; the diastolic blood pressure a 0.0003 probability of significance.

Based on results of the study, this researcher concluded: (1) difference in leadership style was not significant in attributing to change in blood pressure, (2) blood pressure decrease was significant over the 6 week class, (3) consciousness raising through the program design could have impacted on blood pressure change, and (4) due to program design with increased group interaction, leadership style may not have been felt as strongly as in a more formal group.

Acknowledgements

Six years I devoted to the achievement of this dream of becoming a Master's prepared nurse. Many people influenced my life and assisted me in obtaining my dream. I want to thank a few of those people.

When I started graduate school in the spring of 1979, two of my colleagues at the Kansas Department of Health and Environment had in the previous year begun their graduate work. Due to the Outreach Program, I, too, was able to begin realizing my dream. So while traveling 1,800 miles per month with my full-time work, I participated in graduate classes. I want to thank Dorothy Woodin, R.N., M.P.H., for her belief that I would achieve my dream. My respect for this nurse has grown each year I have known her. Her ability to look into the future and develop plans for guiding public health in Kansas along a stable and sound path of growth is truly a gift.

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right. She was able to assess my readiness to move forward at key moments. For this, I am appreciative.

With this goal in my life accomplished, I hope to use it as the Lord shows me the way. Many new options will be open for the use of my knowledge and skills.

Chapter I

Introduction

Since 1972, Federal, State, and local government programs, along with organizations in the private sector, have cooperated in an effort to control hypertension through the National High Blood Pressure Education Program (NHBPEP). Coordinated by the National Heart, Lung and Blood Institute (NHLBI), this program focused on increasing public and professional awareness of this serious health problem. The goal of program agencies was to reduce deaths and disability related to high blood pressure through improved education, detection, and treatment (Haines & Ward, 1981). Since the NHBPEP was a national effort, it was implemented in a variety of ways according to each state's structure and philosophy.

In this hypertension group education study, the state health department was the parent agency for the Hypertension Project. Their role was to establish grant contracts, set standards of care, and evaluate the effectiveness of the blood pressure control efforts for local agencies providing direct care.

This investigator spent a year educating public health nurses in a midwestern state to facilitate a hypertension group education program, "IT'S UP TO ME"¹. The purpose of this program was to provide an effective client intervention for the Federal Hypertension Project of which the state was a grantee. The state had been involved in the federally funded hypertension program for over eight years. In

routine audits of local hypertension screening efforts, it was decided that screening efforts were reaching a maximum number of people each year. Therefore, it was time to carry the high blood pressure project a step further and provide interventions for persons identified as hypertensive or at high risk for developing high blood pressure. The focus of the "IT'S UP TO ME" program was to decrease client blood pressure through medication compliance, education regarding hypertension as a disease, and change in lifestyle behaviors.

The education program provided to the nurse facilitators consisted of a two and one-half day workshop. Independent learning materials regarding hypertension facts were sent to each facilitator prior to their attending the 15 contact hour workshop approved by the State Board of Nursing for continuing education credit. The focus of the workshop was to develop the nurse's skills in facilitating groups of hypertensive clients.

Each participant was given a facilitator's manual at the beginning of the workshop that was designed in a "cookbook" format. The components of the program were outlined in this manual. Also included was processing information for each group activity. The facilitator manual encouraged the facilitators to individualize the material in order to meet particular group needs.

Methods of education used in the facilitator workshop included slides and tape, 16 mm movie, group interaction activities, sharing of personal self and group discussion (see Appendix A). The final event was the videotaping of each nurse as she facilitated one of the

activities from the manual with the workshop participants pretending to be hypertensive clients.

The "IT'S UP TO ME" program for clients consisted of six 90-minute sessions over a six week time period. The topics included: hypertension, medication, nutrition, stress, lifestyle changes, and decision making. Each client was provided a manual which was hers/his to keep. Each session included blood pressure measurement, weight measurement, a review of the objectives, slide-tape presentation on the topic, activities--for--increasing clients' self-awareness of present behaviors, group discussion regarding healthy behaviors, and a relaxation exercise.

Basic information was reported on each class by the facilitator to the State Health Department regarding clinical and behavioral changes of the clients. Effectiveness evaluation was determined from these data.

Because this author was involved in educating the facilitators, this is the area which was pursued for this investigation. Questions kept coming up at each of the six workshops like, "Would this nurse be a good facilitator?" "Would she feel she had to do the group exactly by the book or could she adapt as needed?" "Which of the nurses in this workshop would have more success in helping clients lower their blood pressure?" "Which of these nurses would feel comfortable leading the 'IT'S UP TO ME' classes?"

These questions intrigued the author to the point that a concept paper on interpersonal interactions was written. Studying that concept helped to focus on the questions which needed study.

However, the leadership question remained. "What is it about some leaders that makes people so willing to respond to them and other leaders seem to generate no interest or excitement from their followers?" Since this area had its own field of study, this author decided to look at leadership effectiveness for this research.

Purpose of the Study

The purpose of this study was to investigate leadership styles and their effect on blood pressure change in clients enrolled in "IT'S UP TO ME" hypertension group education classes. More specifically, this study was designed to answer the following research question: Was there a relationship between group members' blood pressure change in a hypertension group education class, "IT'S UP TO ME", that may be attributable to the leadership style of the facilitator?

Hypothesis

There would be no statistical difference between pre and post program blood pressures in a hypertension group education class, "IT'S UP TO ME", that may be attributable to leadership style of the facilitator.

Definition of Terms

Leadership Behavior. The particular acts in which a leader engaged in the course of directing and coordinating the work of his group members (Fiedler, 1967, p. 36).

Leadership Style. The underlying need-structure of the individual which motivated his behavior in various leadership situations (Fiedler, 1967, p. 36).

Coacting Group. "A group with a common task and each member was on his own, and his performance depended on his own ability, skill, and motivation" (Fiedler, 1967, p. 19).

Facilitator. A registered nurse who had completed the "IT'S UP TO ME" Facilitator Workshop and led a group of hypertensive clients in an "IT'S UP TO ME" class.

Client. Any person enrolled in an "IT'S UP TO ME" class that had two consecutive elevated blood pressure readings.

Risk Factors. Lifestyles, behaviors or personal history which predisposed a person to factors considered to contribute to the development of hypertension.

Assumptions

All clients had one or more risk factors for hypertension.

Clients were admitted to the group in various stages of needing help to control their hypertension.

Delimitations

Motivation for lifestyle change were not controlled.

The researcher elected not to control for activities (e.g., stop smoking, decreasing sodium intake) chosen within the structure of "IT'S UP TO ME" program.

Chapter II

Review of Literature

The review of literature covers four areas considered to be relevant to this study on leadership style. The theoretical framework of the Contingency Model of Leadership Effectiveness is discussed with the specific components of situational favorability and motivation structure. The second factor is coacting groups as identified by Fiedler and a review of literature of hypertension education groups. Hypertension as a chronic disease will be discussed followed by a description of the "IT'S UP TO ME" program. Finally, the significance of this study to nursing will be covered.

Theoretical Framework

The Contingency Model of Leadership Effectiveness was first proposed by Fiedler in 1967 as a means of studying different leadership attributes and their effectiveness with group members. The principal thesis was that the relationship between leadership style and leadership effectiveness was contingent upon the favorableness of the situation. The model attempted to spell out the specific circumstances under which various leadership styles are most effective.

The distinction between leadership style and leadership behavior is critical for understanding the Contingency Model. Leadership style was defined by Fiedler as the underlying need-structure of the individual which motivates his behavior in various leadership

situations (Fiedler, 1967, p. 36). Leadership style thus refers to the consistency of goals or needs over different situations. Leadership behavior was identified as the particular acts in which a leader engaged in the course of directing and coordinating the work of his group members (Fiedler, 1967, p. 36).

There were two major styles of leadership presented. One of these was a leadership style which was primarily task-oriented, which satisfied the leader's need to gain satisfaction from performing the task. The other was primarily oriented toward attaining a position of prominence and toward achieving good interpersonal relations (Fiedler, 1967).

In terms of promoting group performance, the task oriented type of leadership style was considered more effective in group situations which were either very favorable for the leader or which were very unfavorable for the leader. The relationship-oriented leadership style was more effective in situations which were intermediate in favorableness. Favorableness of the situation was defined as the degree to which the situation enabled the leader to exert influence over his group (Fiedler, 1972).

In order of importance, the three major variables determining situational favorableness were: (1) the quality of the interpersonal relations between the leader and the followers, (2) the task structure or the degree to which the group's task is programmable and clear cut, and (3) the leader's formal position power (Fiedler, 1967; Rice, 1975).

Situational Favorableness

Leader-Member relations. According to Fiedler (1967), leaders had more power and influence if they had a good relationship with members than if they did not, that is, if they were liked, respected, and trusted. Leader-member relations have been measured by means of members' sociometric rating of the leader or by leader's Group Atmosphere Score.

Task structure. Tasks or assignments that were highly structured, explicit or programmed gave the leader more influence than tasks that were vague, nebulous, and unstructured (Fiedler, 1967). Task structure has been measured by looking at the degree to which (1) the requirements of the task were clear, (2) the problems encountered could be solved in different ways, (3) the correctness of the solutions could be verified, and (4) there was more than one correct answer (Fiedler, 1967).

Position power. Leaders had more power and influence if their position allowed them to reward and punish, hire, and fire (Fiedler, 1972). An example of this is the plant manager with more power over his subordinates than a committee chairman.

In a study by Mitchell, Larson and Green (1977), the position power measure consisted of five ways in which a leader could get subordinates to do their jobs. These power bases were (1) ability to punish, (2) ability to reward, (3) ability to command respect, (4) formal rank, and (5) knowledge or expertise. This type of scale has been used by other authors and adapted as needed. Fiedler (1967)

includes a thirteen item scale developed by Hunt for determining position power.

The Contingency Model was consistent with anecdotal evidence that some leaders performed well under one condition while others performed well under different conditions. The Contingency Model postulated that the effectiveness of a group is contingent upon the relationship between the motivation system of the leader and the degree to which the group situation enabled the leader to exert influence (Fiedler, 1967). As classified by Fiedler (1967, 1972), the major variables impact on the group situation include leader-member relations, task structure, and position power.

Motivation Structure

The Esteem for Least Preferred Coworker Scale (LPC) was developed by Fiedler (1967) and interpreted as an index of a goal hierarchy. High LPC persons, that is, individuals who described their LPC in positive terms, were seen as primarily motivated to relate to others. In an unfavorable situation, where the leader's control was low and the outcome uncertain, high LPC individuals sought to assure themselves of being related, and their behavior was directed toward establishing relationships. In situations in which their relatedness was already assured, that is, in situations in which they were accepted and in which their position power was great, they were motivated to seek secondary goals, luxuries such as recognition from superiors, and admiration (Fiedler, 1972).

Low LPC persons, that is, those who describe their least preferred coworker in very unfavorable terms, were considered to be

basically motivated by task structure. In situations in which their ability to perform the task was secure, that is, when the group supported them, their position power was high, and the task was structured, they would in addition, seek to develop pleasant work relations. Their behavior then seemed friendly and considerate toward coworkers (Fiedler, 1972).

In other words, leadership motivation, as measured by the LPC score and leadership behavior, was not directly related. Highly task-motivated leaders might have wished to get their job done by being considerate and pleasant. Highly relationship-motivated leaders may have concerned themselves with the task in order to achieve their secondary goal of being admired and recognized (Fiedler, 1972).

The implications of this model were that both the relationship-motivated and the task-motivated leaders performed well under some situations but not others. Second, it was not accurate to speak of a good leader or a poor leader, rather one must think of a leader who performed well in one situation but not in another. The performance of a leader obviously depended as much on the situation as it did on his personality.

According to Rice (1978), the inductive development of the Contingency Model has placed the LPC in a more prominent theoretical role than is usually accorded a research measure of this type. Discussions of the model often place greater emphasis on the "LPC score" than on the theoretical concepts measured by the scale. Most individual difference measures are designed to tap some preconceived

theoretical concept. But the scale was not the product of a conscious effort to identify theoretical distinct "styles" of leadership. The only theoretical guidance behind the LPC scale was the general proposition that perceptions of other persons reflect important characteristics of the perceiver and that such perceptions can influence social interaction (McMahon, 1972; Rice, 1978). Apparently the LPC was labelled a measure of "leadership style" only because the LPC score of group leaders proved to be an important predictor of group performance (Rice, 1978). Based on the analysis of "task versus relationship", the LPC scale is best viewed as an attitude measure that reflects a basic difference in personal values of high-, low-LPC persons.

Rice (1978) concluded in his random sample of 66 empirical studies that the LPC scale is best viewed as a measure of interpersonal attitudes. The conditions under which high and low LPC persons have favorable or unfavorable attitudes were thought to reflect systematic differences in the value systems of these two types of persons (see Figure 1).

Task-oriented style	Relationship-oriented considerate style	Task-oriented style
Low Assumed Similarity or Least-preferred Coworker scores	High Assumed Similarity or Least-preferred Coworker scores	Low Assumed Similarity or Least-preferred Coworker scores

Figure 1
 Leadership Styles Appropriate for Various Group Situations*

*Fiedler, F.E. A theory of leadership effectiveness. New York: McGraw-Hill, 1967, p. 14.

In Rice's (1975) review of LPC literature, the dynamics of behavior associated with LPC was interpreted in the framework of a systems model. LPC was viewed as the central component of a system also including group process, group outcome, and the environment. In contrast to the traditional unidirectional causality perspective of the Contingency Model, the systems approach is based on bidirectional causal relationships between components.

Instrumentation

Fiedler's (1967) original interest was in the operational measurement of interpersonal relations. The research was particularly concerned with investigating the therapeutic relationship. In one of the devices explored, the patient described himself by sorting statements on cards, using Q-sort technique methodology. He ordered the statements into eight categories ranging from the one most descriptive of himself to the statement which was next most descriptive, and so on until he came to the statement which was considered least descriptive of himself. Fiedler developed the instrument to where the patient gave a self-description, the therapist gave a self-description and the therapist gave a prediction of his patient. The idea was that a clinician who really understood his patient would also be able to tell how the patient would describe himself (Fiedler, 1967).

As it turned out, the typical therapist's predictions of his patients were neither reliable nor accurate. Reputedly good therapists tended to describe their patients as more similar to

themselves, while reputedly poor therapists tended to describe their patients as quite dissimilar (Fiedler, 1967).

This measure, called the Assumed Similarity of Opposites (ASO), was at first interpreted as indicating psychological warmth, acceptance, and permissiveness. From this work with individuals, the instrument was generalized to perceptions on the performance of small task groups.

Interpersonal perception scores were based on the assumption that the way in which one person perceived another affected his relations with him (Fiedler, 1967). Thus, whether or not the other was in fact intelligent, friendly, cooperative, and helpful may be relatively unimportant to the relationship as long as he was perceived in this manner. This perception may, of course, have changed in the course of time, but so, presumably, would have the relationship.

The Assumed Similarity of Opposites (ASO) was the original instrument with respondents being asked to complete the questionnaire for their least preferred coworker (LPC) and a separate one for their most preferred coworker (MPC). By 1967, when Fiedler published his theory, most work was based on a score derived from only one of these coworker descriptions, namely that of the Least Preferred Coworker. The ASO and LPC scores are based on an identical scale sheet (Fiedler, 1967).

In completing the LPC scale, the respondent was required to think of all the people with whom he had ever worked and to identify the one person with whom he had the most difficult time in getting a

job done. The respondent then described his least preferred coworker in terms of a series of bipolar semantic differential scales. Each scale was scored on an eight point continuum with the favorable pole scored "8" and the unfavorable pole scored "1". The respondent's LPC score was calculated by simply summing the values of all items. Thus, a respondent describing his least preferred coworker in the negative region on most bipolar pairs received a relatively low LPC score. To receive a high LPC score, the respondent must have described his least preferred coworker in relatively favorable terms on many of the bipolar scales. From norms reported by Posthuma, high and low LPC's were defined by selecting persons who had scored above or below the normative mean by at least one normative standard deviation. Low LPC was defined as a score less than or equal to 40, and high LPC as a score greater than or equal to 80 (Vecchio, 1980). Fiedler reported that on the 18 item scale, the high LPC persons is above 74, the middle is 64-73, and the low LPC person would score below 63.

It is important to note that specific items used in the LPC scale have varied over the years. For the version of the instrument used in this study see Appendix I. Reliability and validity of the instrument will be discussed in Chapter III.

The Coacting Group

Fiedler used the term "coacting group" to define a group with a common task and each member working relatively independently of other team members (Fiedler, 1967, p. 19). Each member was on his own, and his performance depended on his own ability, skill and motivation.

The individual member was affected by the moral and logistic support which he received from the group (Fiedler, 1967).

The leader's purpose in the coaching group was the development of individual group members' motivation and the training which was to enable each member to perform up to his/her ability, and the prevention of destructive rivalries and competition. The leader's major functions included: (1) advisor and consultant, (2) anxiety-reducing agent who provided emotional support and tension relief to his group, and (3) the leader as supervisor, evaluator, and spokesman of the group (Fiedler, 1967, p. 20).

In a study by Wyka, et al. (1980), it was found that group educational experiences resulted in individual involvement and commitment in affecting positive behavior changes. In addition to more efficient utilization of professional time and resources by gathering together a greater number of clients per unit of time rather than establishing a one-to-one educational program, the benefits of group education for client learners included: (1) providing a feeling of acceptance and security as part of a group that shared a common concern, (2) active involvement in the process of sharing consequent common fears, perceptions and attitudes with a homogenous group, and (3) a greater commitment to integrating needed knowledge into behaviors (Wyka, et al., 1980, p. 5).

The shift in patterns of disease toward chronic illness necessitates greater patient participation in disease management and in their own rehabilitation; they require greater social support over longer periods. Patient activation, or the enhancement of patient

and support group involvement in personal health care through teaching management techniques and problem-solving skills, has emerged in health education in response to this need. The combined use of group process and hypertension education was the basis for the development of the "IT'S UP TO ME" program.

"IT'S UP TO ME"

The purpose of "IT'S UP TO ME" was to provide guidance for groups of hypertensive clients toward a normotensive state. The program was designed to be an adjunct to current medical treatment. It utilized current drug knowledge to supplement physician teachings as well as incorporating hand warming, relaxation techniques, diet, and exercise to maximize the effectiveness of medication usage ("IT'S UP TO ME" Facilitator Manual, 1980).

The primary objectives for the clients were to:

1. Formulate a working support system to aid in lifestyle changes and maintenance of good health habits.
2. Adapt their lifestyle to provide a positive impact on their health status.
3. Demonstrate long term maintenance of good health habits as established in the program.
4. Measure their own progress toward self-established goals ("IT'S UP TO ME" Facilitator Manual, 1980).

Facilitator Manual

The facilitator was responsible for establishing a supportive atmosphere where positive growth could occur. The facilitator manual was prepared as a guide to assist the facilitator in accomplishing

this. Instructions for each activity were designed to help increase the facilitator's effectiveness. They were meant to be utilized as suggestions allowing room for adaptation to the individual settings. The effectiveness of the program was designed around group interaction rather than a rigidly structured format. The concept could tolerate some alterations in environment, facilities, and tone if the main ingredient, the facilitator, provided the underlying principles of client education. The manual helped accomplish this. It provided the underlying principles in a format that was adaptable to unique settings ("IT'S UP TO ME" Facilitator Manual, 1980).

Description of Sessions

The program was divided into six sessions, each emphasizing a different aspect of hypertension treatment in order to foster holistic health care. Each 90 minute session included a check of weight and blood pressure, a slide presentation, a relaxation or hand warming exercise, and a group activity. This format provided the basis for support for necessary lifestyle changes as well as making knowledge available for sound decision making. "IT'S UP TO ME" offers a starting point for clients to begin to realize their own health potential.

Client manual. At the first session, each client was given an 84 page manual to use for guidance during the class and for reference at home between sessions and after completing the six week program. The manual included the material for each session. Each chapter included agenda, purpose, brief narrative information on a specific topic, a

lecturette/slide, a relaxation exercise, a group activity, and a take-home quiz.

Preparation for the first session. Each client was encouraged to bring a support person to class. It was felt that the person closest to the client was important in supporting lifestyle changes.

In order for the facilitator to assess the client's level of hypertension related knowledge, a Health Education Level Test (HELT) was completed by each client (see Appendix B). The information was used by the facilitator to know which client might need specific help. The HELT was administered again during the sixth session in order to measure the knowledge gained from the classes.

Each client's locus of control was considered important in the "IT'S UP TO ME" program, since the program was designed as a support group for clients working to make behavioral changes in their lives. The facilitator gained insight into each client's perception of his/her control over his/her health when she scored the Locus of Control instrument (see Appendix C).

Clients signed in and picked up a contract (see Appendix D). After picking up the contract, the client weighed him/herself and had his/her blood pressure measured.

Ground work was laid for group involvement in the program during the first session. The Golden Rules for the group consisted of:

1. Please share with the group.
2. Participate as you can with the group.

3. Recognize each person in the group as an important individual ("IT'S UP TO ME" Client Manual, 1980). The rules were kept basic in order not to overstructure the group.

IT'S UP TO ME Class Curriculum

The focus of helping clients to manage their hypertension was directed at determining their compliance potential and understanding their life-styles. The goal of therapy was to reduce the diastolic blood pressure to below 90 mm Hg with a minimum of side effects and inconvenience to the client (Anderson & Bauwens, 1981; Kaplan, 1978). It was felt this could be accomplished in 80% to 85% of hypertensive clients, regardless of the initial severity of the disease (Kaplan, 1978).

A variety of treatment modalities have been identified as effective in managing hypertension. They include medication, diet, relaxation, exercise, assertiveness training, and education regarding hypertension as a chronic disease. They will each be briefly discussed as they are viewed as impacting on clients of the "IT'S UP TO ME" program.

Session One: Hypertension

The major focus of this session was for the clients to be able to describe what high blood pressure is, to know major risk factors, to state the effects of high blood pressure, share their feelings about having high blood pressure, and to share something positive about themselves. During this session, clients were introduced to the hand warming activity using a finger thermometer. The 20 minute narrative was read aloud and clients were encouraged to practice it at home.

It was essential for the nurse facilitator to understand hypertension in order to effectively lead the group. An individual learning packet was provided each nurse. The areas covered included physiology, etiology, and epidemiology.

Epidemiology of Hypertension

The prevalence of high blood pressure for black persons has been found to be higher than for white persons, with an overall ratio of almost 2:1 (Marcinek, 1980). Research has shown that hypertension is widespread among all socioeconomic and educational levels and in all areas of the United States (NHBPEP, 1978).

Social class has been shown to inversely correlate with the incidence of hypertension. The poor are at much greater risk of high blood pressure than persons from higher socioeconomic backgrounds (Keil, 1977). Sex has also been associated with hypertension. Men have previously had a far greater incidence of high blood pressure than women (Brestin, Gifford, & Fairbain, 1966).

Hypertensive individuals were found to conceal their thoughts and feelings from others, and to deny emotion-arousing stimuli in a self-disclosure situation. Mann (1977) also found differences in the expression of hostility between a group of 108 hypertensives and 108 normotensives. Subjects with hypertension demonstrated more hostility and were less self-critical than the normotensive group.

Session Two: Medications

The major focus of this session was for clients to become knowledgeable regarding the medications they were taking. For each medication the client was taking, they received a drug card that

provided information on brand and generic name, type of medication, what it does, special instructions to follow, what to do if they forgot to take a dose, possible side effects, other precautions to follow, and what the pill might look like (see Appendix E).

Group activities focused on sharing how each client remembered to take his/her medication, share a stressful situation, and practice a listening activity. The majority of the group began to feel comfortable with each other by the end of this session. They shared directly and honestly. Some clients still held back and volunteered an occasional comment.

Session Three: Stress

In this session, clients were encouraged to become aware of what their internal and external stressors were and how they reacted to them. The association between distress and disease was related to high blood pressure. The hand warming activity was emphasized during this session.

Relaxation and biofeedback techniques have been correlated with mild reductions in blood pressure, especially in patients who tend to be anxious or tense and young patients with mild or labile hypertension (HBP Coordinating Council, 1980). These methods are still experimental and long term effectiveness has not been established.

Session Four: Nutrition

During this session, information was provided on the four food groups and foods high in potassium and salt. A Food Group Analysis booklet, that was developed specifically for this program, was given

to each client. The group practiced counting sodium points and calorie points so they could do it at home. The sharing activity was on accepting feelings in this session. Group dynamics seemed to take over and the facilitator could let the group run itself with minimal guidance.

Session Five: Lifestyle Changes

Clients were encouraged to look at ways they could personally grow. Information was provided on alcohol, sexuality, smoking, being assertive, and making deliberative changes.

Session Six: Decision Making

Clients were taught to take their own blood pressure during this session. The group members had come to know each other personally and had shared a lot of themselves, sometimes intimately. This session capitalized on previous sharing and each client was asked to state one change he/she planned to make in his/her lifestyle. The total group provided positive support and encouragement as each client shared his/her change.

Follow-Up

Facilitators were encouraged to have clients come back in three and six months in order to determine their continued progress. At the group session, blood pressure and weight were again measured, a short program or film was shown, and there was sharing of their high blood pressure control efforts.

Statistical Analysis of Blood Pressure Change

In looking at the "IT'S UP TO ME" program data analysis for 656 of the clients who participated in the program in fiscal year 1982,

and through June 1983, the results were highly significant at the 0.05 level. Fifteen counties showed a significant change in systolic pressures. The pretest mean was 144.16 and the posttest mean dropped to 135.46. The t value for the systolic pressure was 6.74 with the $PR > (t)$ at 0.0001. Nineteen counties showed statistically significant change in diastolic blood pressure at the 0.05 level. A paired t-test was run on the data. The statewide t value was 9.16 with a $PR > (t)$ at 0.0001. The mean pretest diastolic pressure for all subjects was 86.33. The posttest diastolic mean was 80.96. For more information, see Tables 1 and 2.

Table 1
 FY 1982 and January - June 1983
 IT'S UP TO ME Data Reported by Individual Counties
 Displaying Significance In Blood Pressure Changes

	<u>Systolic State</u>				
	T	PR (t)	N	Pretest	Posttest
	6.74	0.0001	656	144.16	135.46
<u>County</u>					
Chase	4.69	.0054	6	152.00	135.66
Chautauqua	5.66	.0008	8	160.75	131.50
Cowley	2.08	.0415	60	141.33	137.36
Decatur	2.68	.0232	11	147.09	138.90
Douglas	4.59	.0001	77	147.76	135.74
Harvey	3.67	.0008	38	150.10	139.50
Jefferson	2.99	.0135	11	152.90	139.81
Jewel	2.56	.0373	8	133.75	125.50
Marion	3.98	.0165	5	169.20	142.40
McPherson	9.41	.0001	11	152.90	137.45
Miami	2.43	.0454	8	141.25	126.50
Mitchell	2.59	.0226	14	145.00	134.42
Neosho	3.14	.0138	9	142.44	127.55
Ottawa	3.30	.0131	8	142.50	128.75
Reno	3.54	.0046	12	162.00	146.50
Scott	2.51	.0193	25	139.92	132.56
Seward	3.65	.0005	63	134.82	129.09
Shawnee	4.21	.0001	63	144.00	122.06
Wyandotte	3.12	.0081	14	135.28	137.57

Table 2
 FY 1982 and January - June 1983
 IT'S UP TO ME Data Reported by Individual Counties
 Displaying Significance In Blood Pressure Changes

	<u>Diastolic State</u>				
<u>County</u>	T	PR > (t)	N	Pretest	Posttest
	9.16	.0001	656	86.33	80.96
Chase	3.80	.0127	6	91.66	84.66
Chautauqua	7.52	.0001	8	93.75	78.25
Douglas	6.52	.0001	77	87.24	78.80
Harvey	2.77	.0088	38	85.73	80.26
Jefferson	3.70	.0041	11	85.45	73.63
Jewel	2.97	.0208	8	82.75	73.00
McPherson	3.45	.0062	11	96.18	88.72
Mitchell	2.34	.0362	14	84.85	78.57
Osage	2.18	.0606	9	81.55	75.55
Ottawa	2.69	.0312	8	85.25	77.25
Reno	3.47	.0053	12	97.00	88.50
Sedgwick	2.72	.0129	22	84.50	79.36
Seward	4.95	.0001	63	86.98	83.03
Shawnee	3.18	.0023	63	88.49	77.04
Sheridan	2.58	.0327	9	88.44	77.77

Implications for Nursing

By looking at nurses' leadership styles, it was hoped that information would be gained regarding which nurses are most suited to function in the facilitator role. This would impact on nursing education as a tool for determining which nurses or student nurses should be counseled to pursue group leadership roles and under what circumstances. It was also expected to impact on administrative and organizational decisions within public health agencies to help determine which nurses should be encouraged to develop group leadership roles according to the agency's needs and the individual nurse's leadership style.

In the "IT'S UP TO ME" program, nurses with clinical knowledge and skills were taught facilitator skills. This allowed them to provide blood pressure monitoring and education to a group of clients who had come together to support each other as they learned new health behaviors. The second implication is related to the cost effectiveness of providing care to groups of clients rather than to individuals. With the national budget being directed away from public health programs, it has become critical for public health nurses to stretch their resources as far as possible.

In a review of LPC literature, there were no studies that looked at the nurse and group leadership style. No studies were found that used Fiedler's coacting group definition to test the LPC scale. Therefore, this study was designed to test the Contingency Model in both these areas.

In addition, this study was expected to update information about the "IT'S UP TO ME" program success across the state. This information would contribute to the evaluation of the Hypertension Project by the State Health Department. It would conceivably impact on a national basis, since the "IT'S UP TO ME" program has received national attention by the National High Blood Pressure Education Program.

Chapter III

Methodology

The independent variable investigated in this study was the facilitator's leadership style, as measured by the Esteem for Least Preferred Coworker Scale, and its effect on individual client blood pressure change. The "IT'S UP TO ME" program was provided to each hypertensive client in order to lower the client's blood pressure. Demographic data was gathered on each facilitator and client. The facilitator's previous education and experience in group facilitation was analyzed. The client's current risk factors for hypertension were identified through the use of the Demographic Form for Clients.

The instruments that were used included the Esteem for Least Preferred Coworker Scale (LPC) and the Group Atmosphere Scale (GA). The validity and reliability are presented in this chapter for the LPC and as it correlates to the GA.

Setting

The setting for this study was local public health departments in a midwestern state who planned to offer "IT'S UP TO ME" hypertension group education classes within the data collection period. A letter of willingness to participate was mailed to 80 public health departments. All 12 facilitators who indicated they planned to offer an "IT'S UP TO ME" program agreed to participate in the study (Appendix F). Each facilitator who agree to participate was asked to complete a consent form (Appendix H). They were also asked

if they would like to receive a summary of the results (Appendix G). Selection of the local public health departments was based on their plans to offer and complete an "IT'S UP TO ME" class between October 1983 and May 1984. Counties represented a cross sampling of the midwest state in terms of population.

Situational favorability. In order to test Fiedler's Contingency Model, the situational favorability of the setting was determined based on the three criteria identified by Fiedler. Leader-member relations were determined at the end of the sixth session. The facilitator and clients completed the Group Atmosphere Scale (GA) according to their perceptions of the group. Task structure was determined by the investigator based on the criteria identified by Shaw and Fiedler (1972). According to the criteria listed in Chapter II, it was identified as moderate task structure due to having specific tasks to be accomplished, a given time frame to accomplish them in, and a variety of methods which provided education and encouragement. There was room for different problem solutions and it was possible for there to be more than one correct answer. Individual needs of group members tended to influence the structure of the group.

Power and influence of the facilitator was considered moderate since the facilitator had no formal power, such as in an employee/supervisor relationship. The clients attended the sessions as their schedules and motivation permitted. The facilitator had moderate influence. She was in control of the environment, coordinator of the session activities and was responsible for the

clients meeting together as a group. As a nurse, she also had knowledge of hypertension.

Facilitators. The facilitators were selected on the basis of having completed a 15 contact hour "IT'S UP TO ME" facilitator workshop. The leadership information presented covered basic rules of group process. Interpersonal and task oriented topics were discussed. These included development of support relationships, projection of positive, caring attitudes and avoiding parental behaviors. See Appendix A for more information. This investigator was responsible for providing the workshop to the majority of the facilitators. She spent a year conducting workshops throughout the state. She was the second person in the position, therefore, some facilitators were trained by another person.

Subjects

Subjects were selected for this study according to their enrollment in an "IT'S UP TO ME" class at one of the identified local health departments. Self-referral, physician referral, intra-agency referral from a blood pressure clinic, word of mouth, public announcements, were methods used to notify potential clients about the class. Subjects were 18 years of age or older. Each subject completed at least three of six "IT'S UP TO ME" sessions in order to be included in the final analysis of data.

Procedure

The facilitators were mailed the agreement to participate in the study approximately one month prior to the beginning of the data collection. When they agreed to be in the study, they signed the form

and completed the attached LPC Scale and Demographic Form (Appendices K & J). Each facilitator also completed the Demographic Sheet for Facilitators. The names of the facilitator and the agency with which they were affiliated were filled in by each facilitator in order to identify clients and facilitators.

After completion of the scales and signing of the agreement to participate, the facilitator mailed the forms back to the investigator. Each facilitator was then mailed the client forms for Agreement to Participate, with the Demographic Form for Clients (Appendix L) attached. Instructions for assisting the clients in completing the forms was provided. If the facilitator decided not to participate in the study, she indicated so on the Agreement to Participate Form and returned it to the investigator without completing the instruments.

At the first class, each facilitator gave the clients the agreement to participate in the study. This form explained the purpose of the study, the requirement of the client and the risks (Appendix L). When they agreed to be in the study, subjects signed the form and completed the attached Demographic Form for Clients. These forms were returned to the facilitator who sent them to the investigator. If a client chose not to participate in the study, he/she signed the form indicating that he/she did not wish to participate.

The Demographic Form for Clients focused on questions that identified hypertension risk factors (Appendix L). Blood pressures were measured on each client at each of the six sessions by the

facilitator. All facilitators used a standard blood pressure measurement method taught in the Facilitator Workshop. This method was available to each facilitator in health departments in the Wellness Protocol Manual for Community Health Nursing.

After the sixth session was finished, the facilitator and subjects completed the GA scale (Appendix M) which was mailed approximately one week before the last session. Instructions for completing the instrument were included. The GA scale and the six week blood pressure record (Appendix N) were then mailed back to the investigator.

There was no attempt to change the format of the "IT'S UP TO ME" class or the facilitator's behavior during the data collection process. The additional requirements of the facilitator to complete the LPC at the beginning of the class and the demographic form was not believed to have any effect on her leadership behavior. The facilitator and the clients were asked to complete the Group Atmosphere (GA) Scale after the class was completed.

Validity of the Least Preferred Coworker Scale

Rice (1978) provided insight into the internal structure of the Least Preferred Coworker (LPC) Scale through an examination of the correlations between factor scores calculated using unit weighting (i.e., composite score based on the simple total of scale scores for all loading of a particular factor). Rice (1978) reviewed several studies that reported fairly high correlations between the different factors of the LPC and Assumed Similarity of Opposites (ASO) Scale (Alexander, et al., 1960; Cronbach, et al., 1953; Gruenfeld &

Arbuthnot, 1968; Shiflett, 1974). Gruenfeld and Arbuthnot (1968) reported correlations ranging from .40 to .55 between various interpersonal subscales.

According to Rice (1978), there was no "standard" form of the LPC Scale because the item content, instructions, and response format have varied over the years. Based on an intuitive, non-mathematical analysis of the LPC Scale, Foa and associates (1971) concluded that the scale was composed of three types of items: (1) 12 items reflecting interpersonal characteristics of one's least preferred coworker (e.g., friendly--unfriendly, open--guarded, rejecting--accepting), (2) two items reflecting task performance characteristics (efficient--inefficient, helpful--frustrating), and (3) three "mixed" items not falling cleanly into either the task or interpersonal categories (cooperative--uncooperative, supportive--hostile, self-assured--hesitant). Their analysis indicated that the total LPC score was primarily determined by respondents' evaluation of their least preferred coworker on the interpersonal dimension since this makes up the majority of items (Foa, et al., 1971).

The question of internal structure was complicated somewhat by LPC differences in the relationship between items. Several studies, cited by Rice (1978), have shown that the inter-correlations between different factors of the LPC scale are higher for low-LPC persons than for high- or middle-LPC persons. Low-LPC respondents described their least preferred coworker in a consistently negative manner on the different factors of the LPC scale. High-and middle-LPC persons showed a stronger tendency to describe their least preferred coworker

differently on different "factors" of the LPC scale than do low-LPC persons.

Reliability of the Least Preferred Coworker Scale

In Rice's 1975 dissertation, he identified 23 coefficients of test-retest reliability for the Least Preferred Coworker Scale, or its historical predecessor, the ASO. These coefficients ranged from 0.01 to 0.92, with a median of 0.67 and a mean of 0.64; the median test-retest interval was eight weeks (Rice, 1975). Based on efforts to identify factors responsible for the tremendous range among these 23 stability coefficients, he reached the conclusion that the test-retest reliability of LPC is generally acceptable when based on data from adult populations functioning in their normal environment during the test-retest interval.

Rice (1979) continues to maintain the internal consistency of the LPC Scale is high, based on data from five coefficients of internal consistency that became available after the publication of his dissertation in 1975. Coefficient alpha was 0.90 for responses of 226 undergraduates to a 22 item LPC Scale using the semantic differential format. In a sample of 288 West Point cadets using the same LPC Scale, coefficient alpha was 0.91. Two other studies report split-half coefficients 0.79, 0.84, and 0.89 for three testing of company presidents with a 12 item LPC Scale.

Rice (1979) compared the median LPC stability coefficient of 0.67 with other measures of personality. In making such a comparison, he noted that Fielder (1978) reported stability coefficients of 0.60 for the MMPI (one week) and 0.65 and 0.68 for the CPI (one year).

Thus, with regard to stability, the LPC performs as well as some other well recognized and widely used measures of personality. Therefore, the typical LPC stability coefficient was clearly in the range often found for self-report measures of attitudes and personality (Rice, 1979).

Group Atmosphere Scale

Fiedler found the Group Atmosphere Scale useful as a method of assessing the leader's rating of group atmosphere. The rating was obtained on a scale practically identical to the scale for obtaining the Least Preferred Coworker score. A summation of the item scores yielded a quite reliable and meaningful Group Atmosphere score, which indicated the degree to which the leader felt accepted by the group and relaxed and at ease with his role (Fiedler, 1967).

In a Belgian Navy experiment reported by Fiedler (1967), the corrected split-half of the GA scale was over 0.90. Group leaders tended to give consistently good or poor Group Atmosphere scores on all task sessions in this study, as indicated by the high inter-correlations among the three sessions, namely 0.76, 0.73, and 0.83.

Analysis of Data

Each of the facilitator's responses to the LPC Scale was averaged. This procedure was recommended in a telephone conversation with an assistant of Dr. Fiedler's since normative data has never been published on the 15-item LPC scale (see Reference Note, p. 19). This score was utilized to determine in which group the facilitator was placed for this study. Each leader was categorized according to relationship or task orientation. Facilitators with a score between

1 and 4.5 were considered as task oriented. Facilitators with scores between 4.6 and 8.0 were identified as relationship oriented.

An ANOVA between pre and posttest scores was done for systolic and diastolic blood pressures. This was done for both the task oriented and relationship oriented groups.

Risk factors were analyzed according to the category the facilitator was assigned. Each risk factor was considered in light of the success of clients in each category in lowering their blood pressure. No attempt was made to identify which clients lowered their blood pressure according to types of risk reducing activity they chose as part of their individualized plan.

Ethical Considerations

Written permission to use the LPC Scale was obtained from Fred E. Fiedler (Appendix W). Written permission from the facilitators in the participating local health departments from throughout the state was obtained for participating in the study. The Director of the Bureau of Community Health Services of the Kansas Department of Health and Environment wrote a letter of support (Appendix X). This was due to their original and continued involvement in making the "IT'S UP TO ME" program available across the state.

The subjects of the study (facilitators and clients) were informed of the purpose of the study, significance to nursing in looking at leader style and blood pressure, and risks in the letter accompanying the permission form they signed. Participation in the study was voluntary. Confidentiality and anonymity of the results were assured. When all forms had been collected from each

facilitator, an identifying code was put on the form and the name removed. The facilitator's code number was used in matching the participants of the group with the facilitator.

No risks were involved among those persons participating in the study. Only group data was reported to protect the anonymity of the respondents.

The results of the study were made available to the the individual facilitators at their request. At the time they signed the letter of consent, they were asked if they wanted a copy of the study results. The results were also made available to the Director of the Bureau of Community Health Services of the Kansas Department of Health and Environment.

Chapter IV

Presentation of the Findings

Introduction

The purpose of this study was to investigate leadership styles and their effect on blood pressure change in subjects enrolled in "IT'S UP TO ME" hypertension group education classes. This was accomplished by repeated measurement of each subject's blood pressure at the beginning and end of the class. Leadership style was defined by Fiedler. Leaders were considered to be task oriented or relationship oriented. The hypothesis for this study was: There is no statistical difference between pre and post blood pressures in a hypertension group education class, "IT'S UP TO ME", that may be attributable to style of the facilitator. Information in this chapter includes description of facilitator and subjects, data analysis, discussion of data analysis, and additional findings.

Description of Facilitators

Twelve "IT'S UP TO ME" facilitators consented to participate in this study. Eleven were registered nurses and one was a licensed practical nurse. All were employed in public health departments in a midwestern state. Each facilitator had attended the "IT'S UP TO ME" facilitator workshop provided by the state health department. Each facilitator functioned as the leader of the "IT'S UP TO ME" group offered in each of the 12 counties. Facilitators were classified according to their responses to the Least Preferred Coworker Scale.

Facilitators with scores from 0 - 4.5 were considered task oriented. Facilitators with scores 4.6 - 8.0 were classified as relationship oriented. Demographic information was obtained through a Demographic Form for Facilitators developed by the researcher (see Appendix J).

Age. The age of the group facilitators ranged from 29 years to 64 years in the task oriented group with a mean of 40.4 years. In the relationship oriented group, the age range was 48 years to 53 years of age and the mean was 50.5 years. Table 3 shows the raw data for each facilitator's age as well as the basic education and highest educational level achieved.

Table 3
 Facilitators by Leadership Style Orientation, Age,
 Basic Nursing Education Level, and
 Highest Education Level Achieved
 N=12

Facilitator	Age	Basic Level of Education	Highest Level of Education
01 ^a	30	Diploma	Baccalaureate in Health Ed., 3 hrs. grad. work
02 ^a	51	Diploma	Diploma
03 ^a	41	Diploma	Baccalaureate in other than Nursing
04 ^b	53	Diploma	Diploma
05 ^a	36	LPN	LPN
06 ^a	29	Diploma	Diploma
07 ^a	44	Diploma	Certificate as Family Nurse Practitioner
08 ^a	45	Diploma	Diploma
09 ^b	48	Diploma	Diploma
10 ^a	31	Associate	Certificate as Family Nurse Practitioner
11 ^a	33	Diploma	Baccalaureate in Nursing, 17 hours graduate work
12 ^a	64	Diploma	Diploma

^a = Task oriented facilitators
^b = Relationship oriented facilitators

Educational preparation of facilitators. The basic nursing preparation of the 10 facilitators in the task oriented group was 8 diplomas, 1 associate degree, and 1 LPN (see Table 4). In this group, two facilitators received a certificate as a family nurse practitioner, and one received a baccalaureate in a field other than nursing (health education). Two of the nurses completed the baccalaureate in nursing and were continuing their education in Master's programs. One diploma graduate indicated no further educational attainment.

Table 4
Number and Percentage of Facilitators
by Educational Preparation

N=12

<u>Basic Nursing Preparation</u>	Task Oriented		Relationship Oriented	
	N	%	N	%
LPN	1	10	0	0
Associate	1	10	0	0
Diploma	8	80	2	100
 <u>Highest Educational Level Attained</u>				
LPN	1	10	0	0
Associate	0	0	0	0
Diploma	4	40	2	100
Baccalaureate other than Nursing	1	10	0	0
Baccalaureate degree with grad. hours in Nursing	1	10	0	0
Baccalaureate degree in another field with grad. hours	1	10	0	0
Certificate as Family Nurse Practitioner	2	20	0	0
<u>College Classes in Group Leadership</u>	3	30	0	0

Three of the 10 task oriented respondents had taken a group leadership class for college credit. However, neither of the respondents in the relationship oriented group had received credit for group leadership classes.

As shown in Table 5, four facilitators in the task oriented group reported receiving C.E. credit for courses in group leadership. One relationship oriented facilitator had taken C.E. group leadership classes. Table 6 shows six task oriented and one relationship oriented facilitator participated in non-C.E. credit group leadership training.

Table 5
Number and Percentage of Facilitators Receiving
Continuing Education Credit by Groups
N=5*

<u>Group</u>	<u>N</u>	<u>%</u>
Task Oriented	4	80
Relationship Oriented	1	20

*7 facilitators did not answer this question

Table 6
 Number and Percentage of Facilitators Receiving Non-C.E. Credit
 Group Training by Groups
 N=7*

<u>Group</u>	<u>N</u>	<u>%</u>
Task Oriented	6	86
Relationship Oriented	1	14

*5 facilitators did not answer this question

Table 7 shows the number of groups led by the facilitators. Five task oriented and both of the relationship oriented facilitators led 1-5 groups. Three task oriented facilitators led 6-10 groups each; 1 task oriented facilitator led 11-15 groups, and 1 task oriented facilitator led over 20 groups. No relationship oriented facilitators led more than 5 groups.

Table 7
 Number and Percentage of Groups Led by Facilitators
 N=12

Number of Groups	Task Oriented Facilitator	Relationship Oriented Facilitator
1-5	5 (50%)	2 (100%)
6-10	3 (30%)	
11-15	1 (10%)	
16-20	0	
20	1 (10%)	

Description of Groups

Types of group classes. The variety of group classes led by the task oriented and the relationship oriented facilitators are listed in Appendix R. The relationship oriented facilitators indicated six different types of health oriented and non-health oriented classes. The task oriented facilitators reported leading 11 different types of classes.

Size of group classes. Since the participation of subjects attending the classes was critical, they were asked to consent on an individual basis. In total, 68 subjects participated in the study. Class size ranged from 2 subjects to 10 subjects.

Subjects were grouped by facilitators' responses to the Least Preferred Coworker Scale, showing that they were relationship oriented or task oriented. Facilitators with scores from 0 - 4.5 were

considered task oriented. Facilitators with scores ranging from 4.6 - 8 were classified as relationship oriented. All data collection was accomplished through the mail with written instructions. Table 8 shows the size of each group according to the facilitator's orientation.

Table 8
Subjects by Group Orientation and Size of Class
N=68

Facilitator	Number of Subjects
01 ^a	5
02 ^a	3
03 ^a	8
04 ^b	2
05 ^a	6
06 ^a	4
07 ^a	2
08 ^a	6
09 ^b	7
10 ^a	10
11 ^a	9
12 ^a	6

^a = Task oriented facilitators
^b = Relationship oriented facilitators

Description of Subjects

Subject demographic data for this study was collected by use of an instrument developed as part of the original grant which funded the "IT'S UP TO ME" project (Appendix L). The demographic form for subjects was used exactly as it was developed with no attempt to alter it.

Demographic data on the subjects in the study are presented in the following tables. Since the sample size varied, with 9 subjects in the relationship group and 59 in the task group, it was not meaningful to make statements regarding any differences between the two groups.

Table 9
Family Income Level by Group Orientation
N=62*

Yearly Income	Group 1 Task Oriented N=54	Group 2 Relationship Oriented N=8
\$ 0 - 6,000	3 (6%)	3 (37%)
6,001 - 15,000	8 (15%)	3 (37%)
15,001 - 20,000	12 (21%)	0 (0%)
20,001 - 25,000	9 (17%)	1 (13%)
25,000+	22 (41%)	1 (13%)

*6 subjects did not answer this question

Table 10
 Personal Risk Factors Identified by All Subjects
 N=56

	Stroke	Diabetes	High Blood Pressure	Kidney Disease	Heart Disease
Group 1-- Task Oriented	0	7	33	1	4
Group 2-- Relationship Oriented	0	1	8	0	2

Table 11
 Family Risk Factors Identified by All Subjects
 N=131

	Stroke	Diabetes	High Blood Pressure	Kidney Disease	Heart Disease
Group 1-- Task Oriented	22	25	32	4	25
Group 2-- Relationship Oriented	6	5	6	2	4

Table 12
Length of Time with High Blood Pressure by Years

N=62*

	Task Group N = 53	Relationship Group N = 9
1 year or less	14 (26%)	2 (22%)
2-4 years	17 (32%)	0
5-10 years	11 (21%)	4 (44%)
More than 10 years	11 (21%)	3 (34%)

*6 subjects did not answer this question

Table 13
Current Employment by Hours

N=61*

Hours/Week Employment	Task Group N = 55	Relationship Group N = 6
0-20	13 (24%)	0
21-39	3 (5%)	1 (17%)
Full time (40+)	20 (36%)	1 (17%)
Retired, not working	15 (27%)	4 (66%)
Retired, working part time	4 (8%)	0
Retired, but working 40 hours or more	0	0

*7 subjects did not answer this question

Table 14
Education Level by Groups

N=67*

Education Level	Task Group N = 58	Relationship Group N = 9
Grade School (0-8 years)	4 (7%)	0
8-12 years	4 (7%)	0
High School (12 years)	25 (43%)	7 (78%)
Undergraduate (13-16 yrs.)	10 (17%)	1 (6%)
Graduate (17-20 yrs.)	7 (12%)	1 (6%)
Graduate +	2 (3%)	0
Technical School	6 (10%)	0

*1 subject did not answer this question

Table 15
Additional Factors Impacting on Blood Pressure Control

N=68

<u>Exercise Regularly</u>	
Task Group	45 (76%)
Relationship Group	7 (78%)
<u>Take Prescribed Medications</u>	
Task Group	48 (81%)
Relationship Group	8 (88%)
<u>Follow Prescribed Diets</u>	
Task Group	12 (21%)
Relationship Group	1 (11%)

Table 16
 Frequency Taking High Blood Pressure Medication
 by Group as Ordered

N=55*

Percentage of Time Taking Medication as Ordered	Task Group N=47	Relationship Group N=8
Less than 50%	1 (3%)	0
Greater than 50%	1 (3%)	0
80%	1 (3%)	0
90%	7 (14%)	0
100%	37 (80%)	8 (100%)

* 13 subjects did not answer the question

Table 17
 Subjects' Response to Use of Salt, Prepared Foods, or
 Fast Food by Groups

N=59*

Condiment or Food	Task Group N=52	Relationship Group N=7
Salt	26 (50%)	7 (100%)
Prepared Foods	10 (19%)	0
Fast Foods	16 (31%)	0

* 9 subjects did not answer the question

Table 18
Subjects Practicing Stress Management or
Relaxation Activities by Group

	Task Group	Relationship Group
Yes	16 (28%)	7 (77%)
No	40 (72%)	2 (23%)

Data Analysis

This study was designed to answer the question, "Was there a statistical difference between pre and post test blood pressures in a hypertension group education class, 'IT'S UP TO ME', that may be attributable to leadership style of the facilitator". A one-way analysis of variance with repeated measures was calculated to determine if leadership style significantly influenced clients' blood pressure change over the 6 week class. The calculated between groups statistic was not significant at the .05 alpha level. The systolic blood pressure probability was 0.6356 and the diastolic blood pressure probability was 0.7781. Therefore, no statistically significant difference was attributable to the independent variables of task oriented versus relationship oriented leadership style. The null hypothesis was accepted.

First dependent variable--systolic pressure. The one-way ANOVA revealed no significant statistical difference between the groups at the .05 level. The probability was 0.635. This is shown in Table 19.

Table 19
ANOVA Summary Table for Systolic Response

	Degrees of Freedom	Sum of Squares	Mean Square	F	Probability
Between	1	268.20651	268.20651		
Within	1	1457.39284	1457.39284	0.23	0.6356

Figure 2 gives a visual picture of the group means for systolic blood pressure. It shows the decrease pre to post test in blood pressures, thereby supporting the overall effectiveness of the "IT'S UP TO ME" program in assisting the subjects to lower their blood pressure.

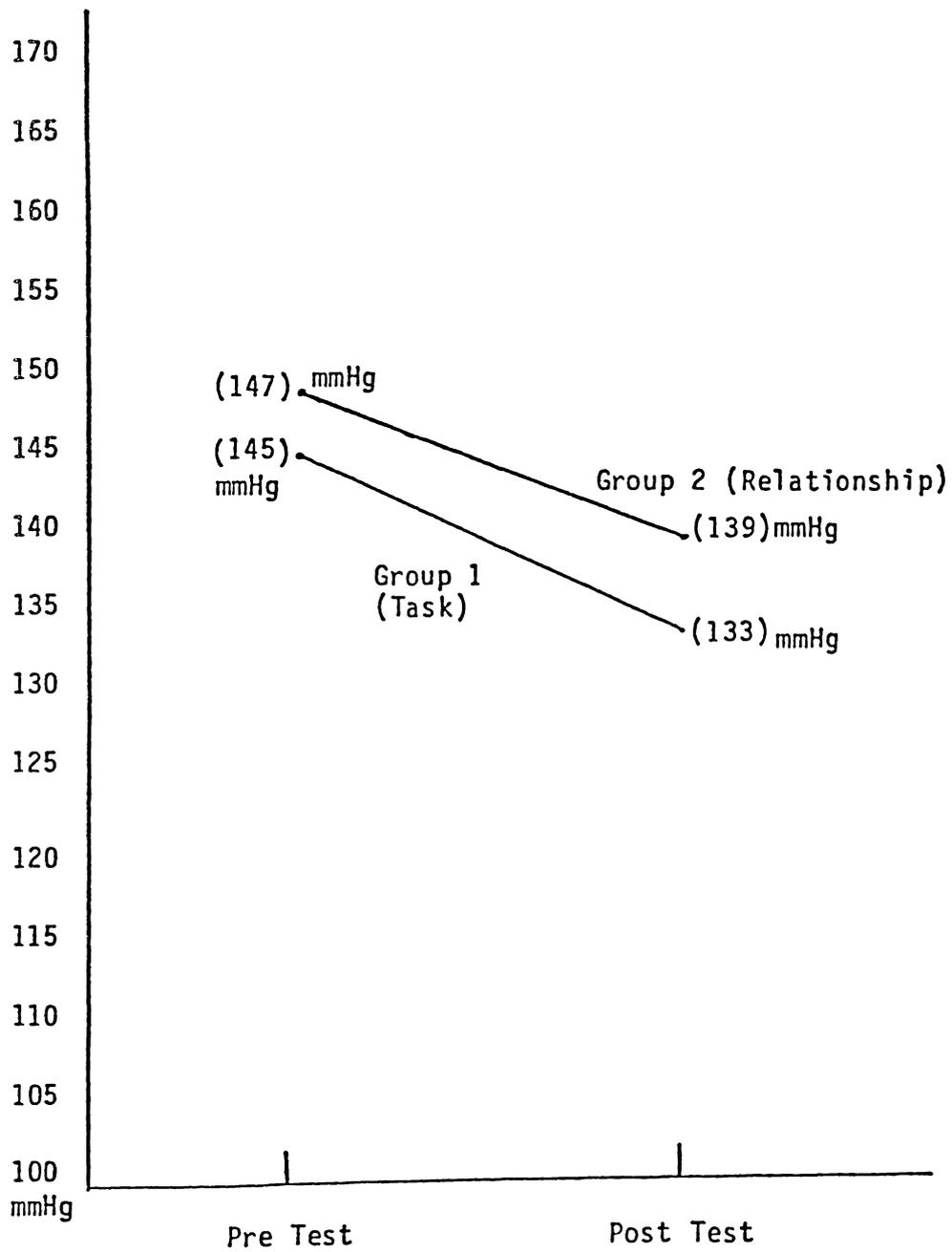


Figure 2
Means of Systolic Blood Pressure
Pre Test and Post Test

The task oriented group had a pre test mean of 145 mm Hg and a post test mean of 133 mm Hg. This resulted in a total decrease of 12 mm Hg. The relationship oriented group had a pre test mean of 147 mm Hg and a post test mean of 139 mm Hg. This was a decrease of 8 mm Hg for the group (see Table 20).

The standard deviation for the pre test systolic pressures for the task oriented group was 27 mm Hg. The post test standard deviation was 26 mm Hg. The standard deviation for the relationship oriented group's pre test pressures was 23 mm Hg. For the post test, the standard deviation was 16 mm Hg (see Table 20).

Table 20
Systolic Blood Pressure Variable
N=68

<u>Group</u>	<u>Mean Blood Pressures</u>		<u>Standard Deviations</u>	
	<u>Pre Test</u>	<u>Post Test</u>	<u>Pre Test</u>	<u>Post Test</u>
Task	144.63	133.08	26.59200	23.11084
Group	146.88	139.11	25.54596	15.940.86

Second dependent variable--diastolic pressure. In analyzing the second dependent variable, diastolic blood pressure the difference between diastolic group blood pressures was not statistically

significant at the 0.05 level. This is shown by the between group F ratio of .08. This indicated there was no difference between the groups attributable to the process by which the subjects were selected and assigned to either the task or relationship groups (Table 21).

Table 21
One Way ANOVA Summary Table for Diastolic Pressures

	Degrees of Freedom	Sum of Squares	Mean Square	F	Probability
Between	1	28.00050	28.00050		
Within	1	594.81162	594.81162	0.08	0.7781

Figure 3 gives a visual picture of the means for the group means. The means show the pre and post test decrease in blood pressure. This supports the overall effectiveness of the "IT'S UP TO ME" program.

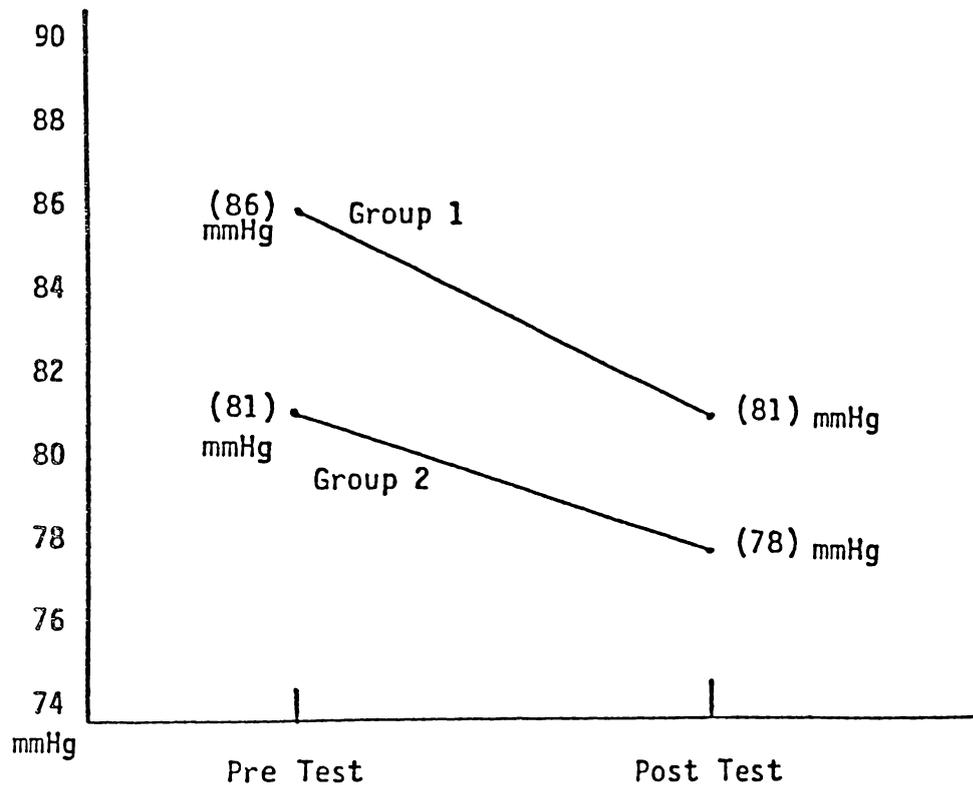


Figure 3
Means of Diastolic Blood Pressures
Pre Test and Post Test

The task oriented group had a pre test diastolic mean of 85 mm Hg and a post test mean of 79 mm Hg. This was a decrease of 6 mm Hg. The relationship oriented group had a pre test mean of 84 mm Hg and a post test mean of 78 mm Hg. The change was 6 mm Hg.

The standard deviation for the pre test diastolic pressures for the task oriented group was 14 mm Hg. The post test standard deviation was also 14 mm Hg. For the relationship oriented group, the standard deviation for the pre test was 13 mm Hg, and for the post test it was 16 mm Hg (see Table 22).

Table 22
Diastolic Blood Pressure Variable

N=68

<u>Group</u>	<u>Mean Blood Pressures</u>		<u>Standard Deviations</u>	
	<u>Pre Test</u>	<u>Post Test</u>	<u>Pre Test</u>	<u>Post Test</u>
Task	85.28814	79.38983	13.94453	13.39569
Group	84.2222	77.77778	13.82778	15.69855

Discussion of Findings

The calculated F ratios were not significant at the 0.05 level. Therefore, the null hypotheses were accepted. This refutes the researcher's earlier thought that the relationship oriented leader would be more successful than the task oriented leader in assisting the subjects to lower their blood pressure (see page 30). This contention was based on Fiedler's (1967) Contingency Model which stated that a relationship oriented leader would be more effective in situations which were intermediate in favorableness. The "IT'S UP TO ME" program had been identified as being of intermediate favorableness.

Three variables determined situational favorableness. The first, quality of the interpersonal relationship, was determined by use of the Group Atmosphere Scale. Appendices U and V show the mean scores for facilitators and the group means for each class in the study. The scores of the facilitators and the class means were close

and all scores were in the positive area of the scale. The second variable was task structure. This researcher identified the task structure as moderate in Chapter 3 based on criteria identified by Shaw and Fiedler (1972). The third variable was the leader's formal position power. Since an employee/supervisor relationship did not exist, power was considered moderate. When all three variables were considered, the situation was defined as intermediate in favorableness for the leader. Referring to Chapter 1, Figure 1, Fiedler shows the most effective leadership style for this situation as being relationship oriented.

Additional Findings

The sample size of the two groups varied greatly. The task oriented group had 10 facilitators whereas the relationship oriented group had only 2 facilitators. This is important to note since the selection process was determined according to the facilitators' score on the LPC scale. This shows that of all the possible facilitators in the midwest state, 10 of the 12 participating in the study were task oriented according to Fiedler's Contingency Model. It could be assumed that there is a greater number of task oriented public health nurses in this state than relationship oriented, since all the facilitators were also public health nurses.

The mean age for the task oriented group was 40.4 years, which was 10.1 years younger than the mean age for the relationship oriented group. When this is related to basic and highest education level achieved, it is shown that the younger facilitators also attained the highest education levels. Nine of the 10 task oriented facilitators

continued their formal education, while neither of the relationship oriented facilitators received more than the diploma in nursing.

Facilitators receiving continuing education for group leadership classes were greater in the task oriented group (80%). An even higher number of task oriented facilitators, 86%, reported non-continuing education credit group training. In looking at all types of education, a greater number of task oriented facilitators participated in formal and non-formal classes than did relationship oriented facilitators. However, the study showed a statistically significant drop in blood pressure irrespective of the facilitators' basic education level, current education level, or formal or informal continuing education.

Size of the groups varied greatly. The task oriented had 59 subjects whereas the relationship group had only 9 subjects. Group size was dependent on the facilitator's LPC score and, therefore, was completely random. It is important to note that an N of 9 may not have been large enough to show true means on systolic and diastolic blood pressures.

Chapter V

Conclusions and Recommendations

Introduction

The purpose of this ex post facto study was to investigate the relationship of leadership style on pre and post test blood pressures in a hypertension group education class "IT'S UP TO ME". The leadership style was determined by asking the facilitators to complete Fiedler's Least Preferred Coworker Scale. The subjects' blood pressures were measured prior to beginning the 6 week class and after the last session. Included in this chapter is the summary of the study with conclusions, implications for nursing, and recommendations for future research.

Summary

This study was designed to examine the leadership style of facilitators as it related to "IT'S UP TO ME" hypertension group education classes provided through local health departments in a midwestern state. This researcher used Fiedler's Contingency Model to determine leadership style and compare it to the pre and post test change that occurred in the subjects' blood pressure. Two major styles of leadership were identified by Fiedler. One of these was a leadership style which was primarily task-oriented, which satisfied the leader's need to gain satisfaction from performing the task. The other was relationship-oriented and was primarily oriented toward

attaining a position of prominence and toward achieving good interpersonal relations (Fiedler, 1967).

The principal thesis was that the relationship between leadership style and leadership effectiveness was contingent upon the favorableness of the situation. The relationship-oriented leadership style was considered by Fiedler (1967) to be more effective in situations which were intermediate in favorableness. The researcher classified the "IT'S UP TO ME" program as being of intermediate favorableness based on criteria identified by Fiedler (1967). Therefore, the relationship-oriented leaders were expected to be more effective in helping their clients lower their blood pressure over the 6 week class.

There were 12 facilitators and 68 group subjects in this study. The facilitators were from 12 different local health departments in the stage and had attended the "IT'S UP TO ME" facilitator workshop. The subjects were local residents who voluntarily chose to participate in the education classes. They attended at least three sessions and were 18 years of age or older.

Data collection was accomplished by written instruments and instructions that were sent through the mail since the participating health departments were located throughout the state. When a facilitator agreed to participate, she was sent a consent form, a Demographic Form for Facilitators, and the Least Preferred Coworker Scale and instructions. At that time, the facilitator also received the subject data collection forms, including a consent form and Demographic Form for Clients. These forms were completed and

returned to the researcher after the first class. After the sixth session, the facilitator and subjects completed the Group Atmosphere Scale. The facilitator returned these to the researcher along with the pre and post test blood pressure readings.

A one way analysis of variance with repeated measures was calculated for the systolic and diastolic blood pressures. The between group statistics were not significant at the 0.05 alpha level as shown by a systolic blood pressure probability of 0.6356 and a diastolic blood pressure probability of 0.7781.

The demographic data of the facilitators revealed differences between the two groups. Ten of the 12 facilitators were task oriented. It is possible that more public health nurses are task oriented rather than relationship oriented. The study showed a significant drop in client's blood pressure irrespective of the facilitator's basic education level, current education level, or formal and informal continuing education.

The two groups were uneven in number of subjects assigned to them. The task oriented group had 59 subjects while the relationship group had only 9 subjects. This made it impossible to draw meaningful conclusions about the leadership style on blood pressure change between both groups.

Conclusions

Based on results of the study, the following conclusions have been made.

1. Difference in leadership style was not significant in attributing to change in blood pressure.
2. Blood pressure decrease was significant over the 6 week class.
3. Due to the increased role the group members played in interaction with each other, the leadership style may not have been felt as strongly as in a more formal group. Although Fiedler (1967) discussed the coacting group in his original work on the Contingency Model, research was not found which tested it. Most completed research was directed at formal power relationships involving supervision in the work setting or grade in the education setting (Fielder, 1973; Green, 1979; Grenfeld, 1969; Rice, 1981; Shaw, 1974).
4. Another factor related to leadership effectiveness is the "IT'S UP TO ME" design may have been such that leadership style was negated. Therefore, regardless of the facilitator's style of leadership, clients were successful in lowering their blood pressure.
5. Consciousness raising through the program design could have impacted on the clients' behavior compliance, therefore resulting in decreased blood pressure. Contributing factors built into the design of the "IT'S UP TO ME" program include hypertension facts, medication information, exercise, weight loss, salt and cholesterol intake, stress management, and lifestyle changes.

Nursing Implications

The implications for nursing based on this study will be discussed as they relate to leadership style and blood pressure in group education settings. Because there was no literature related to Fiedler's Contingency Model being tested in blood pressure classes, this researcher offers the following suggestions based on knowledge of the hypertension group education class and Fiedler's model.

1. Nurses need to continue providing group education classes since they were shown to be effective in assisting clients to lower their blood pressure. This was supported by Wyka (1980) who found that group educational experiences resulted in individual involvement and commitment in affecting positive behavior changes. Other groups similar to "IT'S UP TO ME" include "I CAN COPE" developed by the American Cancer Society and "ARTHRITIS SELF-CARE" by the National Arthritis Foundation.

2. Based on the results of this study, nurses can feel comfortable knowing their leadership style will not determine whether clients will be successful in becoming healthier.

3. Nurses in administrative positions can staff group education classes with available nurses regardless of leadership style.

4. Based on the information that leadership style does not impact significantly on client success in health status in group education settings, it is believed the State Health Department should continue to develop "package" programs. These could be used by nurse facilitators to assist clients in achieving a higher state of health.

5. Group education classes should continue to be provided in local health departments based on financial and human resource management issues. There is a more efficient utilization of professional time and resources by gathering together a greater number of clients per unit of time rather than establishing a one-to-one educational program (Wyka, 1980).

6. Based on the significance of the blood pressure decrease over the 6 week class, there are contributing factors important for nurses to be aware of in assisting clients to decrease their blood pressure. Specifically, knowing what hypertension is and its effects on the body can promote self-care measures which could contribute to lowered blood pressure. Discussing medication's purpose, dosage, how it is used by the body, and potential side effects can reinforce the need to follow the prescribed schedule of hypertensive medications.

The "IT'S UP TO ME" program also provided information and a chart for clients to establish or continue with exercise and/or stress reduction programs. Although exercise and stress reduction has not been definitely linked to lowered blood pressures, they have been shown to be of value in relaxation and decrease of tension (High Blood Pressure Education Coordinating Council, Jan. 1979). This decrease of tension would assist the smooth muscles in the body to spend more time in a relaxed state, thereby decreasing peripheral resistance to the heart.

Diet therapy is another area nurses can use to assist clients in lowering their blood pressure. Weight loss and decreased sodium intake are methods the client can use in place of medication or along

with medication (High Blood Pressure Education Coordinating Council, Jan. 1979). Specifically, nurses can help their clients focus on prevention of weight gain in the young adult years and slow, steady weight loss when appropriate until the desired body weight is achieved.

Due to the physiologic mechanisms involved in blood pressure balance, salt plays an important role in fluid retention. When a client decreases the amount of salt in his or her daily diet, the fluid retention may decrease, thereby decreasing the amount of peripheral resistance to the cardiac muscle. Moderate sodium restriction should be routinely considered as a possible component of treatment for persons with high blood pressure. For persons who experience significant side effects from drugs, sodium restriction should be considered as adjunctive therapy to help reduce drug dosages or increase drug efficacy (National High Blood Pressure Education Program, March 1979).

Recommendations for Future Research

Based on the results of this study, this researcher recommends future studies to examine the following questions and statements.

1. Would the initial 6 week statistically significant decrease in blood pressure still be measurable after 6 months and again at 1 year after the classes were finished?

2. Was the classification of the type of group according to Fiedler (1967) really finite enough to make the distinction? Perhaps more definitive criteria need to be used in a future study in

determining the situational favorability of the group (i.e., high, intermediate, or low).

3. Would there have been a statistically significant drop in blood pressure regardless of whether or not the facilitators attended the "IT'S UP TO ME" Facilitator Workshop?

4. Would there have been a statistically significant decrease in blood pressure if this had been a self-paced individual program without the coaching group format?

5. Would statistical significance be shown using a larger facilitator and subject population?

6. Is there another measurement of leadership style that would detect significant leadership style characteristics that impact on successful blood pressure decrease in group education settings?

7. Since leadership style did not make the difference, maybe subjects need to be looked at. Does the type of program appeal to people who are more self-motivated?

8. Does the "IT'S UP TO ME" program appeal to a certain individual based on learning style? Do people who are relationship oriented join these classes more frequently than task oriented persons? Or, is the reverse true?

9. Would the high percentage of self-reported compliance to prescribed hypertensive medications be validated by pre and post test blood analysis?

10. Do clients significantly change their pretest dietary habits during the 6 week class? If so, would this contribute to the statistically significant drop in blood pressure? The use of a 72

hour dietary history prior to beginning the class and at the end of the class could measure differences in nutrition patterns.

Footnotes

1. The "IT'S UP TO ME" program was developed through grant #07-00359-01-DHHS as a joint effort between the University of Kansas School of Medicine--Wichita, Division of Health Care Outreach and the Kansas Department of Health and Environment during 1979-1981.

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APPENDICES

Appendix A

"IT'S UP TO ME" Facilitator Workshop Agenda

First Day

- 8:30 Coffee available
- 8:45 Registration
- 9:00 Introduction of workshop staff and facilitator manual
- 9:15 Administration and discussion of FIRO-B
- 10:30 Session 1: Hypertension slides, lecture, discussion
(You can get the group to do what you want. Your attitude about your clients)
- 11:30 Lunch--on your own
- 12:30 Session 1 continued
- 1:30 "Biofeedback - Yoga of the West"
- 2:45 Break
- 3:15 Session 2: Medication slides, lecture, discussion
(What do you feel? How do groups operate? Parental behavior)
- 4:45 Dinner
- 6:15 Session 3: Stress slides, lecture, discussion
(Importance of the group experience. What do you feel?)
- 7:45 Session 4: Nutrition slides, lecture, discussion
(Experiential learning)
- 9:15 Adjourn

Second Day

- 8:30 Coffee available
- 9:00 Session 5: Lifestyle changes slides, lecture, discussion
(Don't tell them)
- 10:30 Break
- 10:45 Session 6: Decision making discussion
(How to manage groups)
- 12:00 Lunch--on your own
- 1:15 Practice facilitating - video taping
- 3:00 Questions and discussion of self-assessment questionnaire
- 3:30 Certificates and evaluations
Adjourn

Note: Material in parenthesis refers to topics the workshop facilitator addressed as part of processing each session.

Appendix B

"IT'S UP TO ME"
HIGH BLOOD PRESSURE GROUP EDUCATION PROGRAM

Health Educational Level Test*

Directions: This exercise will help us in our planning for the classes on high blood pressure. It is important for us to know what you understand about high blood pressure. Make a checkmark on the line before the answer that you think is correct. Thank you for your cooperation.

Name _____ Date _____

1. After one has had high blood pressure for a long time that has not been treated and controlled, what pair of organs might be damaged in the body? (Check one pair)

 a. Brain and kidneys
 b. Liver and stomach
 c. Heart and bones
 d. Heart and lungs

2. The term "systolic" used in the measurement of your blood pressure is defined as:

 a. The figure recorded that measures the average force exerted on the blood vessels by the heart.
 b. The first figure recorded that measures the force of your heartbeat pushing blood from the heart into the blood vessels.
 c. The second figure recorded that measures the pressure when your heart is at rest between beats.
 d. The figure recorded that measures the pressure the muscles exert on your blood vessels.

3. The term "diastolic" used in the measurement of blood pressure is defined as:

 a. The second figure recorded that measures the pressure when your heart is at rest between beats.
 b. The first figure recorded that measures the force of your heartbeat pushing blood from the heart into the blood vessels.
 c. The figure recorded that measures the average force exerted on the blood vessels by the heart.
 d. The figure recorded that measures the pressure the muscles exert on your blood vessels.

Appendix B (continued)

4. The word "hypertension" means which of the following:
- a. Blood rushing to the head
 - b. Overactivity
 - c. High blood pressure
 - d. An extremely nervous/tense condition
5. Choose the correct statement about high blood pressure.
- a. It can be cured.
 - b. It can be treated and controlled.
 - c. It cannot be treated or controlled.
 - d. It can be treated and controlled most of the time in mild to moderate cases without medical care.
6. Which minerals are you likely to lose when you take certain diuretics (water pills)? (Check one pair)
- a. Iron and sodium
 - b. Sodium and potassium
 - c. Zinc and iron
 - d. Zinc and potassium
7. Which pair of foods has a very high amount of salt per serving? (Check one pair)
- a. Spaghetti and cheese
 - b. Roast beef and ham
 - c. Asparagus and hamburger
 - d. Canned soups and dietetic soft drinks
8. Which of the following might you, as a person with high blood pressure, be advised to do?
- a. Stop smoking and make an appointment with your doctor only when you develop symptoms of high blood pressure.
 - b. Take your prescribed medications on a daily basis and follow an appropriate diet.
 - c. Lose weight if necessary and continue smoking if you still feel well.
 - d. If side effects from your medication develop, stop them, and inform your doctor on your next visit.

Appendix B (continued)

9. A high "risk factor" is defined as something that makes a person more likely to develop high blood pressure. Of the following risk factors, which pair contribute the most to high blood pressure? (Check one pair)

- a. Stress and poverty
 b. Race and alcohol
 c. Obesity and smoking
 d. Frequent colds and smoking

10. Which pair of foods has a very high amount of potassium per serving? (Check one pair)

- a. Bread and potatoes
 b. Carrots and bananas
 c. Bananas and potatoes
 d. Apples and cheese

True False

11. Most people who have high blood pressure have no symptoms.
12. High blood pressure affects only people over the age of 40.
13. Research has shown that a high salt intake is not related to having high blood pressure.
14. If you are obese and have high blood pressure, reducing your weight may help to control your high blood pressure.
15. People who are calm and relaxed do not develop high blood pressure.
16. Some high blood pressure medications may cause some side effects to begin with, but they usually go away as time passes.
17. You have been feeling well the past year, and your blood pressure is normal now, so it is probably OK to stop taking your medication and just follow your diet for a period of time.
18. Cigarette smoking is not a factor which can contribute to eventual high blood pressure.

Appendix B (continued)

True False

- ___ ___ 19. Individuals who are constantly subjected to severe stress can develop high blood pressure.
- ___ ___ 20. High blood pressure medicine must be taken every day in order to be effective.

*Adapted from the HELT designed by C.A. Wyka, M.S., N.P.; P.G. Levesque, B.S., N.P.; S.L. Ryan, M.S., N.P.; and E.J. Mattea, Pharm. D.

Appendix C

Locus of Control Instrument
"IT'S UP TO ME"Form A
MHLC

Name _____

HIGH BLOOD PRESSURE GROUP EDUCATION PROGRAM

This is a questionnaire designed to determine the way in which different people view certain important health-related issues. Each item is a belief statement with which you may agree or disagree. Beside each statement is a scale which ranges from strongly disagree (1) to strongly agree (4). For each item, we would like you to circle the number that represents the extent to which you disagree or agree with the statement. The more strongly you agree with a statement, then the higher will be the number you circle. The more strongly you disagree with a statement, then the lower will be the number you circle. Please make sure that you answer every item and that you circle only one number per item. This is a measure of your personal beliefs; obviously, there are no right or wrong answers.

Please answer these items carefully, but do not spend too much time on any one item. As much as you can, try to respond to each item independently. When making your choice, do not be influenced by your previous choices. It is important that you respond according to your actual beliefs and not according to how you feel you should believe or how you think we want you to believe.

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. If I get sick, it is my own behavior which determines how soon I get well again.	1	2	3	4
2. No matter what I do, if I am going to get sick, I will.	1	2	3	4
3. Having regular contact with my physician is the best way for me to avoid illness.	1	2	3	4
4. Most things that affect my health happen to me by accident.	1	2	3	4
5. Whenever I don't feel well, I should consult a medically trained professional.	1	2	3	4
6. I am in control of my health.	1	2	3	4
7. My family has a lot to do with my becoming sick or staying healthy.	1	2	3	4
8. When I get sick, I am to blame.	1	2	3	4
9. Luck plays a big part in determining how soon I will recover from an illness.	1	2	3	4
10. Health professionals control my health.	1	2	3	4
11. My good health is largely a matter of good fortune.	1	2	3	4
12. The main thing which affects my health is what I myself do.	1	2	3	4
13. If I take care of myself, I can avoid illness.	1	2	3	4
14. When I recover from an illness, it's usually because other people (for example, doctors, nurses, family, friends) have been taking good care of me.	1	2	3	4

Appendix C (continued)

	Strongly Disagree	Disagree	Agree	Strongly Agree
15. No matter what I do, I'm likely to get sick.	1	2	3	4
16. If it's meant to be, I will stay healthy.	1	2	3	4
17. If I take the right actions, I can stay healthy.	1	2	3	4
18. Regarding my health, I can only do what my doctor tells me to do.	1	2	3	4

Appendix D

IT'S UP TO ME
Hypertension Education Program
CLIENT CARE CONTRACT

My BP goal is:	week 1	week 2	week 3	week 4	week 5	week 6
BLOOD PRESSURE READING	/	/	/	/	/	/
At Goal?	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no

PILLS	week 1	week 2	week 3	week 4	week 5	week 6
All Pills Taken This Week?	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no

WEIGHT	week 1	week 2	week 3	week 4	week 5	week 6
Weight						
1 Pound Lost This Week?	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no
If Not Attempting Weight Reduction:						
Did You Weigh At Home?	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no

ATTENDANCE	week 1	week 2	week 3	week 4	week 5	week 6
Attendance at Class?	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no

CHOICE ACTIVITY	week 1	week 2	week 3	week 4	week 5	week 6
	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no

Appendix D (continued)

Additional Activity	yes/no	yes/no	yes/no	yes/no	yes/no	yes/no
---------------------	--------	--------	--------	--------	--------	--------

Hand Temperature						
------------------	--	--	--	--	--	--

TOTALS	week 1	week 2	week 3	week 4	week 5	week 6
Totals from above	yes ___ no ___					

Appendix D (continued)

ACTIVITIES I WILL DO:

1. I am working to get my blood pressure at goal.

My BP goal is _____. I use my _____ arm for taking my BP.

2. I am working to take all my high blood pressure pills.

<u>My BP Medications</u>	<u>Dose</u>	<u>Time Taken</u>	<u>Number of Pills At One Time</u>	<u>Date This Filled Out</u>

3. I am working on losing, or keeping my weight down.

My weight goal is _____, by date _____.

4. I will be working toward attending class.

5. I will also be working on one personal goal of my choosing.

CHOICE ACTIVITIES:

- 1) I will exercise 20-45 min. every day. Your choice of exercise.
- 2) I will stop adding salt to my food while cooking.
- 3) I will stop adding salt to my food at the table.
- 4) I will cut my cigarette smoking down to 10 a day.
- 5) I will stop smoking.
- 6) I will practice a relaxation exercise for a total of 45 min. daily.
- 7) I will take or have my blood pressure taken at home weekly.
- 8) Other

Appendix D (continued)

I agree to participate in the "IT'S UP TO ME" High Blood Pressure Education program. I understand that the information obtained about me for use in this study will remain confidential.

Client signature _____

Date _____

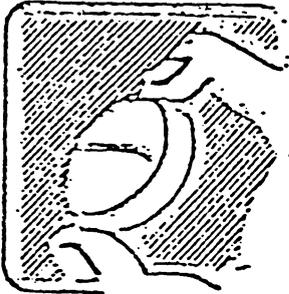
The nurse agrees to do the following: _____

Educator signature _____

Date _____

This program is supported by Grant #07-H-00359-01, awarded by HEW, Public Health Service to the University of Kansas School of Medicine-Wichita, Division of Health Care Outreach-Wichita, and the Kansas Department of Health and Environment.

Hypertension Medication Card



Hypertension Medication
**TRIAMTERENE/
 HYDROCHLOROTHIAZIDE**
 (Generic Name)

Dosage _____

Frequency _____

Brand Name: Dyazide

Type Of Medication: Diuretic, Potassium sparing.

What It Does: Makes your kidneys dispose of extra salt and water in your body. When taken as prescribed and on a regular basis, this action will lower your blood pressure. Dyazide has the added advantage over other diuretics in that it conserves potassium (a body mineral).

Special Instructions To Follow:

1. You will notice that you will empty your bladder often. This effect will last one to six weeks only.
2. It is best to take this medication when you first get up. If you are to take this twice a day, schedule the second dose in the mid-afternoon so you won't have to go to the bathroom during the night. This medication begins to work about two hours after it is taken and continues working for another six to twelve hours.
 Take _____ at _____.
(Dosage) (Time of Day)
3. You may notice that your mouth will feel dry. Chewing gum will help.
4. It is best to take this medication right after meals or with a snack. This will prevent the medication from possibly upsetting your stomach.
5. Please bring all medications with you when seeing your doctor or making a clinic visit.

(over)

Appendix E (continued)

6. Weigh yourself daily or every other day to check for rapid weight gain. If this occurs, call your doctor.
7. Continue to see your doctor regularly to assist him in evaluating your body's response to this drug (blood pressure and weight check).
8. The action of this diuretic is to cause you to lose salt. To increase the effectiveness of this medication, reduce the amount of salt you eat. Discuss this with your doctor.

If I Forget To Take A Dose: Take it as soon as you remember it (if it is still within the hour) or resume taking it at the next dosage time.

Possible Side Effects . . . What Can I Do?

Rapid weight gain, puffiness of hands and feet. Call your doctor.

Other Precautions To Follow: Avoid the use of excessive amounts of salt substitute, or eating and drinking large amounts of grapefruit juice, orange juice, tomato juice, bananas, apricots, coconut, dates, figs, peaches, or prunes.

What This Pill May Look Like:

Dyazide 
red

Questions?

Doctor or clinic to call: _____

Developed by: The University of Kansas,
Health Care Outreach/Wichita
Kansas Department of Health and Environment,
Early Intervention Screening Program

Appendix F
Facilitator Cover Letter

October __, 1983

Dear

I am currently working on my Master's degree in nursing at the University of Kansas. I am conducting a study on leadership effectiveness of facilitators conducting "IT'S UP TO ME" hypertension group education classes. Since you are a current facilitator of this class, you have been chosen to be included in the study. Your anonymity will be maintained throughout the study.

There is no known risk on your part in participating in this study as only group data will be reported. If you choose to participate in the study, please complete the two instruments enclosed and return via the stamped envelope prior to beginning an "IT'S UP TO ME" class.

Relevant information regarding the clients attending the class is also being collected for this study. You will be asked to distribute a demographic form along with a cover letter and letter of agreement to participate in the study to each client prior to beginning. This information will be mailed to me after the first session when the forms have been completed.

At each session you will be asked to record each client's blood pressure on the Blood Pressure Record in order to send it to me at the end of the class for analysis. Prior to the sixth session, you will receive an instrument to be completed by you and the clients in your group after the last session is over. The scale along with the Blood Pressure Record will then be sent to me for analysis. The information will be coded once it has been received. Once it has been coded, the names will be removed in order to protect each person's anonymity.

Thank you for participating. It is hoped that the information gathered from this research will help analyze the effects of hypertension education classes as well as look at public health nurses as facilitators of small groups.

Appendix F (continued)

If you would like a summary of the study, please return the enclosed form. It will take approximately six months before results of the study can be mailed to you.

Sincerely,

Mary Beth Riner, R.N.

Appendix F (continued)

IT'S UP TO ME Research Thesis

Please complete and return this form by August 10, 1983, in the enclosed envelope.

_____ I am interested in participating in this study and would like more information regarding what would be involved.

_____ I am not interested in participating in this study.

_____ I am interested in participating but had not planned to offer a class this fall.

Name _____

Address _____

Telephone Number _____

Thank you for taking the time to complete this form.

Mary Beth Riner, R.N.

Appendix G
Request for Summary of Study

If you would like a summary of the study, please sign below and return this form along with your completed instrument forms. It will take approximately 6 months before the results can be mailed to you.

Signature _____

Address _____

Appendix H

Agreement to Participate

I, _____ agree to participate in the research study conducted by Mary Beth Riner, R.N., as partial completion toward the Master's Degree in Nursing from the University of Kansas School of Nursing.

Signature _____

Address _____

Appendix I

Letter of Agreement to Participate

July 23, 1983

Currently I am working on the thesis for my master's degree in community health nursing. The area I am researching is the "IT'S UP TO ME" program.

At this point, I am looking for facilitators of the "IT'S UP TO ME" classes who would be willing to participate in this study. In order to help me plan for the actual research, I am asking you to complete the attached form. I will be collecting the data this fall, so am looking for facilitators who would be willing to conduct classes during that time.

I believe that the "IT'S UP TO ME" program is innovative and provides an excellent model for client education. Dorothy Woodin and I feel strongly regarding a continued effort to look at the effectiveness of the program. The research thesis I am involved with would build on existing clinical results of the program and attempt to define more clearly the value of the program and community health nurses as facilitators.

Thank you for completing the attached form. I'm looking forward to working with you. Have a nice summer.

Sincerely,

Mary Beth Riner, R.N.

Appendix J

Demographic Form for Facilitator

Instructions: You are asked to complete the questions to the best of your knowledge. Some of the questions require you to think back to your basic education and specific classes you completed. Please feel free to take as long as you need to complete this survey.

1. Name _____ Date of birth _____

3. Agency providing class _____

4. Basic level of education:

___ Associate ___ Diploma ___ Baccalaureate

___ Education other than nursing (if checked this option, please state what kind)

5. Current level of education:

___ Associate ___ Diploma ___ Baccalaureate

(Please include hours completed toward any degree if working on it at present)

___ In field other than nursing ___ Baccalaureate in nursing

___ Master's in field other than nursing ___ Master's in nursing

___ Additional education (please explain)

6. Have you had any classes in group leadership, or that had a significant component on group leadership, that you received college credit for?

___ yes ___ no

7. Have you attended any continuing education programs on group leadership that you received credit for?

___ yes ___ no

If yes, state the total number of hours _____

Appendix J (continued)

8. Have you had other training in group leadership (i.e., volunteer groups such as association work, church, politics, etc.)?

_____ yes _____ no

9. How many groups (more than one session) have you been the leader of?

_____ 0-5 _____ 6-10 _____ 11-15 _____ 16-20

_____ More than 20

10. Describe these groups as to their purpose, your leadership role, size of the group; number of group sessions per class.

Appendix L
Client Cover Letter

October __, 1983

Dear

I am currently working on my Master's Degree in Nursing at the University of Kansas. I have been given permission to conduct a study of "IT'S UP TO ME" hypertension group education classes. Since you are a participant of an "IT'S UP TO ME" class, you have been chosen to be included in the study. Your anonymity will be maintained throughout the study.

There is no known risk on your part in participating in this study as only group data will be reported. If you choose to participate in the study, please complete the attached form and letter of agreement to participate. Your facilitator will collect the forms from you and mail them to me. At the end of the last class, you will be asked to complete another form.

Thank you for participating. It is hoped that the information gathered from this research will help analyze hypertension control efforts through education classes.

Sincerely,

Mary Beth Riner, R.N.

4. How long have you known that you have High Blood Pressure?

5. Employment: How many hours per week do you work?

_____ 0-20

_____ 21-39

_____ Full-time (over 40)

_____ Retired, not working

_____ Retired, working part-time

_____ Retired, but working 40 hours or more per week

6. Education Level: What is your highest level of education?

___ Grade School

___ High School

___ Undergraduate College

___ Graduate College

1 2 3 4 5 6 7 8

9 10 11 12

13 14 15 16

17 18 19 20

+

Technical Education

7. Exercise: Do you regularly exercise?

_____ yes

_____ no

8. If yes, how often per week? _____

For how many minutes per exercise session? _____

9. Medications: Has your physician prescribed medication for your high blood pressure?

_____ yes

_____ no

Appendix M

Group Atmosphere Scale

Describe the atmosphere of your group by checking the following items:

- | | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | |
|-----------------|---|---|---|---|---|---|---|---|------------------|
| 1. Friendly | : | : | : | : | : | : | : | : | : Unfriendly |
| 2. Accepting | : | : | : | : | : | : | : | : | : Rejecting |
| 3. Satisfying | : | : | : | : | : | : | : | : | : Frustrating |
| 4. Enthusiastic | : | : | : | : | : | : | : | : | : Unenthusiastic |
| 5. Productive | : | : | : | : | : | : | : | : | : Nonproductive |
| 6. Warm | : | : | : | : | : | : | : | : | : Cold |
| 7. Cooperative | : | : | : | : | : | : | : | : | : Uncooperative |
| 8. Supportive | : | : | : | : | : | : | : | : | : Hostile |
| 9. Interesting | : | : | : | : | : | : | : | : | : Boring |
| 10. Successful | : | : | : | : | : | : | : | : | : Unsuccessful |

Appendix 0
 Subjects' Blood Pressure Reading, Change,
 and Direction of Change

Relationship Oriented Leadership Style

Subject	Pre Test	Post Test	Change	Direction
209-001	148/92	158/94	-10	2
209-002	148/92	158/94	-10	2
209-003	172/88	142/62	30	18
209-004	166/86	138/82	28	4
209-005	136/72	124/64	12	8
209-006				
209-007				
204-001	160/100	152/90	8	10
204-002	164/102	152/102	12	0

Appendix P

Frequency of Exercise Sessions Per Week and Minutes Per Session

Group Classification	Subject Number	Frequency of Sessions	Minutes/Session
1	01001		
1	01002	3 X week	15-30
1	01003	Daily	10
1	01004	2 X week	60
1	01005	3-4 X week	20-45
1	02001	4 X week	50
1	02002	4 X week	
1	02003		
1	03001	3-4 X week	20-40
1	03002		
1	03003	3 X week	60+
1	03004		
1	03005	3 X week	60
1	03006		
1	03007	5 X week	20
1	03008		
2	04001	2 X week	60
2	04002	4 X week	60
2	05001		
2	05002	5 X week	30
2	05003	7 X week	30
2	05004		
2	05005	4 X week	5
2	06001	Daily	
2	06002	Daily	20
2	06003		
2	06004	4 X week	20-25
1	07001		
1	07002	6 X week	30
2	08001		30
2	08002	5 X week	20
2	08003		
2	08004		
2	08005	7 X week	10
2	08006		60
2	09001	6 X week	30
2	09002	7 X week	15-20

Appendix P (continued)

Group Classification	Subject Number	Frequency of Sessions	Minutes/Session
2	09003	5 X week	15
2	09004	7 X week	30
2	09005	3-4 X week	20
2	09006		
2	09007		
2	10001		
2	10002		
2	10003		
2	10004		
2	10005		
2	10006		
2	10007		
2	10008		
2	10009		
2	10010		
1	11001		
1	11002	7 X week	60
1	11003		
1	11004	7 X week	15
1	11005		
1	11006	6 X week	25
1	11007	5 X week	30-45
1	11008	4 X week	60
1	11009	7 X week	20
2	12001		
2	12002		
2	12003	3 X week	60
2	12004		
2	12005	5 X week	15
2	12006	3 X week	60

Group Classification 1 = Task oriented group subjects

2 = Relationship oriented group subjects

Appendix Q
Stress Management or Relaxation Activities

Group Classification	Subject Number	Type of Activity	Frequency Practiced
1	01001	It's Up To Me	7 X week
1	01002		
1	01003	Run	Daily
1	01004		2 X month
1	01005		
1	02001	Walk 1 mile	5 X week
1	02002	Walk 1 mile	5 X week
1	02003		
1	03001	Run	2-3 X week
1	03002		
1	03003		
1	03004		
1	03005		
1	03006		
1	03007		
1	03008	It's Up To Me	
2	04001		
2	04002	It's Up To Me	Daily
2	05001		
2	05002	Reading	Daily
2	05003		
2	05004		
2	05008		
2	05066		
2	06001	Relaxing	When stressed
2	06002		
2	06003	Sit in darkened room, say a prayer	As needed when possible
2	06004		
1	07001		
1	07002		
2	08001	Swim, walk	5 X week
2	08002	Total relaxation	When feel the need
2	08003		
2	08004		
2	08005		
2	08006		
2	09001		

Appendix Q (continued)

Group Classification	Subject Number	Type of Activity	Frequency Practiced
2	09002	Read & lay on floor with feet up	7 X week
2	09003	Crafts, read, sew	7 X week
2	09004	Read, sew	7 X week
2	09005		
2	09006	Read, crafts	7 X week
2	09007		
2	10001		
2	10002		
2	10003		
2	10004		
2	10005		
2	10006		
2	10007	Rest	
2	10008		
2	10009	Crochet	7 X week
2	10010		
1	11001		
1	11002	Swim	7 X week
1	11003		
1	11004	Flexing & relaxing tight muscles	7 X week
1	11005		
1	11006		
1	11007	Meditation	Daily
1	11008		
1	11009		
2	12001		
2	12002		
2	12003		
2	12004		
2	12005		
2	12006	Read, relax, & exercise	7 X week

Group Classification 1 = Task oriented group subjects

2 = Relationship oriented group subjects

Appendix R
Types of Groups Lead by Facilitators

Types of Groups	Task Oriented Facilitator	Relationship Oriented Facilitator
Exercise Group	1	
It's Up to Me	8	1
Groups in Psychiatric Settings	1	
First Aid	1	
Nurses Aid Classes	1	
Expectant Parent Classes	1	
Church Group		1
Brownie Scouts		1
4-H Club Leader		1
County Cancer Vol. Assoc.		1
Home Economic Demonstration Pres.		1
Church Youth Group		1
Babysitting Classes	1	
Stress Class	1	
Assisted teaching for menopause	1	
Assisted teaching for Parkinson's Disease	1	

Appendix S

Facilitators' Least Preferred Coworker Scale Scores

Group Code Number	Facilitator Code Number	Individual Score
1	11	4.0
1	06	2.9
1	05	4.0
1	08	4.18
1	07	3.0
2	09	4.6
1	10	4.0
1	12	4.4
1	03	2.5
2	04	5.1
1	02	4.1
1	01	4.4

1=Task Oriented Facilitator
2=Relationship Oriented Facilitator

Appendix T
 Clients' Pre and Post Test Blood Pressure Readings and Changes
 Task Oriented Leaders' Group Clients

Client Code	Pre Test Systolic/Diastolic	Post Test Systolic/Diastolic	Change* Systolic/Diastolic	
101001	134/88	188/74	-54	14
101002	158/90	132/78	26	12
101003	188/78	148/72	40	6
101004	174/108	166/98	8	10
101005	127/74	110/82	17	-8
102001	130/80	126/68	4	12
102002	136/80	124/76	12	4
102003	180/90	186/94	-6	-4
103001	148/90	134/72	14	18
103002	198/90	172/82	26	8
103003	180/106	152/96	28	10
103001	140/90	130/86	10	4
103005	150/90	140/80	10	20
103006	140/90	130/70	10	20
103007	158/102	142/102	16	0
103008	150/90	146/84	4	6
107001	170/80	140/76	30	4
107002	180/80	170/70	10	10
111001	136/98	112/84	24	14
111002	140/82	120/80	20	2
111003	158/80	120/82	38	-2
111004	142/80	148/98	-6	-18
111005	152/80	130/90	22	-10
111006	150/78	126/58	24	20
111007	140/82	140/88	0	-6
111008	150/90	142/80	8	10
111009	138/82	120/80	18	2
105001	164/86	142/72	22	14
105002	134/86	130/86	4	0
105003	124/92	110/70	14	22
105004	136/88	130/76	6	12
105005	156/106	144/96	12	10
105006	170/96	166/70	4	22
106001	142/98	114/78	28	20
106002	166/86	146/86	20	0
106003	154/84	144/84	10	0

Appendix T (continued)

Clients' Pre and Post Test Blood Pressure Readings and Changes
Task Oriented Leaders' Group Clients

Client Code	Pre Test Systolic/Diastolic	Post Test Systolic/Diastolic	Change* Systolic/Diastolic	
106004	132/72	148/76	-16	-4
108001	140/82	124/80	16	2
108002	130/80	110/60	20	20
108003	150/88	140/84	10	4
108004	120/80	120/78	0	4
108005	170/90	136/90	34	0
108006	140/80	126/80	14	0
110001	126/82	114/76	12	6
110002	110/70	110/72	0	-2
110003	150/80	154/88	-4	-8
110004	120/80	120/80	0	0
110005	160/80	148/84	12	-4
110006	124/84	140/84	-16	0
110007	162/100	150/98	12	2
110008	154/96	150/80	4	16
110009	000/000	000/000	0	0
110010	142/86	130/78	12	8
112001	120/80	114/76	6	4
112002	136/90	110/80	26	10
112003	140/90	126/88	14	2
112004	154/94	124/70	30	14
112005	130/84	120/84	10	0
112006	130/94	118/76	12	18

*- indicates an increase in blood pressure

Appendix U

Group Atmosphere Scores for Task Oriented Facilitators and Subjects

Facilitator	G.A. Score	Subject	G.A. Score	Mean
01	6.7	01001	4.8	6.5
		01002	0	
		01003	8.0	
		01004	5.7	
		01005	7.5	
02	7.6	02001	6.8	7.1
		02002	6.7	
		02003	7.7	
03	6.6	03001	6.5	7.6
		03002	8.0	
		03003	8.0	
		03004	8.0	
		03005	7.4	
		03006	7.8	
		03007	0	
		03008	0	
05	8.0	05001	7.4	7.6
		05002	8.0	
		05003	8.0	
		05004	6.6	
		05005	8.0	
		05006	0	
06	7.5	06001	8.0	8.0
		06002	8.0	
		06003	8.0	
		06004	0	
07	7.9	07001	8.0	8.0
		07002	8.0	
08	5.9	08001	7.1	6.67
		08002	7.9	
		08003	5.0	
		08004	5.6	
		08005	6.4	
		08006	8.0	

Appendix U (continued)

Facilitator	G.A. Score	Subject	G.A. Score	Mean
10	6.5	10001	7.1	7.7
		10002	8.0	
		10003	8.0	
		10004	8.0	
		10005	8.0	
		10006	7.5	
		10007	8.0	
		10008	8.0	
		10009	7.9	
		10010	6.9	
11	6.1	11001	8.0	8.0
		11002	7.7	
		11003	8.0	
		11004	8.0	
		11005	8.0	
		11006	8.0	
		11007	8.0	
		11008	8.0	
		11009	0	

Appendix V

Group Atmosphere Scores for Relationship Oriented Facilitators and Subjects

Facilitator	G.A. Score	Subject	G.A. Score	Mean
04	7.0	04001	8.0	8.0
		04002	8.0	
09	7.5	09001	7.6	7.5
		09002	7.0	
		09003	7.2	
		09004	7.0	
		09005	8.0	
		09006	8.0	
		09007	0	

JUL 25 1983

Appendix W

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July 22, 1983

Fred E. Fiedler
Department of Psychology
University of Washington
Seattle, Washington 98105

Dear Sir:

Currently I am enrolled as a graduate student in the School of Nursing at the University of Kansas Medical Center. For completion of the Master of Science degree I am working on a research thesis regarding leadership effectiveness.

I would like your permission to use the Least Preferred Coworker scale in order to determine leadership styles. The subjects for the study are individuals participating in hypertension group education classes.

Thank you for your help.

Sincerely,

Mary Beth Riner, RN
8625 W 84th Terrace
Overland Park, Kansas 66212

You have my permission

July 25 7/83

Appendix X

State of Kansas . . . John Carlin, Governor

DEPARTMENT OF HEALTH AND ENVIRONMENT

Barbara J. Sabol, Secretary
~~Joseph F. Herkins, Secretary~~

Forbes Field
Topeka, Kansas 66620
913-862-9360



October 6, 1983

Mary Beth Riner
11412 West 56th Terrace
Shawnee Mission, Kansas 66203

Dear Mary Beth:

We are pleased that you are continuing to work on education for hypertensives for your master's thesis. We will look forward to sharing your information on the "It's Up To Me" program. It should help us with development of on-going outcome information which is necessary for adequate program evaluation. Best wishes on your continued education endeavor. That is another outcome to which we are looking forward.

Sincerely,

Dorothy Woodin, R.N., M.P.H.

DW/da