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ABSTRACT

Although many people fail in their attempts at health change, there is strong evidence that many others can modify negative health practices with or without the aid of therapy or formal intervention programs. Cultural norms, help-seeking and help-giving behaviors, and personal values have all been studied as factors in successful lifestyle changes. In this study, subjects (N=119) recruited in an airport waiting area described their health change efforts over the previous year by completing a survey of personal data, health change history, social support, and a cultural norm indicator. Over half (52.1 percent) of the subjects were successful in establishing their health practices. Social support was found to facilitate health change efforts, but only when group norms also supported the health change. High personal priority for the health change and giving help to others were also related to successful change. Prior attempts to change, medical imperatives for change, help seeking, and participation in formal health programs were not associated with success. The results suggest that congruent social norms may be quite important in achieving health changes. A four-page bibliography is included. (Author/NRB)

CORRELATES OF SUCCESS IN LIFESTYLE CHANGE EFFORTS

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Abstract

One hundred and nineteen subjects recruited in an airport waiting area, described their health change efforts of the previous year. Social support was found to facilitate health change efforts, but only when group norms also supported the health change. High personal priority for the health change and giving help to others were also related to successful change. Prior attempts to change, medical imperatives for change, help seeking, and participation in formal health programs were not associated with success. The importance of congruent social norms has often been overlooked.

It is fairly certain that there are millions, perhaps hundreds of millions of people who have, or will someday, attempt to change their health practices. Results of a national sample of smokers (National Public Health Service, 1979), for example, indicate that 74.8 percent of some 12,000 smokers had tried to quit. Schachters' (1982) studies of smoking and obesity at Columbia University and Amagansett, New York found that roughly 85 percent had tried to improve their lifestyles. Unpublished reports of health change interests in large corporations (Allen, 1980) indicate that 95 plus percent of employees and their families would like to undertake at least one health change effort.

Unfortunately, many, if not the majority, of these lifestyle efforts will fail. Most of the evidence on single health change efforts comes from studies of the success rates in various therapeutic programs. In an early study of weight reduction programs, for example, Stunckard (1958: 79) concluded that, "Most obese persons will not stay in treatment of obesity." Furthermore, Stunckard (1958: 79) determined that, "Of those who stay in treatment, most will not lose weight and of those who do lose weight, most will regain it." Twenty five years after Stunckard's (1958) review of programs for the treatment of obesity, little progress in treatment has been demonstrated. Wing and Jeffery (1979: 261) reviewed the results of 145 treatment programs and reported:

> There has been little improvement in the clinical effectiveness of weight reduction therapy since Stunckard and McLaren-Hume's (1959) review.

The reports on efforts to cure addiction are just as disheartening. Leventhal and Cleary (1980: 23) summarized the state of smoking therapy as follows, "that so many people who are motivated to seek therapy drop out of the treatment, and that so many people eventually return to the habit underscores the scope of the task that one is faced with in dealing with the smoking problem." Hunt and Matarazzo (1973) surveyed 87 studies and reached the same somber conclusions. Hunt, Barnett and Branch (1971) note that in the treatment of alcoholism, heroin, and smoking, "roughly 65 percent of successfully treated patients relapse within three months of termination of therapy, and within one year 80 percent of all patients are recidivists" (As quoted in Schachter, 1982: 436).

The literature on health change program provides some basis for pessimism about peoples' abilities to change their health practices. Yet, there is strong evidence that many people are able to modify negative health practices with or without the aid of therapy or formal intervention programs. Some of the studies which report successful health changes include:

* A national survey of drug use among men in their twenties discovered that 31 percent of prior heroin users had not touched the drug for at least a year (O'Donnell as cited by Peele, 1983: 43).

* A Harvard study of several hundred men found that more than 50 percent of one-time alcohol abusers had ceased problem drinking (Vaillant as cited in Peele, 1983: 43).

* Horn's (1972) study of smoking in the United States found that literally millions of U.S. citizens have been able to give up smoking.

* Robins, Helzer, Hasselbrock and Wish (1980: 220) found that "of all the men addicted to heroin in vietnam, only 12 percent have relapsed to addiction at any time... since their return".

Most evidence indicates that support based programs may lead to short-term, but not long-term health change successes. Several studies (Atthowe, 1973; Henderson, Hall and Lipton, 1979; Leventhal and Cleary, 1980; Lishtenstein and Danaher, 1976; Sackett and Haynes, 1976; Shewchuck, 1976) have shown that as long as clients have at least one session scheduled, clients will maintain their health changes. However, Peele (1981) and Janis (1983) report that the preponderance of evidence indicates that less than 25 percent of the participants in support group-based treatment programs are successful at maintaining their health changes.

Cultural Norms and Health change Efforts

Some social scientists (Allen and Kraft, 1980) believe norms explain much of the difference between success and failure in health change efforts. Norms are expected or accepted behaviors which are created when people come together with a shared purpose (Allen and Kraft, 1980). Examples of health inducing norms in a family might include expectations for not smoking, serving fruit instead of cookies for dessert or playing active sports together.

One source of information about the effects of norms on health change efforts is the large body of literature on an approach to changing health cultures, called Lifegain. Lifegain (Allen and Linde, 1981; Allen and Kraft, 1982; Allen, et al., 1982) has been used widely in businesses, hospital and in various community settings. While the results of control group comparative studies have yet to be tabulated, prior programs

(Allen and Kraft, 1982) have indicated a strong association between norms operating in a setting and health practices.

Help-Seeking Behavior and Health Change Efforts

Another likely area of interest to students of health change efforts is that of asking for assistance, sometimes called help-seeking behavior. Help-seeking behavior might include anything from joining a class to going to a friend or a physician for advice. Gourash (1978: 414) defines help-seeking behavior as, "any communication about a problem or troublesome event which is directed towards obtaining support, advice, or assistance in times of distress".

Epidemiological studies (Gurin et al., 1960; Lowenthal et al., 1975) have established that the majority of people who report experiencing troublesome life events do seek help for their problems. Research has shown that help-seeking among friends and relatives is active in enhancing parent-child interactions following divorce (Hetherington et al., 1976), contributing to successful negotiation of doctoral exams (Hall, 1968), mitigating psychiatric symptoms arising from job related stress (Burke and Weir, 1977), and improving the health status of heart attack victims (Finlayson, 1976).

Help-seeking may not be all that helpful, however. In a review of 13 evaluations of the effectiveness of seeking professional help, Geismar (1972) concluded that this form of help-seeking did not lead to positive results. Schachter (1982) reported a similar result in his study of remission in obesity

and cigarette smoking. This finding has been explained (Gourash, 1978) as an artifact of the probability that people who seek professional help are struggling with more difficult problems which have not been resolved through the assistance of other social network members.

Help-Giving Behavior and Health Change Efforts

Allen and Linde (1981) proposed that helping others to accomplish their health change objectives may lead the helper to accomplish their own objectives. They note that in the process of helping others, people are: (1) building friendships around a new health behavior; (2) publicly committing themselves to their own health changes; (3) rehearsing the various steps that might go into their own health change efforts; and (4) developing a positive self-image associated with being a teacher.

Research on reciprocal helping and mutual obligation has indicated that this type of behavior is associated with several positive psychological outcomes (Surtees, 1980; Cobb, 1979; Cohen and Sokolovsky, 1978, 1979; Froland et al., 1979; Pattison et al., 1975; Tolsdorf, 1976). Surtees (1980), for instance, found that people with reciprocal relationships (i.e. relationships in which people both give help and get help from each other) tended to recover from clinical depression more quickly than others. In addition, helping others may work as a public commitment to a health practice. Lewin (1958), Bennett (1955) and Pelz (1958) demonstrated that such open statements could lead to behavioral changes that were consistent with the content of disclosure.

Personal Priority and Health Change Efforts

An argument could be made that those people who are highly motivated to change their health practices will see to it that they are successful. According to this reasoning, a person who places a higher priority on his or her health changes will most likely be more successful at changing than someone who makes his or her effort a lower priority. As one student of health change efforts (Vierke, 1980: 31) put it: "Health behavior is voluntary." Kirscht (1974: 455) further explained much of the theory behind this popular view that individual motivation leads to change when he stated that:

> If the individual perceives greater threat from an ill health condition, or if health motivation is increased, or if the perceived value and/or likelihood of an action to reduce threat is increased, or if the costs of an action that is efficacious against a threat are reduced, or if some combination of these changes takes place then the likelihood of action is increased.

Unfortunately, as there are few reported studies of success and failure in health change efforts, there are no reported studies of the effects of health values in a population that is already motivated enough to make a health change attempt. However, one related study of lifestyle which included both people active in health changes and people who had not attempted health changes (Vierke, 1980), found that the value placed on health, as measured by adapting Rokeach's (1973) Terminal Value Scale, was not related to a measure of lifestyle practices.

Method

Subjects

Two hundred and sixty people who were seated in front of an airport ticket counter at Newark International Airport were asked to serve as subjects. If a potential subject agreed to participate and could recall having made a health change effort during the prior year, they were given a pencil and the survey instrument. Out of 160 questionnaires handed out, 119 were returned with sufficient information to be included in this study. All subjects who returned the questionnaires were debriefed and thanked.

Of the 119 subjects who comprised the sample population, 76.9 percent characterized themselves as caucasian, 71.4 percent were between the ages of 18 and 29 years old, 25.2 percent were married, 53 percent were female, 26.1 percent reported yearly incomes of less than $5000 and 2.5 percent reported yearly incomes of $50,000 or more.

The Survey Instrument

The questions in this study were presented in four sections: (1) Personal Data; (2) Health Change History; (3) Social Support; and (4) Cultural Indicator. An explanation of each section follows.

Personal Data

These questions were used to determine the general demographic make-up of the subjects. The questions pertained to (1) marital status; (2) sex; (3) age; (4) occupation; (5) work

schedule; (6) weekly number of hours worked; (7) race; (8) income; (9) number of dependents; (10) number of people in subject's place of residence; and (11) whether the subject was financially independent from his or her family.

Health Change History

The Health Change History segment of the questionnaire was designed to determine: (1) the type of health change effort made by the subject; (2) the success or failure of the health change effort (the dependent measure); (3) the general approach that was undertaken in carrying forward the health change attempt; (4) the priority the health effort received; (5) the rationale for undertaking the change effort; and (6) the history of prior attempts to adopt similar lifestyle changes.

Subjects were asked to describe the goal of their health change effort and the means by which they had intended to accomplish their objectives. These goals and means were later recoded into eight change categories: (1) exercise; (2) weight control; (3) nutrition; (4) smoking cessation; (5) alcohol use management; (6) safety; (7) stress management; and (8) human relations and potentials. This coding was used to compare success rates in different types of change efforts. The coding of change type was also used to analyze the cultural data.

Health change success was assessed by asking subjects: (1) if they had accomplished their health objective; and (2) how long they had maintained their health improvements. Subjects who had maintained a health change six months or longer were scored as

having been successful. Although statistical power was lost by dichotomizing the dependent variable, it was necessary in a health change study to differentiate between temporary and lasting change.

Subjects were asked to tell why they attempted their health change effort, and especially if there were immediate medical reasons and what priority they had given to their health change objective. Subjects were also asked whether they had sought specific therapy or training in order to accomplish their health objectives. Subjects were requested to tell whether they had attempted similar health change objectives in the past.

Social Support

The social support segment of the questionnaire contained three groups of questions concerning: (1) the nature of the relationship between the subject and his or her social network; (2) the quantity of health related social support behaviors provided to the subject; and (3) the perceived helpfulness of health related social support. Subjects reported on social support received from: (1) their closest friend; (2) their closest family member; (3) their closest housemate; (4) their closest co-worker; and (5) the health professional they see most frequently.

A modified version of the Inventory of Socially Supportive Behaviors (Barrera, Sandler and Ramsay, 1981), was used to measure the frequency of health related social support and the perceived helpfulness of health related supports.
Subjects were asked to rate the frequency of 18 forms of social

support on a 5-point Likert-type scale which ranged from a score of 1 for not at all to a score of 5 for about every day. Subjects were also asked to rate the helpfulness of the 18 forms of support for each network member.

In addition, subjects answered questions about their relationship to their network members. Subjects were asked to indicate whether they: (1) asked network members for help; (2) assisted network members in health change efforts; and (3) had teamed up with a network member in a joint effort to change their lifestyles.

The Cultural Indicator

A health related cultural norm indicator (Allen and Linde, 1981) was administered to each subject. Subjects were asked to indicate their level of agreement that a statement reflecting a particular social expectation exists: (1) in their household; (2) among their co-workers; (3) in community groups to which they belong; (4) among close friends; and (5) in their family. Thus, for each of the 38 norm statements, subjects were asked to indicate the prevalence of a social expectation five times. During the scoring procedure an average was taken of the ratings given to norm statements which were directly relevant to the subject's lifestyle change effort.

Results

Just over half, or 52.1 percent, of the subjects were successful in establishing their health practices. All scales

are internally consistent with coefficient alphas ranging from

and the mean of 3.75 for the Support Helpfulness Measure indicate that on average subjects experienced a moderate amount of support for their change efforts and that they considered support as neither to be a help nor a hindrance (the support measures were on a 5-point scale). The mean of responses to norm questions of 2.4 (also on a 5-point scale) reflects an average sense that cultural norms run slightly counter to intended health changes.

Hierarchical multiple regression (Cohen and Cohen, 1975) was used to determine the relationship between the dependent measure of health change success and social support frequency, social support helpfulness, cultural norms, and associated interaction effects. As seen in Table 1, main effects were found with measures of support frequency $F(3,81)= 3.72$, $p<.05$ and with measures of cultural norms $F(3,81)= 14.86$, $p<.001$, but not with the measure of support helpfulness $F(3,81)= .65$, $p>.05$. Cultural norms and social support are positively related to health change success.

INSERT TABLE 1

In addition to these main effects, an interaction between support frequency and cultural norms was found $F(3,78)=3.96$, $p<.05$ (See Step #2 of Table 1). The interaction between norms and support is such that support is only positively related to success when the cultural environment endorses the desired lifestyle practice. This conditional relationship is illustrated

in Figure 1. As can be seen in Figure 1, social support seems to reinforce the positive effects of supportive cultural environments.

INSERT FIGURE 1

In order to examine the relationships between other study variables and health change effort success, a series of t-tests were conducted (See Table 2). Comparisons between the group means of successful and unsuccessful subjects found no significant relationship between health change effort success and self-reported measures of: (1) gender; (2) income; (3) age; (4) marital status; (5) formal health program enrollment; (6) prior lifestyle change attempts; (7) immediacy of medical needs; and (8) whether the health change effort was conducted with a social network member. These variables were not significantly related with the dependent measure of change effort success.

INSERT TABLE 2

Group mean comparisons reveal, however, that success is associated with assisting others and/or assigning a higher personal priority to health change efforts (See Figure 2). People who reported that they had assisted their network members in health change efforts were more likely to have succeeded at their own change effort than those who had not not given help. People who indicated that they had placed a high priority on their change effort were more likely to have succeeded in their change effort than those who said that they had given a lower priority.

Discussion

Social support, cultural norms, health effort priority, and giving assistance to others are related to change effort outcomes. A person will be more likely to succeed if the health change effort: (1) is consistent with cultural expectations; (2) is frequently praised and aided by the actions of network members; (3) is given a high priority by the person undertaking the change effort; and (4) is combined with public reaffirmation in the form of helping others to make lifestyle changes.

The finding that social support and cultural norms are interdependent adds a new dimension to the study and use of the social support concept. If cultural context is important to the study of the effects of social support on specific human outcomes, then it seems likely that efforts to change the functioning of social support should also emphasize changing the cultural norms. A Weight Watchers participant, for example, should not be expected to stay off junk foods longer than the duration of the program, if those foods are what everyone else in his or her family eats regularly. Without supportive norms, the value of social supports could be expected to disappear with the end of support programs.

Unfortunately, most health change programs focus solely on bolstering social support without modifying the broader normative environment. Long-term success rates in non-culture based programs have been extremely disheartening. The success rates range from 10 to 20 percent (Peele, 1981, p. 86). Would changing the cultural context and changing the norms for giving and

receiving social support be a part of more successful interventions? The results of this study indicate that emphasizing social support does not make a difference in cultures which do not have expectations for the desired health practice. Perhaps helping people to change their cultural environments is a key to making social support enhancing programs work.

Health change priority was also found to correlate with lifestyle change success. This finding supports the notion that health change efforts are helped by personal commitment (Peele, 1983). According to this view, a person must focus attention on the effort, and not let other demands on time, energy, and additional resources take precedence over the health change effort.

The lack of a relationship between the measure of medical imperative and success is consistent with other reports which indicate a low adherence to medical advice (Kasl, 1975; Kirscht and Rosenstock, 1979; Sackett, 1976; Stone, 1979). Such medical imperatives may be sufficient to prompt an effort to change, but insufficient to prompt and fuel a successful change effort. Another explanation for the lack of a significant relationship is that people with medical imperatives may be struggling with more severe addiction.

The old adage, "Practice makes perfect" was not found to apply to health change efforts. One explanation for the lack of a correlation between measures of success and measures of prior efforts is that people who failed before, may be among the segment of the population who experience the greatest obstacles to change. The advantages of practice may be counterbalanced by

the disadvantages associated with having been through a failure experience. Having failed once may make it easier to get discouraged.

No relationship was found between the index of success and the measure of change effort partnership. One explanation for this result is that a partner could be a disadvantage in the situations in which the partner falters. The failed effort of the partner may weaken the resolve and confidence of the person who continues to try. Future research may investigate whether it is advantageous to have a partner if the partner succeeds and a disadvantage if the partner fails.

In an attempt to better explain the role of social support in health change efforts, an evaluative measure of supportive behavior helpfulness was used in addition to the measure of support frequency. According to theory (Lehmann, et al., 1983; Porritt, 1979), evaluative measures of support should explain variance in outcomes which is not accounted for by measures of support frequency. One plausible explanation for why the support helpfulness measure was not more closely related to lifestyle change outcomes is that the measure did not accurately assess support quality. Subjects were asked to indicate the helpfulness of behaviors which were chosen for their helping qualities. Subjects may have responded to their own psychological theories of what forms of support should be helpful rather than to the realities of the actual health change situation. For this reason, it may be useful to measure support quality by having subjects respond to negatively worded support questions such as

"Were you given misleading or false information by a network member?" In the current study, subjects were only asked to evaluate positive support questions such as "Did this network member express an interest and concern in your overall well-being?" Further research needs to be conducted on the best approach to measuring support quality.

Some methodological limitations should be noted when considering the results of the current study. Due to the retrospective nature of the study, people may have inaccurately reconstructed their health change experiences. Future research may, for instance, determine that the high correlation found between health change priority is not linked to heightened personal commitment but is, instead, an artifact of post hoc explanations of health change failure. Given the anonymity of the responses, however, there is no strong reason to believe that subjects intentionally misrepresented their experiences.

The sample size represents the strongest threat to the accuracy of some conclusions drawn in this study. While there were 119 subjects in the study, some statistical comparisons were based on many fewer subjects. There were, for instance, only 20 subjects with immediate medical reasons for accomplishing their health objectives. The decision as to whether medical imperative was correlated with change success was based on the success rates among these 20 subjects. Since all tested reliabilities were high, however (alpha coefficients > .85), most of the tests did have sufficient power to detect medium effect sizes.

There is no reason to believe that the study population of airport patrons approach health change efforts in an unusual way

or that they had unique social environments. The success rates found in this study are very similar to the success rates found in the two other studies of health change efforts which were conducted on a community population (Schachter, 1982). This similarity indicates that this study population, is representative of other populations.

Conclusion

Crystallized in the findings of this study are some exciting theoretical prospects. It was found, for instance, that help-giving was associated with a greater likelihood of success in the health change efforts of the help-giver. Perhaps help-giving should be promoted in health programs. If help-giving can have positive effects, then being "your brother's (and sister's) keeper" is also "looking out for number one."

The most exciting theoretical prospect to emerge in this study concerns how social support and cultural norms may work together. The results indicate that taken together, measures of social support and cultural norms may better explain the outcome of health change efforts. Further research seems worthwhile to determine whether norms and social support are important in such areas as depressive symptomatology and for health outcomes associated with aging.

Given that lifestyle is a major determinant of both longevity and physical wellbeing; given that better than three quarters of the population have actively sought healthier lifestyles; and given that more than one half of these change efforts fail, then it behooves the concerned social scientist to

determine what factors lead to success. This study is an initial probe into the role of individual and environmental determinants of success in the health change efforts of the general population. The findings that help-giving, social support, cultural norms and individual priority are linked to success, have clear policy implications. It is critical that we turn these findings into effective individual and organizational change initiatives.

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Figure 1

The Interaction Between Social Support

And Cultural Norms

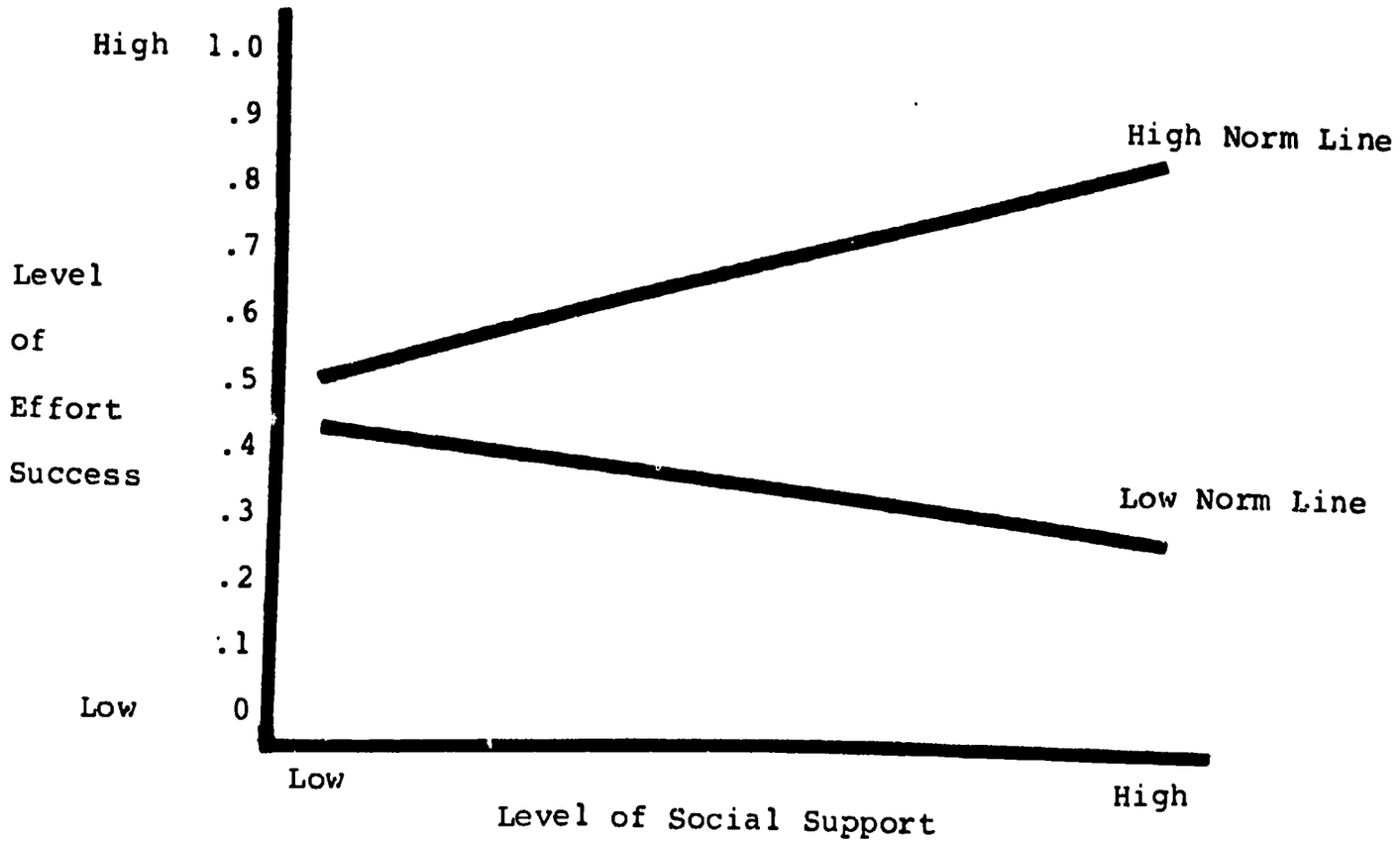

Table 1

Hierarchical Regression Analysis of the

Social Support and Norm Variables

With Success as the Dependent Measure

Step #1 (Main Effects)
R^2(Step 1)= .1934, F(3,81)= 6.47, p<.01

Variable	Beta	F	Significance
Norms Assigned By Change Effort Type	1.12	14.86	p<.001
Support Frequency Variable	1.45	3.72	p<.05
Support Helpfulness Variable	.68	.65	n.s.

Step #2 (Two-way Interactions)
R^2 Change (Step 2)= .092, F(3,78)= 3.33, p<.05

Variable	Beta	F	Significance
Support Frequency X Assigned Norms	1.17	3.96	p<.05
Support Helpfulness X Assigned Norms	.53	.65	n.s.
Support Frequency X Support Helpfulness	1.15	1.86	n.s.

Summary (For Full Equation)
R^2=.285, F(6,78)= 5.18, p<.01

The three-way interaction did not enter with a tolerance level of .0001.

Table 2

Group Mean Comparisons Between Subjects with Health Change Effort Success and Subjects with Health Change Failure

Variable	T Value	df	Significance Level
Sex	-.25	117	n.s.
Income	-1.53	113	n.s.
Age	-1.50	117	n.s.
Marital Status	1.51	113	n.s.
Change Priority	3.04	115	p<.01
Assisting Others	2.72	111	p.<01
Trying With Others	1.14	110	n.s.
Immediate Medical Reasons	.28	117	n.s.
Prior Change Attempts	-1.03	116	n.s.
Asking for Assistance	-1.46	117	n.s.