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**Intention and attitude as predictors of compliance to the Air
Force Weight Control Program using Fishbein's behavioral
intentions model**

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The University of Arizona, 1991

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INTENTION AND ATTITUDE AS PREDICTORS OF COMPLIANCE TO THE
AIR FORCE WEIGHT CONTROL PROGRAM
USING FISHBEIN'S BEHAVIORAL
INTENTIONS MODEL

by

Heather Marina Slimon

A Thesis Submitted to the Faculty of the
DEPARTMENT OF NUTRITION AND FOOD SCIENCE
In Partial Fulfillment of the Requirements
For the Degree of

MASTER OF SCIENCE
WITH A MAJOR IN DIETETICS

In the Graduate College
THE UNIVERSITY OF ARIZONA

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STATEMENT BY AUTHOR

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ABSTRACT

Poor compliance with weight loss diets has consistently been a problem in the health care field. Prediction of adherence to diets by Air Force Weight Program participants could help the diet therapist with intervention counseling. Sixty-six active duty Air Force persons on the Weight Program were given a survey based on the Fishbein Model of Behavioral Intentions.

The subjective norm, spouse, was beneficial for prediction of behavior of following the diet prescription, $R^2 = 0.32$, $p = 0.003$. The attitude towards their Air Force career was useful in the prediction of weight loss, $R^2 = 0.30$, $p = 0.002$. Stressing the effects of the program on the members' careers during initial counseling and upon follow-up, may help increase adherence to the weight program. In addition, involving the spouse or significant other in the counseling may increase the positive behavior of following the diet prescription.

Chapter I

INTRODUCTION

The United States Air Force and the other U.S. military branches are concerned with military readiness. Their personnel's health is necessary to obtain and/or maintain this readiness. Weight management is an important component of health, and the Department of Defense has directed each branch of the military to provide a weight management program (Santos, 1985).

Weight management is also, according to the Air Force, essential to the image of the Air Force as a whole, and to the esteem of its members (Santos, 1985). Since image is a major component of the program, appearance is deemed as important - or more important than - the amount the person weighs.

The regulation, that directs the weight control program, contains standard maximum weight allowances for both sexes - based on height shown in Appendix A. All members of the Air Force are directed to be weighed a minimum of twice a year to ensure they are under their maximum weight allowance. They can also be weighed at any time if their commander wishes.

If a member is above the weight standard, s/he may obtain a waiver if s/he appears to have an acceptable military image and is not clinically obese. A nomogram may

be performed by measuring the circumference of the bicep on the male and the forearm on the female using the scales in Appendix B, and weight allowances may be increased based on the nomogram. Body frame sizes are not taken into consideration in the calculation of the maximum allowable weight.

If the member is not helped by the nomogram and is not clinically obese, but presents a military image, the base commander may grant an increase in the weight allowance for this member. This increase may be based upon the medical practitioner and unit commander's recommendations (Santos, 1985).

Image and health of Air Force personnel are considered very important to the military, so the Air Force member's weight loss, while on the weight program, is essential to his or her career.

Health risks of obesity. At least 12 percent of the U.S. population is obese (Bray and Gray, 1988). Men that entered the military were heavier in the 1950s than those that entered in 1943 (Bray and Gray, 1988). Obesity is associated with many health risks including hypertension, hypercholesterolemia, cardiovascular disease, certain types of cancer, gall bladder disease, and diabetes mellitus (Mayer, 1989; Bray, 1989). These health risks become

present when the Body mass index (BMI) is approximately 25 - 30 kg/m² (Williams, 1988).

The maximum allowable weights for Air Force personnel, located in Appendix A, compute to BMIs ranging from approximately 24.5 to 31, the range at which health risks become apparent. An increase in body frame size does not increase the maximum allowable weight for the person, but this is probably related to the possibility that health risks may be associated with an increase in frame size and muscle mass as well as body fat distribution (Kissebah et al., 1989).

Problem Statement

Compliance to weight loss diet prescriptions generally is very low. It has been shown that prediction of intention to lose and the behavior of losing weight by persons on voluntary weight loss programs is possible (Saltzer, 1979). If the factors that predict motivation or intolerance to weight loss programs can be determined, diet instruction can be focused towards the greatest needs and help increase compliance. When weight loss diets are not followed, this amounts to a great expense to the United States Air Force. Time of the person in counselling, dietitians' time, legal officers' time, and the whole court time for discharge of these persons - lead to a great expense to the Air Force.

Research Objectives

The research in this study was used to evaluate the following:

1. The relationship between intention to follow a diet prescription and the behavior of following a diet and losing weight.
2. The ability of the Fishbein's Model of Behavioral Intention to predict intention and behavior using the attitude and subjective norm of persons on the weight program.

What the study examined

In order to determine the predictive power of attitudes and subjective norms, the beliefs that are related to attitudes were measured. A disaggregate version of the behavioral predictive model was used in this analysis.

Health-related behavior is increasingly becoming the responsibility of the individual, but health education "bridges the gap between health information and health practices" (Freudenberg, 1978). If the provider attempts to change the negative behaviors of the patient without knowing the forces that influence those behaviors, it would be unlikely that they would be effective. Knowing the underlying forces that direct behavior will be a useful tool for behavior change, and can help lead towards effectiveness.

Statement of Hypotheses

The following hypotheses were derived from the Fishbein Model of Behavioral Intention and were tested:

Aggregate Version

- H₁: There is a significant positive relationship between intention and attitude with respect to following the diet as prescribed.
- H₂: There is a significant positive relationship between intention and subjective norm with respect to following the diet as prescribed.
- H₃: There is a significant positive relationship between intention and behavior with respect to following the diet as prescribed.
- H₄: There is a significant positive relationship between attitude plus subjective norm and intention with respect to following the diet as prescribed.
- H₅. There is a significant negative relationship between intention and the goal of weight change.

Disaggregrate Version

- H₆. There is significant relationship between behavior and the individual attitudes and subjective norms.

H7. There is a significant relationship between weight loss and the individual attitudes and subjective norms.

LIMITATIONS

1. The analysis is correlational - therefore causal relationships may not be assumed.

2. The study was conducted on persons on a mandatory weight program - therefore the results can not be generalized to the population.

3. The design was made to measure intentions of those on a mandatory weight program on a short term basis, and cannot be assumed for a long term basis. The short time-frame is needed to decrease the possibility in changes in attitudes that will affect the correlation between attitude, behavioral intention and behavior.

4. There is no parallel mandatory weight program in the civilian sector that could be used as a control, since this study was not measuring voluntary weight loss intentions.

5. The small sample size was a limitation in this study.

Definitions

1. Attitude: affect for or against a psychological object (Mueller, 1986).

2. Belief: the subject's subjective likelihood that s/he will perform the behavior in question (Fishbein and Ajzen, 1975)
3. Compliance: the extent to which a person follows the prescribed regimen.
4. Subjective Norm: person that may influence the subject's decision
5. Motivation to Comply: the subject's desire to follow the expectations of the subjective norm
6. Normative Belief: the amount of influence the subjective norm has on the subject
7. Behavior: an observable act (Fishbein and Ajzen, 1975).
8. Intention: the subject's subjective likelihood that s/he will perform a behavior.

Chapter II

REVIEW OF THE LITERATURE

Predictors of dietary change. Rodin (1989) revealed studies have shown that a subset of the obese respond to external cues and prefer to socialize rather than being solitary. Those that curtail their eating tend to eat a lot more when they are presented with food they greatly enjoy. People that value social settings and value other people's opinions are labeled field-dependent. These field-dependent people are restrained eaters (Rodin, 1989). When people are dieting, they tend to binge when they eat foods they especially like (Rodin, 1989). It has been found that obese people have greater weight fluctuations than people of normal weight (Rodin, 1989). This could be due to the binging related to restrained eating (Rodin, 1989).

A study by Vega et al. (1988) measured predictors of dietary change in Mexican-American families and found that the social support received had an effect on the amount of fat intake over a three day period. Another study by Ferguson et al (1989) measured predictors of exercise intent and behavior in school children and found that perceived benefits, attitudes toward physical education, and gender contributed significantly to the prediction of behavior. Seiwacz et al. (1980) found that intention only moderately predicted weight loss in women. Social support has been

shown to be a strong predictor of compliance of hypertensives to their medical regimen (Stanton, 1987).

A study using the Health Belief Model and Fishbein's Theory of Reasoned Action found barriers and benefits from the Health Belief Model (explained 10% of variance) and belief strength, outcome evaluation, and behavioral intention from the Theory of Reasoned Action (explained 19% of variance) to be significantly correlated with adherence to a drug prescription (Rief, 1988). The subjective norms and motivation to comply significantly predicted intention to comply although it did not predict behavior of adherence to drug prescriptions.

The amount of barriers were significant in the prediction of adherence to diet prescriptions in a study of diabetic patients (Schafer, 1983). The value of appearance and health was the best positive predictor of the behavior of weight loss of patients to an outpatient weight loss clinic (Saltzer, 1979). The subjective norms (friends and employees) were the best predictors of intention to lose weight, and unexpectedly, the spouse contributed little to the prediction (Saltzer, 1979). Also, intention was highly correlated with weight loss (Saltzer, 1979).

There have been several studies that have shown social support plays a very important role in both short and long-term success of weight loss (Brownell, 1984). Voluntary

weight loss may be increased if the social support systems of these people are changed appropriately to help those persons on a weight loss diet (Brownell, 1984).

Early studies on behavior. Dulany was one of the first researchers concerned with prediction of behavior from intention (Fishbein, 1967). He surveyed his subjects on how they intended to perform the behavior in different specific circumstances. The correlation between intention and behavior in his studies was 0.90 (Fishbein, 1967).

Fishbein took this one step further and used attitudes and normative beliefs to predict behavioral intention and, in turn, behavior (Fishbein, 1967). He called this the extended model (Fishbein, 1976).

Expectancy-value models are used to help predict behavior. Fishbein's model was the sum of the beliefs related to the behavior and the subject's subjective likelihood that the outcome will occur, times the subject's evaluation of the outcome (Ajzen and Fishbein, 1972). Shown symbolically as

$$A_{act} = \sum_{i=1}^n B_i a_i$$

where A = the attitude towards the act

B_i = the beliefs related to the behavior and
the subject's subjective likelihood
that the outcome will occur

a_i = the subject's evaluation of the outcome

Alternative models used to predict behavior. The Health Belief Model is one that has been used to predict health-related behavior. This model is based on the expectancy-value theory. Inadequacies in the model include (1) it only uses the perceived benefit of increased health status (2) attempts to validate the model have shown only a modest ability to predict adherence to prescribed regimens (3) the model does not specify how the variables are to be measured and their relationships (Montano, 1986).

Another model used for prediction of intentions is the Triandis Model. The Triandis Model has been shown to have greater prediction capability than the Fishbein Model in a few studies (Montano, 1986; and Valois, 1988). One study on family planning found the opposite results (Jaccard and Davidson, 1975). The Triandis Model would not be useful to measure intention to lose weight because a major component of the model includes the measurement of performing the behavior in the past, i.e. the habit of performing the behavior in the past (Montano, 1986). The past habits or efforts used in weight reduction have not been shown to correlate with behavioral intentions (Rodin, 1989).

Fishbein's Model of Behavioral Intentions. Fishbein's Model has two forms, an aggregate and a disaggregate form.

The first form that will be reviewed is the disaggregate form as it will be used in the study.

It can be symbolically shown as

$$B \sim BI = (b_1 a_1) w_1 + (b_2 a_2) w_2 + \dots + (b_n a_n) w_n + [(NB_j)(MC_j)] w_{n+1}$$

where

B = behavior of losing weight

BI = person's intention to follow diet

b_i = person's subjective belief of probability that the diet prescription will lead to the i th consequence in question

a_i = the importance/desirability of the i th consequence to the person

w_i = empirically derived standardized regression coefficient. The beta weights that reflect the relative importance of each component in determining behavioral intention.

n = the number of salient beliefs that affect following the diet prescription in the study and corresponding evaluations

NB_j = a normative belief that relevant other j thinks s/he should or should not follow the diet prescription

MC_j = the motivation to comply with the relevant other j .

The second, the aggregate form, can be shown symbolically as

$$B - I = (A_B)w_1 + (SN) w_2$$

where

A_B = a person's attitude toward following the behavior (diet prescription)

SN = a person's subjective norm with respect to following the diet prescription

The attitude towards performing the behavior (A_B) is a function of a person's belief regarding consequences of following the diet prescription, times the person's evaluation of the degree of desirability/importance of the consequence. Represented as

$$A = \sum_{i=1}^n b_i a_i$$

The subjective norm is a function of a person's subjective probability that specific people (referents) think s/he should or should not follow the diet prescription and his/her motivation to comply with those referents' expectations. Represented as

$$SN = \sum_{j=1}^n NB_j MC_j$$

The aggregate model can be represented alternatively as

$$B - I = \left(\sum_{i=1}^n b_i a_i \right) w_1 + \left[\sum_{j=1}^m (NB_j)(MC_j) \right] w_2$$

Fishbein's model of behavioral intentions is based on the theory of reasoned action (Ajzen, and Fishbein, 1980). This theory is based on a personal and a social aspect of influences on behavioral intention (Ajzen, and Fishbein, 1980).

Reliability. Reliability of attitude belief scales have been measured at 0.900 for correlation between attitude scores and 0.908 for belief scores ($p < 0.01$) (Fishbein and Raven, 1967).

Construct Validity. The construct validity of the Fishbein Model of Behavioral Intention has been tested repeatedly (Ajzen and Fishbein, 1980; and Fishbein and Ajzen, 1975). Miniard and Cohen (1981) challenged the methods of measuring the independent variables noting they did not measure what they were supposed to measure. Fishbein and Ajzen (1981) published a rebuttal that addressed every item noted in Miniard and Cohen's article, the main point being the separation of the attitudinal measurement and the subjective norm.

Halo Effect. The expectancy-value portion of Fishbein's Behavioral Intention Model is represented as

$$A = \sum_{i=1}^n b_i a_i$$

Classically, the equals sign equates to the notion that belief and the evaluation of the belief influence the

attitude (Bagozzi, 1988). The attitude towards the behavior tends to drive the perception of the individual outcomes or consequences from the behavior and this is called the halo effect. The halo effect would turn the equation in the opposite direction (i.e. attitude affects beliefs about outcomes and their evaluations). Bagozzi (1988) performed a study to measure the effect of arousal on the direction. He found that the halo effect occurs when there is a low arousal situation and this effect was not present during high arousal situations (Bagozzi, 1988).

Goal-directed behavior. Bagozzi (1988) stated, in an article he wrote on the Fishbein's Model of Behavioral Intentions, the Model "disregards the steps intervening between intentions and behavior performance/goal attainment but rather assumes that intentions inevitably produce their implied effects". Ajzen and Fishbein (1980) stated that their model does not address goals. A meta-analysis was conducted on 87 studies and the results showed that the model does very well in predicting goals (Sheppard et al, 1988). Schlundt et al. (1985) states "body weight can be used as a criterion to evaluate adherence to the rules prescribed in weight control programs", since they have been shown to be highly correlated; eighty seven percent of the variance can be explained.

Attitudes may "influence behavior without necessarily or fully working through intentions" (Bagozzi, 1988).

Conceptualization of the Model

Lutz (1976) has challenged the conceptualization of the concept of belief in the Fishbein Behavioral Intentions Model. The model suggests that belief is a subjective probability that the behavior will lead to a consequence. Lutz (1976) suggested that a probability is unipolar and therefore the model doesn't follow the theory. When tested empirically, the model does show a bipolar direction suggesting the need to evaluate the theory in this aspect.

Lutz (1976) also stated that the weights (w_1 and w_2) have not been conceptualized in the model; this should be corrected.

Problems associated with multiple regression. It has been noted that multiple regression sometimes may not be generalizable to the population (Thomas and Nelson, 1985). Since the population - Air Force personnel on the Weight Program - is quite homogeneous, this should not be a problem in this study.

Intention measurements. When intentions are estimated, the prediction of behavior is better than when intentions are measured (Sheppard et al., 1988). This study used

estimates of intention to perform behavior. A meta-analysis of eighty seven studies has shown that the prediction of behavior intentions is better than the prediction of overall goal intentions (Sheppard et al., 1988).

As Brownell (1984) stated "In the likely possibility that some treatments are more effective for certain subgroups of patients, predictor variables would permit a match between individuals and treatments". This is what I attempted to find with this study.

Chapter III

Methodology

This study focuses on the prediction of compliant behavior (following a diet prescription) by Air Force personnel on the Weight Program . It is correlational in nature and is based on the Fishbein's Model of Behavioral Intention.

Sample population

Sixty six persons who were entered into the Air Force Weight Program were evaluated. The only criteria they met included: being active duty in the US Air Force, and being entered into the Weight Program. As the persons arrived at the nutrition clinic, they were asked to complete the survey, and to return to the nutrition clinic in two weeks for a follow up. Only one person who was asked to complete the survey refused.

Instrument Construction

The questionnaire was developed by a pilot study using the questionnaire in Appendix D. The pilot study was used to determine the clarity and adequacy of the instrument and to identify any salient beliefs that were not covered adequately.

The pilot study was conducted on five subjects. Several changes were made to the questionnaire after the pilot study was completed and this can be found in Appendix

E. The location of the belief and evaluation of a reprimand was moved to the beginning of the survey to increase the likelihood of being more carefully read. Wording on the motivation to comply was changed to clarify the question.

Demographic Data (Questions 23-27). Demographic data that was collected included age, sex, years in the service, marital status, and number and ages of children in their household.

Dependent Variables. The dependent variables for this study were the person's intent to follow his/her diet prescription (question 14), the subjective evaluation of their behavior of following the diet prescription, and weight loss - measured two weeks after administration of the questionnaire.

Independent Variables (Questions 2-13, and 15-22). Beliefs and evaluation of the beliefs, normative beliefs and motivation to comply were the independent variables. Ajzen and Fishbein (1975) recommended that beliefs be measured on a seven point bipolar scale ranging from +3 to -3 (using the poles of likely and unlikely).

Data collection

The data were collected for a period of six weeks. The subjects were given an informed consent statement (see Appendix C) that discussed the nature of the study - along with the questionnaire - when they visited the nutrition clinic. The questionnaires were picked up as soon as the subjects completed them. The subjects were instructed to return in two weeks for a follow up. At this time, they were weighed to determine if they lost any weight. The scales were checked for calibration using a 50-pound weight.

Data analysis

Question items 2-23 were scored from +3 to -3 as Ajzen and Fishbein (1975) recommended.

Restatement of Hypotheses

I will restate the hypotheses in the null form to apply the inferential statistics. The SAS statistics procedures were used to evaluate the data.

1. H_0 : There is no significant positive relationship between intention (I) and attitude

$$\sum_{i=1}^n b_i e_i$$

with respect to following the diet prescription. The Pearson Product Moment Correlation (r) was used to test significance.

2. H_0 : There is no significant positive relationship between intention (I) and subjective norm

$$\sum_{j=1}^m NB_j MC_j$$

with respect to following the diet prescription. The Pearson Product Moment Correlation (r) was used to test significance.

3. H_0 : There is no significant positive relationship between intention (I) and behavior (B) with respect to following the diet prescription. The Pearson Product Moment Correlation (r) was used to test significance.

4. H_0 : There is no significant positive relationship between intention (I) and the linear combination of attitude

$$\sum_{i=1}^n b_i e_i$$

and subjective norm

$$\sum_{j=1}^m NB_j MC_j$$

with respect to following the diet prescription.

The significance of R^2 for the regression of I on

$$\sum_{i=1}^n b_i e_i$$

and

$$\sum_{j=1}^m NB_j MC_j$$

was tested using the F ratio.

5. H_0 : There is no significant relationship between intention and the goal of weight loss. The Pearson Product Moment Correlation (r) was used to test significance.

Disaggregate Version

6. H_0 : There is no significant relationship between behavior and the individual attitudes and subjective norms.

The significance of R^2 for the regression of behavior on the independent attitudes and subjective norms was tested using the F ratio. The order of the independent variables being entered into the equation were determined using a stepwise selection.

7. H_0 : There is no significant relationship between weight loss and the individual attitudes and subjective norms. The significance of R^2 for the regression of weight loss on the independent attitudes and subjective norms was tested using the F ratio. The order of the independent variables being entered into the equation were determined using a stepwise selection.

CHAPTER IV

RESULTS AND DISCUSSION

The questionnaire was administered to 86 subjects. Sixty six were on the Air Force Weight Program, and their data were used in the hypotheses testing. Twenty subjects were not on the Air Force Weight Program and their data are shown separately as "Not on Weight Program" and combined as "Both on and not on Weight Program". Nineteen surveys were received from four other Air Force bases for comparison and are combined under the heading "All bases".

Descriptive Data

Demographics

The demographics of age, height, weight and body mass index of the subjects are shown in Table 1. Frequencies of sex, marital status, length of service, and number of children are presented in Table 2. The sample I studied was 16.7 percent female. Seventeen percent of the population of persons on the first phase of the Air Force Weight Program are female (2,503 out of 14,474) therefore, the sample was representative of the population for gender.

The distribution of the attitudes, subjective norms, intentions, weight changes, and behaviors are shown in Tables 3 and 4. Of all the attitudes and subjective norms measured, only one attitude was never rated negatively -

TABLE 1

Descriptive Measures of
Age, Height, Weight and Body Mass Index of
Active Duty Air Force Personnel on the Weight Program
at a Large Air Force Base in the Southwest

| Variable | n | Mean | Standard Deviation | Range |
|--------------------------|----|--------|--------------------|-------------|
| Age (years) | 66 | 31.23 | 7.81 | 19-47 |
| Height (in) | 65 | 69.34 | 3.17 | 62.5-77.0 |
| Height (cm) | 65 | 176.12 | 8.05 | 158.8-195.6 |
| Weight (lb) | 66 | 198.45 | 25.19 | 145-260 |
| Weight (kg) | 66 | 90.02 | 11.45 | 65.8-117.9 |
| BMI*(kg/m ²) | 65 | 27.61 | 1.75 | 24.6-32.3 |

*BMI = Body Mass Index (weight in Kg/height in m²)

TABLE 2

Frequency distribution of sex, marital status, length of service and number of children of persons that were surveyed on the Weight Program at a Large Air Force Base in the Southwest

| Sex | | Marital Status | | | |
|--------------------|--------|----------------|---------|----------|-----------|
| Male | Female | Never Married | Married | Divorced | Separated |
| 55 | 11 | 13 | 48 | 4 | 1 |
| <u>Male only</u> | | 10 | 40 | 4 | 1 |
| <u>Female only</u> | | 3 | 8 | 0 | 0 |

| Length of service in years | | | | | |
|----------------------------|-----|------|-------|-------|---------------|
| <3 | 3-6 | 7-10 | 11-14 | 15-18 | 19 or Greater |
| 10 | 16 | 7 | 8 | 12 | 13 |
| <u>Male Only</u> | | | | | |
| 7 | 12 | 6 | 6 | 11 | 13 |
| <u>Female Only</u> | | | | | |
| 3 | 4 | 1 | 2 | 1 | 0 |

TABLE 2 (cont)

Frequency distribution of sex, marital status, length of service and number of children of persons on the Weight Program that were surveyed at a Large Air Force Base in the Southwest

| <u>Number of Children</u> | | | | | | |
|---------------------------|----------|----------|----------|----------|----------|----------|
| <u>0</u> | <u>1</u> | <u>2</u> | <u>3</u> | <u>4</u> | <u>5</u> | <u>6</u> |
| 28 | 10 | 16 | 7 | 2 | 2 | 1 |
| <u>Male Only</u> | | | | | | |
| 22 | 7 | 14 | 7 | 2 | 2 | 1 |
| <u>Female Only</u> | | | | | | |
| 6 | 3 | 2 | 0 | 0 | 0 | 0 |

TABLE 3

Distribution of Subjective Norms, Attitudes, Intentions,
Behaviors and Weight Changes
of Active Duty Air Force Personnel at a Large
Air Force Base in the Southwest

| Variable | N | Min | Max | Mean | Std Dev |
|---|----|--------|------|-------|---------|
| <u>On Weight Program only</u> | | | | | |
| <u>INDIVIDUAL SUBJECTIVE NORMS</u> | | | | | |
| Diet Therapist ¹ | 63 | -18 | 18 | 8.78 | 7.98 |
| Spouse | 59 | -4 | 18 | 9.46 | 6.95 |
| Friends | 62 | -6 | 18 | 4.68 | 5.87 |
| Family | 59 | -12 | 18 | 5.44 | 6.75 |
| Supervisor | 62 | -9 | 18 | 6.55 | 8.02 |
| Children | 48 | -6 | 18 | 3.25 | 6.13 |
| <u>INDIVIDUAL ATTITUDES</u> | | | | | |
| Reprimand | 65 | -18 | 18 | 13.38 | 7.46 |
| Wt Loss | 65 | -5 | 18 | 9.63 | 5.96 |
| Convenience | 65 | -3 | 18 | 4.83 | 5.18 |
| Health | 66 | 0 | 18 | 13.50 | 4.49 |
| Military Image | 66 | 0 | 18 | 9.36 | 6.22 |
| Look Better | 66 | 0 | 18 | 11.82 | 6.37 |
| Career | 65 | -12 | 18 | 11.57 | 6.88 |
| Feel Better | 66 | 0 | 18 | 11.91 | 5.49 |
| Heavy | 66 | -10 | 18 | 9.21 | 7.30 |
| Dining Hall | 61 | -15 | 18 | -0.07 | 6.01 |
| Flight Line | 55 | -18 | 18 | -2.69 | 8.41 |
| <u>AGGREGATE ATTITUDE AND SUBJECTIVE NORMS</u> | | | | | |
| Attitude | 49 | 14 | 165 | 91.35 | 38.33 |
| Subjective Norm | 46 | -15 | 108 | 40.93 | 31.04 |
| <u>INTENTION AND BEHAVIOR OF FOLLOWING DIET</u> | | | | | |
| Intention | 66 | -3 | 3 | 1.88 | 1.39 |
| Behavior | 26 | -3 | 3 | 1.48 | 1.58 |
| <u>FOLLOW UP WEIGHT - INITIAL WEIGHT (lbs)</u> | | | | | |
| Weight Change | 27 | -13.75 | 7.25 | -2.59 | 4.05 |

¹ E.g. Diet Therapist = belief that the diet therapist would recommend following the diet and motivation to comply with his/her recommendation

TABLE 3 (cont)

Distribution of Subjective Norms, Attitudes, Intentions,
Behaviors and Weight Changes
of those Active Duty Air Force Personnel at a Large
Air Force Base in the Southwest

| Variable | N | Min | Max | Mean | Std Dev |
|---|----|------|------|-------|---------|
| <u>Not on Weight Program</u> | | | | | |
| <u>INDIVIDUAL SUBJECTIVE NORMS</u> | | | | | |
| Diet Therapist | 20 | -12 | 18 | 8.05 | 9.02 |
| Spouse | 19 | 0 | 18 | 10.11 | 6.84 |
| Friends | 19 | -4 | 18 | 4.68 | 6.56 |
| Family | 18 | -2 | 18 | 8.83 | 6.55 |
| Supervisor | 19 | -15 | 18 | 5.26 | 8.97 |
| Children | 13 | -2 | 18 | 5.38 | 7.18 |
| <u>INDIVIDUAL ATTITUDES</u> | | | | | |
| Reprimand | 20 | -12 | 18 | 7.35 | 6.91 |
| Wt Loss | 19 | -6 | 18 | 8.11 | 7.04 |
| Convenience | 0 | 0 | 18 | 6.60 | 5.58 |
| Health | 20 | 3 | 18 | 13.95 | 4.45 |
| Military Image | 20 | 0 | 18 | 9.50 | 7.07 |
| Look Better | 20 | 0 | 18 | 10.35 | 6.18 |
| Career | 20 | -1 | 18 | 9.90 | 6.21 |
| Feel Better | 20 | 2 | 18 | 12.20 | 5.37 |
| Heavy | 20 | -18 | 18 | 6.20 | 9.89 |
| Dining Hall | 19 | -12 | 9 | -0.63 | 4.73 |
| Flight Line | 15 | -18 | 0 | -3.20 | 5.49 |
| <u>AGGREGATE ATTITUDE AND SUBJECTIVE NORMS</u> | | | | | |
| Attitude | 14 | 21 | 138 | 87.14 | 31.89 |
| Subjective Norm | 12 | 0 | 108 | 46.75 | 34.86 |
| <u>INTENTION AND BEHAVIOR OF FOLLOWING DIET</u> | | | | | |
| Intention | 20 | 0 | 3 | 2.20 | 0.89 |
| Behavior | -2 | -2 | 3 | 1.50 | 1.51 |
| <u>FOLLOW UP WEIGHT - INITIAL WEIGHT (lbs)</u> | | | | | |
| Weight Change | 8 | -7.5 | 2.75 | -1.94 | 3.20 |

TABLE 3 (cont)

Distribution of Subjective Norms, Attitudes, Intentions,
Behaviors and Weight Changes
of those Active Duty Air Force Personnel at a Large
Air Force Base in the Southwest

| Variable | N | Min | Max | Mean | Std Dev |
|--|----|--------|------|-------|---------|
| <u>Including those on the Weight Program and not</u> | | | | | |
| <u>INDIVIDUAL SUBJECTIVE NORMS</u> | | | | | |
| Diet Therapist | 83 | -18 | 18 | 8.60 | 8.19 |
| Spouse | 78 | -4 | 18 | 9.61 | 6.88 |
| Friends | 81 | -6 | 18 | 4.68 | 5.99 |
| Family | 77 | -12 | 18 | 6.23 | 6.82 |
| Supervisor | 81 | -15 | 18 | 6.24 | 8.21 |
| Children | 61 | -6 | 18 | 3.70 | 6.36 |
| <u>INDIVIDUAL ATTITUDES</u> | | | | | |
| Reprimand | 85 | -18 | 18 | 11.96 | 7.73 |
| Wt Loss | 84 | -6 | 18 | 9.28 | 6.21 |
| Convenience | 85 | -3 | 18 | 5.24 | 5.29 |
| Health | 86 | 0 | 18 | 13.60 | 4.46 |
| Military Image | 86 | 0 | 18 | 9.39 | 6.38 |
| Look Better | 86 | 0 | 18 | 11.48 | 6.32 |
| Career | 85 | -12 | 18 | 11.17 | 6.73 |
| Feel Better | 86 | 0 | 18 | 11.98 | 5.43 |
| Heavy | 86 | -18 | 18 | 8.51 | 8.02 |
| Dining Hall | 80 | -15 | 18 | -0.20 | 5.71 |
| Flight Line | 69 | -18 | 18 | -2.79 | 7.84 |
| <u>AGGREGATE ATTITUDE AND SUBJECTIVE NORMS</u> | | | | | |
| Attitude | 62 | 14 | 165 | 90.40 | 36.77 |
| Subjective Norm | 58 | -15 | 108 | 42.14 | 31.64 |
| <u>INTENTION AND BEHAVIOR OF FOLLOWING DIET</u> | | | | | |
| Intention | 86 | -3 | 3 | 1.95 | 1.29 |
| Behavior | 35 | -3 | 3 | 1.48 | 1.54 |
| <u>FOLLOW UP WEIGHT - INITIAL WEIGHT (lbs)</u> | | | | | |
| Weight Change | 36 | -13.75 | 7.25 | -2.45 | 3.85 |

TABLE 4

Distribution of Subjective Norms, Attitudes, Intentions,
Behaviors and Weight Changes
of all Active Duty Air Force Personnel surveyed

| Variable | N | Min | Max | Mean | Std Dev |
|---|----|--------|------|-------|---------|
| <u>On Weight Program</u> | | | | | |
| <u>INDIVIDUAL SUBJECTIVE NORMS</u> | | | | | |
| Diet Therapist | 81 | -18 | 18 | 9.09 | 8.29 |
| Spouse | 77 | -4 | 18 | 9.06 | 7.04 |
| Friends | 79 | -6 | 18 | 4.54 | 5.91 |
| Family | 76 | -12 | 18 | 5.84 | 7.09 |
| Supervisor | 80 | -9 | 18 | 6.45 | 7.93 |
| Children | 63 | -6 | 18 | 3.16 | 6.22 |
| <u>INDIVIDUAL ATTITUDES</u> | | | | | |
| Reprimand | 83 | -18 | 18 | 12.73 | 7.64 |
| Wt Loss | 83 | -6 | 18 | 9.14 | 6.54 |
| Convenience | 82 | -3 | 18 | 5.17 | 5.82 |
| Health | 84 | 0 | 18 | 13.17 | 4.63 |
| Military Image | 84 | 0 | 18 | 8.95 | 6.47 |
| Look Better | 84 | 0 | 18 | 10.96 | 6.76 |
| Career | 83 | -12 | 18 | 10.79 | 7.23 |
| Feel Better | 84 | 0 | 18 | 11.51 | 5.87 |
| Heavy | 84 | -18 | 18 | 8.30 | 7.96 |
| Dining Hall | 78 | -18 | 18 | -0.82 | 6.43 |
| Flight Line | 72 | -18 | 18 | -2.93 | 8.69 |
| <u>AGGREGATE ATTITUDE AND SUBJECTIVE NORMS</u> | | | | | |
| Attitude | 64 | -12 | 167 | 85.75 | 44.60 |
| Subjective Norm | 60 | -17 | 108 | 39.25 | 31.94 |
| <u>INTENTION AND BEHAVIOR OF FOLLOWING DIET</u> | | | | | |
| Intention | 84 | -3 | 3 | 1.86 | 1.46 |
| Behavior | 41 | -3 | 3 | 1.54 | 1.47 |
| <u>FOLLOW UP WEIGHT - INITIAL WEIGHT (lbs)</u> | | | | | |
| Weight Change | 41 | -13.75 | 7.25 | -2.76 | 3.70 |

TABLE 4 (cont)

Distribution of Subjective Norms, Attitudes, Intentions,
Behaviors and Weight Changes
of all Active Duty Air Force Personnel surveyed

| Variable | N | Min | Max | Mean | Std Dev |
|---|----|------|------|-------|---------|
| <u>Not on Weight Program</u> | | | | | |
| <u>INDIVIDUAL SUBJECTIVE NORMS</u> | | | | | |
| Diet Therapist | 21 | -12 | 18 | 7.86 | 8.84 |
| Spouse | 20 | 0 | 18 | 9.70 | 6.90 |
| Friends | 20 | -4 | 18 | 4.60 | 6.39 |
| Family | 19 | -2 | 18 | 8.42 | 6.61 |
| Supervisor | 20 | -15 | 18 | 4.85 | 8.93 |
| Children | 14 | -2 | 18 | 5.21 | 6.93 |
| <u>INDIVIDUAL ATTITUDES</u> | | | | | |
| Reprimand | 21 | -12 | 18 | 7.86 | 7.12 |
| Wt Loss | 20 | -6 | 18 | 8.20 | 6.86 |
| Convenience | 21 | 0 | 18 | 6.29 | 5.62 |
| Health | 21 | 3 | 18 | 13.76 | 4.43 |
| Military Image | 21 | 0 | 18 | 9.05 | 7.19 |
| Look Better | 21 | 0 | 18 | 10.33 | 6.02 |
| Career | 21 | -1 | 18 | 9.43 | 6.43 |
| Feel Better | 21 | 2 | 18 | 12.33 | 5.27 |
| Heavy | 21 | -18 | 18 | 5.90 | 9.74 |
| Dining Hall | 20 | -12 | 9 | -0.60 | 4.60 |
| Flight Line | 16 | -18 | 0 | -4.12 | 6.47 |
| <u>AGGREGATE ATTITUDE AND SUBJECTIVE NORMS</u> | | | | | |
| Attitude | 15 | 21 | 138 | 84.33 | 32.60 |
| Subjective Norm | 13 | 0 | 108 | 43.92 | 34.89 |
| <u>INTENTION AND BEHAVIOR OF FOLLOWING DIET</u> | | | | | |
| Intention | 21 | 0 | 3 | 2.19 | 0.87 |
| Behavior | 9 | -2 | 3 | 1.56 | 1.42 |
| <u>FOLLOW UP WEIGHT - INITIAL WEIGHT (lbs)</u> | | | | | |
| Weight Change | 9 | -7.5 | 2.75 | -1.83 | 3.01 |

TABLE 4 (cont)

Distribution of Subjective Norms, Attitudes, Intentions,
Behaviors and Weight Changes
of all Active Duty Air Force Personnel surveyed

| Variable | N | Min | Max | Mean | Std Dev |
|---|-----|--------|------|-------|---------|
| <u>Both on and not on Weight Program</u> | | | | | |
| <u>INDIVIDUAL SUBJECTIVE NORMS</u> | | | | | |
| Diet Therapist | 102 | -18 | 18 | 8.83 | 8.37 |
| Spouse | 97 | -4 | 18 | 9.20 | 6.98 |
| Friends | 99 | -6 | 18 | 4.56 | 5.98 |
| Family | 95 | -12 | 18 | 6.36 | 7.05 |
| Supervisor | 100 | -15 | 18 | 6.13 | 8.11 |
| Children | 77 | -6 | 18 | 3.53 | 6.36 |
| <u>INDIVIDUAL ATTITUDES</u> | | | | | |
| Reprimand | 104 | -18 | 18 | 11.75 | 7.76 |
| Wt Loss | 103 | -6 | 18 | 8.96 | 6.68 |
| Convenience | 103 | -3 | 18 | 5.40 | 5.77 |
| Health | 105 | 0 | 18 | 13.29 | 4.57 |
| Military Image | 105 | 0 | 18 | 8.97 | 6.58 |
| Look Better | 105 | 0 | 18 | 10.84 | 6.59 |
| Career | 104 | -12 | 18 | 10.52 | 7.07 |
| Feel Better | 105 | 0 | 18 | 11.68 | 5.74 |
| Heavy | 105 | -18 | 18 | 7.82 | 8.35 |
| Dining Hall | 98 | -18 | 18 | -0.78 | 6.08 |
| Flight Line | 88 | -18 | 18 | -3.15 | 8.31 |
| <u>AGGREGATE ATTITUDE AND SUBJECTIVE NORMS</u> | | | | | |
| Attitude | 79 | -12 | 167 | 85.48 | 42.40 |
| Subjective Norm | 73 | -17 | 108 | 40.08 | 32.28 |
| <u>INTENTION AND BEHAVIOR OF FOLLOWING DIET</u> | | | | | |
| Intention | 105 | -3 | 3 | 1.92 | 1.36 |
| Behavior | 50 | -3 | 3 | 1.54 | 1.45 |
| <u>FOLLOW UP WEIGHT - INITIAL WEIGHT (lbs)</u> | | | | | |
| Weight Change | 50 | -13.75 | 7.25 | -2.59 | 3.58 |

the attitude, Feel Better, i.e. no one rated this as unimportant to them. The means for all the attitudes and subjective norms were positive except for the effects of working on the flight line and staying on the diet.

Forty one percent, of those surveyed, returned for the follow-up visit. Most of those that did not return (89%) had conflicting duty schedules. The study was conducted during the time a Unit Effectiveness Inspection was being held on the Air Force Base; this made it difficult for the people to return.

Of those that were able to return, most followed their diet only some of the time (on a scale from Always, Most of the time, Some of the time, Seldom and Never) (see Appendix F). Only one person stated he followed his diet all of the time, and only one person never followed his diet. The average weight loss in the two weeks was 2.55 pounds. This was within the weight loss requirements of the Air Force Weight Program.

Tests of Hypotheses

This study tested the ability of the Behavioral Intentions model to predict compliance to the Air Force Weight Program. It also tested the components of the model in its power to predict behavior.

Aggregate Version

Null Hypothesis1. There is no significant relationship between intention and the combined attitude score with respect to following the diet prescription. The results are shown in Table 5.

Null Hypothesis2. There is no significant relationship between intention and the combined subjective norm score with respect to following the diet prescription. The results are shown in Table 6.

Null Hypothesis3. There is no significant relationship between intention and combined attitude score and subjective norm score with respect to following the diet prescription. The results are shown in Table 7.

Null Hypothesis4. There is no significant relationship between intention and behavior with respect to following the diet prescription. The results are shown in Table 8.

Null Hypothesis5. There is no significant relationship between intention and the goal of weight loss. The results are shown in Table 9.

The results of the hypotheses tested for the aggregate version of the model are shown in Tables 5, 6, 7, 8, and 9.

TABLE 5

Pearson Correlation Coefficients using the Aggregate Version of the Fishbein Model of Active Duty Air Force Personnel from selected Air Force Bases on a weight loss diet.

H₁ Intention and Attitude

WEIGHT PROGRAM ONLY

Large Southwestern Air Force Base

r=0.5334 p= .0001 n=48

All Bases

r=0.5520 p= .0001 n=64

ACTIVE DUTY NOT ON WEIGHT PROGRAM

Large Southwestern Air Force Base

r=0.1369 p= .64 (ns) n=14

All Bases

r=0.1705 p= .54 (ns) n=15

WEIGHT PROGRAM AND NOT

Large Southwestern Air Force Base

r=0.4743 p= .0001 n=62

All Bases

r=0.5158 p= .0001 n=79

Intention correlated moderately high with attitude, $r = 0.53$, $p = .0001$ (Table 5). Intention correlated less with subjective norm, $r = 0.47$, $p = .0009$ (Table 6). Intention correlated moderately low with the combined attitude and subjective norm, adjusted $R^2 = 0.36$, $p = .04$ (Table 7). Behavior correlated with intention ($r = 0.42$, $p = .03$), i.e. 17% of the variance of the behavior of following the diet prescription could be explained by self reported rating of intention to follow the diet prescription (Table 8).

Change in weight did not correlate with intention to follow the diet prescription (Table 9).

Disaggregate Version

Null Hypothesis 6. There is no significant relationship between behavior and the individual attitudes and subjective norms. The results are shown in Table 10.

Null Hypothesis 7. There is no significant relationship between weight loss and the individual attitudes and subjective norms. The results are shown in Table 11.

The results of the disaggregate version of the model are shown in Tables 10 and 11. They were determined using the stepwise selection. Behavior correlated with Spouse but was not significant, when using the data from a Large

TABLE 6

Pearson Correlation Coefficients of the Aggregate Version of the Fishbein Model of Active Duty Air Force Personnel from selected Air Force Bases on a weight loss diet.

H₂ Intention and Subjective Norm

WEIGHT PROGRAM ONLY

Large Southwestern Air Force Base

r=0.4716 p= .0009 n=46

All Bases

r=0.5117 p= .0001 n=60

ACTIVE DUTY NOT ON WEIGHT PROGRAM

Large Southwestern Air Force Base

r=0.6842 p= .01 n=12

All Bases

r=0.6793 p= .01 n=13

WEIGHT PROGRAM AND NOT

Large Southwestern Air Force Base

r=0.4902 p=0.0001 n=58

All Bases

r=0.5160 p=0.0001 n=73

TABLE 7

Stepwise Regression of the Aggregate Version of the Fishbein Model of Active Duty Air Force Personnel from selected Air Force Bases on a weight loss diet.

H₃ Intention with Attitude and Subjective Norm

WEIGHT PROGRAM ONLY

Large Southwestern Air Force Base

Adj R² = 0.3576 F=4.339 p=0.04 n=46
 Beta = 0.017 (Attitude) Beta = 0.024 (Norm)

All Bases

Adj R² = 0.3398 F=6.404 p=0.0075 n=60
 Beta = 0.008 (Attitude) Beta = 0.026 (Norm)

WEIGHT PROGRAM AND NOT

Large Southwestern Air Force Base

Adj R² = 0.2997 F=4.210 p=0.0389 n=58
 Beta = 0.015 (Attitude) Beta = 0.022 (Norm)

All Bases

Adj R² = 0.2961 F=6.257 p=0.0068 n=73
 Beta = 0.007 (Attitude) Beta = 0.023 (Norm)

Adj R² takes into account how many variables were used in the equation and slightly lowers the estimate of explained variation - the adjusted multiple regression.

TABLE 8

Pearson Correlation Coefficients of the Aggregate Version of the Fishbein Model of Active Duty Air Force Personnel from selected Air Force Bases on a weight loss diet.

H4 Behavior and Intention

WEIGHT PROGRAM ONLY

Large Southwestern Air Force Base

| | | |
|----------|--------|------|
| r=0.4163 | p= .03 | n=27 |
|----------|--------|------|

All Bases

| | | |
|----------|---------|------|
| r=0.4483 | p= .003 | n=41 |
|----------|---------|------|

NOT ON WEIGHT PROGRAM

Large Southwestern Air Force Base

| | | |
|----------|-------------|-----|
| r=0.4743 | p= .24 (ns) | n=8 |
|----------|-------------|-----|

All Bases

| | | |
|----------|-------------|-----|
| r=0.4711 | p= .20 (ns) | n=9 |
|----------|-------------|-----|

WEIGHT PROGRAM AND NOT

Large Southwestern Air Force Base

| | | |
|----------|--------|------|
| r=0.4178 | p= .01 | n=35 |
|----------|--------|------|

All Bases

| | | |
|----------|---------|------|
| r=0.4454 | p= .001 | n=50 |
|----------|---------|------|

TABLE 9

Pearson Correlation Coefficients of the Aggregate Version of
the Fishbein Model
of Active Duty Air Force Personnel from selected Air Force
Bases on a weight loss diet.

H_s Weight Change and Intention

WEIGHT PROGRAM ONLY

Large Southwestern Air Force Base

$r = -0.0704$ $p = .72$ (ns) $n = 28$

All Bases

$r = -0.0355$ $p = .83$ (ns) $n = 41$

NOT ON WEIGHT PROGRAM

Large Southwestern Air Force Base

$r = -0.2707$ $p = .52$ (ns) $n = 8$

All Bases

$r = -0.2693$ $p = .48$ (ns) $n = 9$

WEIGHT PROGRAM AND NOT

Large Southwestern Air Force Base

$r = -0.0861$ $p = .62$ (ns) $n = 36$

All Bases

$r = -0.0489$ $p = .74$ (ns) $n = 50$

TABLE 10

Stepwise Regression of the Disaggregate Version of the Fishbein Model of Behavioral Intentions of Active Duty Air Force personnel from selected Air Force Bases on a weight loss diet.

H₆ Behavior and Disaggregate variables of Attitudes and Subjective Norms

WEIGHT PROGRAM ONLY

Large Southwestern Air Force Base

$R^2 = 0.2736$ $p = .06$ (ns) $F = 4.14$

Intercept = 0.3727

| Beta weights | Variable | Partial R ² | p |
|--------------|----------|------------------------|---------|
| 0.13 | SPOUSE | 0.2736 | .06(ns) |

All Bases

$R^2 = 0.4891$ $p = .006$ $F = 5.74$

Intercept = 1.2803

| Beta weights | Variable | Partial R ² | p |
|--------------|------------|------------------------|----------|
| 0.09 | SPOUSE | 0.29 | .01 |
| -0.08 | REPRIMAND | 0.13 | .056(ns) |
| 0.06 | SUPERVISOR | 0.07 | .12(ns) |

TABLE 10 (cont)

Stepwise Regression of the Disaggregate Version of the Fishbein Model of Behavioral Intentions of Active Duty Air Force personnel from selected Air Force Bases on a weight loss diet.

H₆ Behavior and Disaggregate variables of Attitudes and Subjective Norms

NOT ON WEIGHT PROGRAM

Large Southwestern Air Force Base

$R^2 = 0.9796$ $p = .09$ (ns) $F = 48.00$

Intercept = - 1.00

| Beta weight | Variable | Partial R ² | p |
|-------------|----------|------------------------|---------|
| 0.43 | FAMILY | 0.9796 | .09(ns) |

All Bases

$R^2 = 0.7348$ $p = .14$ (ns) $F = 5.54$

Intercept = 1.61

| Beta weight | Variable | Partial R ² | p |
|-------------|----------|------------------------|---------|
| -0.21 | HEAVY | 0.74 | .14(ns) |

TABLE 10 (cont)

Stepwise Regression of the Disaggregate Version of the Fishbein Model of Behavioral Intentions of Active Duty Air Force personnel from selected Air Force Bases on a weight loss diet.

H₆ Behavior and Disaggregate variables of Attitudes and Subjective Norms

WEIGHT PROGRAM AND NOT

Large Southwestern Air Force Base

$R^2 = 0.3664$ $p = .01$ $F = 8.03$

Intercept = 0.05

| Beta weights | Variable | Partial R ² | p |
|--------------|----------|------------------------|-----|
| 0.16 | SPOUSE | 0.3664 | .01 |

All Bases

$R^2 = 0.3929$ $p = .003$ $F = 7.44$

Intercept = 1.12

| Beta weights | Variable | Partial R ² | p |
|--------------|-----------|------------------------|---------|
| 0.14 | SPOUSE | 0.32 | .003 |
| -0.06 | REPRIMAND | 0.08 | .10(ns) |

TABLE 11

Stepwise Regression of the Disaggregate Version of the Fishbein Model of Behavioral Intentions of Active Duty Air Force personnel from selected Air Force Bases on a weight loss diet.

H7 Weight Change and Disaggregate variables of Attitudes and Subjective Norms.

WEIGHT PROGRAM ONLY

Large Southwestern Air Force Base

$R^2 = 0.8444$ $p = .0006$ $F = 16.28$

Intercept = -7.56

| Beta weight | Variable | Partial R ² | p |
|-------------|----------------|------------------------|---------|
| 0.42 | Career | 0.30 | .002 |
| 0.15 | Military Image | 0.28 | .06(ns) |
| -0.30 | Diet Therapist | 0.27 | .03 |

All Bases

$R^2 = 0.7085$ $p = .0002$ $F = 10.33$

Intercept = -3.19

| Beta weight | Variable | Partial R ² | p |
|-------------|---------------------|------------------------|----------|
| | Convenience | 0.19 | 0.04 |
| -0.26 | Spouse | 0.26 | 0.007 |
| 0.21 | Career | 0.17 | 0.01 |
| 0.20 | Children | 0.07 | 0.07(ns) |
| | Convenience Removed | 0.04 | 0.15 |
| -0.10 | Diet Therapist | 0.06 | 0.09(ns) |

TABLE 11 (cont)

Stepwise Regression of the Disaggregate Version of the Fishbein Model of Behavioral Intentions of Active Duty Air Force personnel from selected Air Force Bases on a weight loss diet.

H7 Weight Change and Disaggregate variables of Attitudes and Subjective Norms.

NOT ON WEIGHT PROGRAM

Large Southwestern Air Force Base

$R^2 = 0.9992$ $p = .02$ $F = 1272.36$

Intercept = -2.76

| Beta weight | Variable | Partial R ² | p |
|-------------|----------|------------------------|-----|
| 0.47 | HEAVY | 0.9992 | .02 |

All Bases

$R^2 = 0.9999$ $p = .008$ $F = 7114.47$

Intercept = 1.08

| Beta weight | Variable | Partial R ² | p |
|-------------|----------|------------------------|-----|
| -0.63 | FRIENDS | 0.9709 | .01 |
| -0.22 | FAMILY | 0.0291 | .03 |

TABLE 11 (cont)

Stepwise Regression of the Disaggregate Version of the Fishbein Model of Behavioral Intentions of Active Duty Air Force personnel from selected Air Force Bases on a weight loss diet.

H7 Weight Change and Disaggregate variables of Attitudes and Subjective Norms.

WEIGHT PROGRAM AND NOT

Large Southwestern Air Force Base

$R^2 = 0.8692$ $p = .0001$ $F = 18.28$

Intercept = -7.3413

| Beta weight | Variable | Partial R ² | p |
|-------------|----------------|------------------------|---------|
| | SPOUSE | 0.31 | .02 |
| 0.65 | CAREER | 0.25 | .02 |
| -0.35 | DIET THERAPIST | 0.19 | .009 |
| | SPOUSE REMOVED | 0.02 | .31(ns) |
| 0.12 | HEAVY | 0.07 | .05 |
| -0.14 | REPRIMAND | 0.06 | .05 |

All Bases

$R^2 = 0.7242$ $p = .0001$ $F = 10.50$

Intercept = -3.19

| Beta weights | Variable | Partial R ² | p |
|--------------|----------------|------------------------|---------|
| -0.30 | SPOUSE | 0.26 | .008 |
| 0.20 | CAREER | 0.28 | .001 |
| 0.12 | WEIGHT LOSS | 0.09 | .03 |
| -0.12 | DIET THERAPIST | 0.05 | .10(ns) |
| 0.14 | CHILDREN | 0.05 | .07(ns) |

Southwestern Air Force base personnel on the Weight Program. When data from all bases surveyed were added in, the correlation with the attitude, Spouse, was significant, $R^2 = .32$, $p = .003$. Weight change correlated with Career, using the data from the large Southwestern Air Force Base personnel on the Weight Program, $R^2 = .30$, $p = .002$.

The correlation analyses of all the variables that were collected in this study can be found in Appendix G.

Discussion of Findings

The equation formed to predict behavior was

$$\text{Behavior} = 1.28 + .09(\text{Spouse}) - .08(\text{Reprimand})$$

This regression equation was significant at the $p = .0002$ level. The variable Reprimand, was a suppressor variable in this equation. The suppressor variable has a high correlation with the predictor variables and a very low correlation with the criterion variable; it is used to suppress the variance that is irrelevant to the criterion.

The variable that correlated with weight loss was the attitude toward Career; the subjective norm, Diet Therapist, was a suppressor variable.

The equation that was formed to predict weight loss was

$$\text{Weight Loss} = -7.56 - 0.30(\text{Diet Therapist}) + 0.42 (\text{Career}).$$

The regression equation was significant at the $p = .0006$ level.

Discussion of Hypotheses Testing

The null hypotheses H_1 , H_2 , H_3 , and H_4 using the aggregate version of the model were rejected. The null hypothesis H_5 could not be rejected. The null hypotheses H_6 , and H_7 using the disaggregate version of the model were rejected.

Both the aggregate and disaggregate versions of the Fishbein model of behavioral intentions were able to predict behavior (following the diet prescription). This follows the meta analysis results in the Sheppard et al. (1988) study that shows that prediction of behavior is better than goals. The aggregate version was able to predict whether the person would follow the diet prescription and the disaggregate version was able to predict the goal of weight loss and the behavior of following the diet prescription.

Prediction of Dieting from Intention was similar to a previous study - the $r = 0.42$ in this study vs $r = 0.40$ in Sejwacz's study (Sejwacz et al., 1989). The disaggregate form that this study used was able to predict weight loss better than the aggregate form - both in this study and in the Sejwacz et al. (1980) study.

Career - the belief that following the diet would help their career and whether they found their career important - had the greatest partial R^2 of 0.30 with weight change. Intuitively this makes sense since the weight program plays

such a major part in one's career in the Air Force. An Air Force person may be discharged, i.e. end their career, if they do not lose weight while on the weight program (Santos, 1985).

As with Saltzer's (1979) observations, the subjective norm - Spouse (including significant others) showed no correlation with weight loss. Spouse did, however, correlate with behavior, $R^2 = .32$, $p = .003$. A scatterplot of the regression of behavior with the subjective norm, spouse and another of weight change with career are shown in Appendix H and Appendix I respectively. The subjective norm, Spouse, could play a more significant role in the Air Force population since the majority are male. Their spouses and significant others probably participate more in the food choice decisions as contrasted with the female sample in Saltzer's (1979) study. Unlike Saltzer's findings, the attitude toward health and looking better did not help in the prediction of either behavior change or weight change. This is probable because the persons on the Air Force weight program are not extremely overweight - the mean BMI was 27.6.

CHAPTER IV

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

SUMMARYRestatement of Problem

The problem this study evaluated was the ability to predict compliance to weight loss diets by persons on the Air Force Weight Program using the Fishbein Model of Behavioral Intentions.

Design

A sample of 66 persons on the Air Force Weight Program were recruited during a six week period. The criteria they had to meet were

1. Active Duty Air Force
2. Entered into the Weight Program

All were given the first survey which measured intent to follow the diet, the attitudes toward Weight Loss, Looking Better, Convenience, Career, Health, Feeling Better, Military Image, Being Heavy, Reprimand, and the subjective norms, Spouse, Children, Friends/Peers, Diet Therapist, and Supervisor.

The result of correlation of intent and attitude was significant using the aggregate form of the model ($R^2 = .533$, $p < .0001$). Subjective norm correlated with attitude using the aggregate form of the model ($R^2 = .472$, $p < .0009$). When intention (the dependent variable) was

regressed with subjective norm and attitude, the adjusted R^2 was .358 with $p = .04$.

Behavior correlated with intention, $r = .416$, $p = .03$, but weight loss did not correlate with intention in the aggregate version $r = -.07$, $p = .72$.

CONCLUSIONS

Adequacy of Sample

The sample was not chosen randomly, since the timing of attendance at the nutrition clinic was critical. The intervention of diet instruction was provided at this time. Sixty six persons were given the first part of a two-part survey. The statistics accomplished on the first part have an adequate sample size. Only 40% completed the second survey and this may have biased the results.

The inspection the Air Force Base was undergoing could have also biased the results. Many people that were put on the program may have not been placed on the Weight Program if the inspection team was not there.

Adequacy of the Instrument

The survey was able to measure a wide range of attitudes and subjective norms and appeared adequate for this study.

Results of Hypotheses testing

Only 17% of the variance could be explained between intention and the behavior of following the diet prescription. This could be related to the difficulty of following an exchange diet at home and outside the home. It is highly possible that the persons surveyed do not realize how difficult the diet prescription may be. Nine percent of the variance may be explained between weight loss and the attitude, Career.

The Fishbein Model of Behavioral Intention was useful in the prediction of both diet behavior and the goal of weight loss. The model was designed for prediction of behavior and not for prediction of attainment of goals (Ajzen and Fishbein, 1980). The ability to predict the goal, weight loss, in this study was very good. The model has been shown to be able to predict goal attainment in many studies (Sheppard, et al., 1988). The population that was being studied is fairly homogeneous, and this could only aid predictive power.

The information received from this study may be useful in directing consultation of active duty Air Force personnel on the Weight Program. Stressing the effects of the program on their career during initial counseling and upon follow up may help adherence to the program. Involving the spouse or

significant other in the counseling may increase the positive behavior of following the diet prescription.

Recommendations

Any future research using this design should

1. Use a larger sample size to help moderate the effects of attrition.
2. Obtain a random sample of the population.
3. Evaluate exercise in the attitude scale and as a behavior contributing to the goal of weight loss.
4. Increase the length of time between evaluations to two months in order to evaluate the predictive power for a longer period of time.

Suggestion for Future Research

1. Attempt to manipulate the subjective norms or attitudes and measure any effect they may have on behavior or achievement of the goal.

APPENDIX A

THE MAXIMUM ALLOWABLE WEIGHT TABLES
FOR THE UNITED STATES AIR FORCE

WEIGHT STANDARDS - MEN (see note)

| HEIGHT (IN INCHES) | MAXIMUM ALLOWABLE WEIGHT (MAW) | INTERPOLATED WEIGHT | | | 10% CRITERIA WEIGH ANNUALLY |
|-----------------------|--------------------------------------|------------------------|---------|---------|-----------------------------------|
| | | 1/4" | 1/2" | 3/4" | |
| 60 | 153 | 153 1/2 | 154 | 154 1/2 | 138 |
| 61 | 155 | 155 3/4 | 156 1/2 | 157 1/4 | 139 |
| 62 | 158 | 158 1/2 | 159 | 159 1/2 | 142 |
| 63 | 160 | 161 | 162 | 163 | 144 |
| 64 | 164 | 165 1/4 | 166 1/2 | 167 3/4 | 148 |
| 65 | 169 | 170 1/4 | 171 1/2 | 172 3/4 | 152 |
| 66 | 174 | 174 1/4 | 175 1/2 | 176 3/4 | 157 |
| 67 | 179 | 180 1/4 | 181 1/2 | 182 3/4 | 161 |
| 68 | 184 | 185 1/4 | 186 1/2 | 187 3/4 | 166 |
| 69 | 189 | 190 1/4 | 191 1/2 | 192 3/4 | 170 |
| 70 | 194 | 195 1/4 | 196 1/2 | 197 3/4 | 175 |
| 71 | 199 | 200 1/2 | 202 | 203 1/2 | 179 |
| 72 | 205 | 206 1/2 | 208 | 209 1/2 | 184 |
| 73 | 211 | 212 3/4 | 214 1/4 | 216 | 190 |
| 74 | 218 | 219 1/2 | 221 | 222 1/2 | 196 |
| 75 | 224 | 225 1/2 | 227 | 228 1/2 | 202 |
| 76 | 230 | 231 1/2 | 233 | 234 1/2 | 207 |
| 77 | 236 | 237 1/2 | 239 | 240 1/2 | 212 |
| 78 | 242 | 243 1/2 | 245 | 246 1/2 | 218 |
| 79 | 248 | 249 1/2 | 251 | 252 1/2 | 223 |
| 80 | 254 | 255 1/4 | 257 1/2 | 258 3/4 | 229 |

NOTE: For every inch under 60 inches, subtract 2 pounds from the MAW. For every inch over 80 inches, add 6 pounds to the MAW.

WEIGHT STANDARDS - WOMEN (see note)

| HEIGHT (IN INCHES) | MAXIMUM ALLOWABLE WEIGHT (MAW) | INTERPOLATED WEIGHT | | | 10% CRITERIA WEIGH ANNUALLY |
|-----------------------|--------------------------------------|------------------------|---------|---------|-----------------------------------|
| | | 1/4" | 1/2" | 3/4" | |
| 58 | 126 | 126 1/2 | 127 | 127 1/2 | 113 |
| 59 | 128 | 128 1/2 | 129 | 129 1/2 | 115 |
| 60 | 130 | 130 1/2 | 131 | 131 1/2 | 117 |
| 61 | 132 | 132 1/2 | 133 | 133 1/2 | 119 |
| 62 | 134 | 134 1/2 | 135 | 135 1/2 | 121 |
| 63 | 136 | 136 3/4 | 137 1/2 | 138 1/4 | 122 |
| 64 | 139 | 140 1/4 | 141 1/2 | 142 3/4 | 125 |
| 65 | 144 | 145 | 146 | 147 | 130 |
| 66 | 148 | 149 | 150 | 151 | 133 |
| 67 | 152 | 153 | 154 | 155 | 137 |
| 68 | 156 | 157 1/4 | 158 1/2 | 159 3/4 | 140 |
| 69 | 161 | 162 | 163 | 164 | 145 |
| 70 | 165 | 166 | 167 | 168 | 148 |
| 71 | 169 | 170 1/4 | 171 1/2 | 172 3/4 | 152 |
| 72 | 174 | 175 1/4 | 176 1/2 | 177 3/4 | 157 |
| 73 | 179 | 180 1/2 | 182 | 183 1/2 | 161 |
| 74 | 185 | 186 1/4 | 187 1/2 | 188 3/4 | 166 |
| 75 | 190 | 191 1/2 | 193 | 194 1/2 | 171 |
| 76 | 196 | 197 1/4 | 198 1/2 | 199 3/4 | 176 |
| 77 | 201 | 202 1/4 | 203 1/2 | 204 3/4 | 181 |
| 78 | 206 | 207 1/4 | 208 1/2 | 209 3/4 | 185 |

NOTE: For every inch under 58 inches, subtract 2 pounds from the MAW. For every inch over 78 inches, add 6 pounds to the MAW.

APPENDIX 8

THE AIR FORCE NOMOGRAM

INSTRUCTIONS FOR USING THE NOMOGRAM (MALE)

STEP 1: Determine the individual's height in either centimeters or inches

STEP 2: Measure the circumference of the individual's flexed biceps in either centimeters or inches.

NOTE: Taking the Flexed Biceps Measurement. With a clinched fist and 90-degree bend in the elbow, measure the biceps circumference. Take the measurement at the point of maximum flexion.



STEP 3: Locate the height and circumference in centimeters or inches on the left and right scales of the nomogram. With a straight edge, determine where a line drawn between these two points intersects the center scale (weight in kilograms or pounds). This point provides the maximum weight allowance.

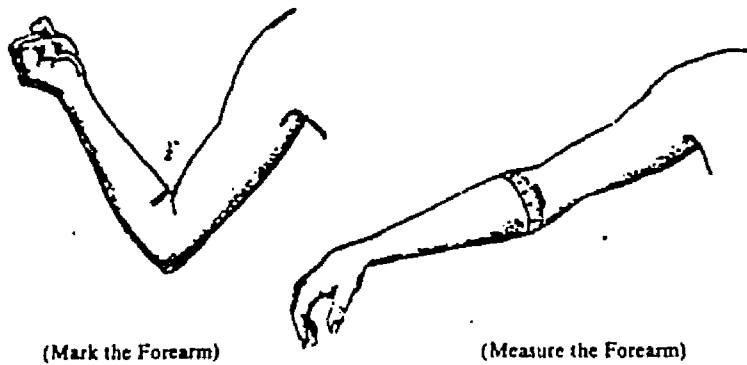
EXAMPLE: A man who is 70.78 inches tall (180 centimeters) has a biceps circumference of 17.32 inches (44 centimeters). His maximum weight would be 224 pounds (102 kilograms).

INSTRUCTIONS FOR USING THE NOMOGRAM (WOMEN)

STEP 1: Determine the individual's height in either centimeters or inches.

STEP 2: Measure the circumference of the individual's forearm in either centimeters or inches. Forearm must be relaxed when the measurement is taken.

NOTE: Taking the forearm measurement: With a clinched fist and 90 degree bend in the elbow, mark a point 1/4 inch down from the bend in the elbow. Then allow the arm to hang relaxed and measure the forearm circumference at the mark. Take the measurement with one edge of the tape on the mark and the other edge toward the hand.



STEP 3: Locate the height and circumference in centimeters or inches on the left and right scales of the nomogram. With a straight edge, determine where a line drawn between these two points intersects the center scale (weight in kilograms or pounds). This point provides the maximum weight allowable.

APPENDIX C

VOLUNTEER AGREEMENT AFFIDAVIT

I AM BEING ASKED TO READ THE FOLLOWING MATERIAL TO ENSURE THAT I AM INFORMED OF THE NATURE OF THIS RESEARCH STUDY AND OF HOW I WILL PARTICIPATE IN IT, IF I CONSENT TO DO SO. COMPLETING THIS QUESTIONNAIRE WILL INDICATE THAT I HAVE BEEN SO INFORMED AND THAT I GIVE MY CONSENT. FEDERAL REGULATIONS REQUIRE WRITTEN INFORMED CONSENT PRIOR TO PARTICIPATION IN THIS RESEARCH STUDY SO THAT I CAN KNOW THE NATURE AND THE RISKS OF MY PARTICIPATION AND CAN DECIDE TO PARTICIPATE OR NOT PARTICIPATE IN A FREE AND INFORMED MANNER.

PURPOSE

"I am being invited to voluntarily participate in the above-titled research project. The purpose of this project is to determine what motivates persons on the Air Force Weight Program to follow their diet prescription. This information could lead to more efficient and effective instruction for those on the program.

PROCEDURE

"If I agree to participate, I will be asked to agree to the following: 1. complete a questionnaire that will take approximately 10 minutes and 2. come to the nutrition clinic in 2 weeks to weigh - this will take approximately 5 minutes.

BENEFITS

You may benefit from the awareness of the factors that affect whether you follow your diet prescription, and this may help you adhere to a healthy diet.

ASSURANCE OF CONFIDENTIALITY OF SUBJECT'S IDENTITY

The results of this study may be important enough to be published in the medical journals, but the Privacy Act of 1974 assures you that you will not be identified by name, social security number or other identifying information without your express consent.

Those who will have access to the data will be as follows:

Capt. Heather M. Slimon

Dr. Edward Sheehan

Dr. Donald McNamara

Dr. Timothy Lohman

AUTHORIZATION

"BEFORE GIVING MY CONSENT BY COMPLETING THIS QUESTIONNAIRE, THE METHODS, INCONVENIENCES, RISKS, AND BENEFITS HAVE BEEN EXPLAINED TO ME AND MY QUESTIONS HAVE BEEN ANSWERED. I UNDERSTAND THAT I MAY ASK QUESTIONS AT ANY TIME AND THAT I AM FREE TO WITHDRAW FROM THE PROJECT AT ANY TIME WITHOUT CAUSING BAD FEELINGS OR AFFECTING MY MEDICAL CARE. I UNDERSTAND THAT I DO NOT GIVE UP ANY OF MY LEGAL RIGHTS BY SIGNING THIS FORM.

APPENDIX D
QUESTIONNAIRE

1. Have you been entered into the Air Force Weight Program?

(Circle one)

1. YES
2. NO

Q-2 Following my diet prescription exactly as my Diet Therapist instructed for the next two weeks will help me lose weight. (Circle number)

- 1 EXTREMELY LIKELY
- 2 QUITE LIKELY
- 3 SLIGHTLY LIKELY
- 4 NEITHER LIKELY NOR UNLIKELY
- 5 SLIGHTLY UNLIKELY
- 6 QUITE UNLIKELY
- 7 EXTREMELY UNLIKELY

Q-3 For me, losing weight is:

- 1 EXTREMELY DESIRABLE
- 2 QUITE DESIRABLE
- 3 SLIGHTLY DESIRABLE
- 4 NEITHER DESIRABLE NOR UNDESIRABLE
- 5 SLIGHTLY UNDESIRABLE
- 6 QUITE UNDESIRABLE
- 7 EXTREMELY UNDESIRABLE

Q-4 Following my diet exactly as my diet therapist instructed for the next two weeks will be convenient.

(Circle number)

- 1 EXTREMELY LIKELY
- 2 QUITE LIKELY
- 3 SLIGHTLY LIKELY
- 4 NEITHER LIKELY NOR UNLIKELY
- 5 SLIGHTLY UNLIKELY
- 6 QUITE UNLIKELY
- 7 EXTREMELY UNLIKELY

Q-5 For me, convenience is:

- 1 EXTREMELY DESIRABLE
- 2 QUITE DESIRABLE
- 3 SLIGHTLY DESIRABLE
- 4 NEITHER DESIRABLE NOR UNDESIRABLE
- 5 SLIGHTLY UNDESIRABLE
- 6 QUITE UNDESIRABLE
- 7 EXTREMELY UNDESIRABLE

Q-6 Following my diet prescription exactly as my diet therapist instructed for the next two weeks will help me stay healthy. (Circle one)

- 1 EXTREMELY LIKELY
- 2 QUITE LIKELY
- 3 SLIGHTLY LIKELY
- 4 NEITHER LIKELY NOR UNLIKELY
- 5 SLIGHTLY UNLIKELY
- 6 QUITE UNLIKELY
- 7 EXTREMELY UNLIKELY

Q-7 For me, staying healthy is:

- 1 EXTREMELY DESIRABLE
- 2 QUITE DESIRABLE
- 3 SLIGHTLY DESIRABLE
- 4 NEITHER DESIRABLE NOR UNDESIRABLE
- 5 SLIGHTLY UNDESIRABLE
- 6 QUITE UNDESIRABLE
- 7 EXTREMELY UNDESIRABLE

Q-8 I think that losing weight would improve my military image. (Circle number)

- 1 EXTREMELY LIKELY
- 2 QUITE LIKELY
- 3 SLIGHTLY LIKELY
- 4 NEITHER LIKELY NOR UNLIKELY
- 5 SLIGHTLY UNLIKELY
- 6 QUITE UNLIKELY
- 7 EXTREMELY UNLIKELY

Q-9 Portraying a military image is:

- 1 EXTREMELY DESIRABLE
- 2 QUITE DESIRABLE
- 3 SLIGHTLY DESIRABLE
- 4 NEITHER DESIRABLE NOR UNDESIRABLE
- 5 SLIGHTLY UNDESIRABLE
- 6 QUITE UNDESIRABLE
- 7 EXTREMELY UNDESIRABLE

Q-10 How likely is each of the following to recommend that you follow your diet prescription? (Circle number)

| | EXTREMELY LIKELY | | | EXTREMELY UNLIKELY | | | |
|-----------------------------|------------------|---|---|--------------------|---|---|---|
| Diet therapist | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Spouse/Significant Other | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Friends/Peers | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Family members | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Supervisor | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Children | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Q-11 How desirable is it for you to follow the recommendations of the following? (Circle number)

| | EXTREMELY LIKELY | | | EXTREMELY UNLIKELY | | | |
|-----------------------------|------------------|---|---|--------------------|---|---|---|
| Diet therapist | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Spouse/Significant Other | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Friends/Peers | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Family members | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Supervisor | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Children | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Q-15 I would look better if I lost weight. (Circle one)

- 1 EXTREMELY LIKELY
- 2 QUITE LIKELY
- 3 SLIGHTLY LIKELY
- 4 NEITHER LIKELY NOR UNLIKELY
- 5 SLIGHTLY UNLIKELY
- 6 QUITE UNLIKELY
- 7 EXTREMELY UNLIKELY

Q-16 Looking better is: (Circle number)

- 1 EXTREMELY DESIRABLE
- 2 QUITE DESIRABLE
- 3 SLIGHTLY DESIRABLE
- 4 NEITHER DESIRABLE NOR UNDESIRABLE
- 5 SLIGHTLY UNDESIRABLE
- 6 QUITE UNDESIRABLE
- 7 EXTREMELY UNDESIRABLE

Q-15 I would look better if I lost weight. (Circle one)

- 1 EXTREMELY LIKELY
- 2 QUITE LIKELY
- 3 SLIGHTLY LIKELY
- 4 NEITHER LIKELY NOR UNLIKELY
- 5 SLIGHTLY UNLIKELY
- 6 QUITE UNLIKELY
- 7 EXTREMELY UNLIKELY

Q-16 Looking better is: (Circle number)

- 1 EXTREMELY DESIRABLE
- 2 QUITE DESIRABLE
- 3 SLIGHTLY DESIRABLE
- 4 NEITHER DESIRABLE NOR UNDESIRABLE
- 5 SLIGHTLY UNDESIRABLE
- 6 QUITE UNDESIRABLE
- 7 EXTREMELY UNDESIRABLE

Q-17 Not losing weight will hurt my career in the Air Force. (Circle number)

- 1 EXTREMELY LIKELY
- 2 QUITE LIKELY
- 3 SLIGHTLY LIKELY
- 4 NEITHER LIKELY NOR UNLIKELY
- 5 SLIGHTLY UNLIKELY
- 6 QUITE UNLIKELY
- 7 EXTREMELY UNLIKELY

Q-18 To me, my career in the Air Force is:

- 1 EXTREMELY IMPORTANT
- 2 QUITE IMPORTANT
- 3 SLIGHTLY IMPORTANT
- 4 NEITHER IMPORTANT NOR UNIMPORTANT
- 5 SLIGHTLY UNIMPORTANT
- 6 QUITE UNIMPORTANT
- 7 EXTREMELY UNIMPORTANT

Q-19 Following my diet prescription will make me feel better. (Circle number)

- 1 EXTREMELY LIKELY
- 2 QUITE LIKELY
- 3 SLIGHTLY LIKELY
- 4 NEITHER LIKELY NOR UNLIKELY
- 5 SLIGHTLY UNLIKELY
- 6 QUITE UNLIKELY
- 7 EXTREMELY UNLIKELY

Q-20 Feeling better is: (Circle number)

- 1 EXTREMELY DESIRABLE
- 2 QUITE DESIRABLE
- 3 SLIGHTLY DESIRABLE
- 4 NEITHER DESIRABLE NOR UNDESIRABLE
- 5 SLIGHTLY UNDESIRABLE
- 6 QUITE UNDESIRABLE
- 7 EXTREMELY UNDESIRABLE

Some people want to maintain their weight for body building, or similar reasons.

Q-21 If I follow my diet prescription, I will be less heavy. (Circle number)

- 1 EXTREMELY LIKELY
- 2 QUITE LIKELY
- 3 SLIGHTLY LIKELY
- 4 NEITHER LIKELY NOR UNLIKELY
- 5 SLIGHTLY UNLIKELY
- 6 QUITE UNLIKELY
- 7 EXTREMELY UNLIKELY

Q-22 Being heavy is: (Circle number)

- 1 EXTREMELY DESIRABLE
- 2 QUITE DESIRABLE
- 3 SLIGHTLY DESIRABLE
- 4 NEITHER DESIRABLE NOR UNDESIRABLE
- 5 SLIGHTLY UNDESIRABLE
- 6 QUITE UNDESIRABLE
- 7 EXTREMELY UNDESIRABLE

Q-23 Your sex. (Circle number of your answer)

- 1 MALE
- 2 FEMALE

Q-24 Your present marital status. (Circle number)

- 1 NEVER MARRIED
- 2 MARRIED
- 3 DIVORCED
- 4 SEPARATED
- 5 WIDOWED

Q-25 Number of children you have in each age group. (If none, write "0")

Number of children

_____ UNDER 5 YEARS OF AGE

_____ 5 TO 13

_____ 14 TO 18

_____ 19 TO 24

_____ 25 AND OVER

Q-26 Your present age: _____ YEARS

Q-27 Number of years you have been in the service.

Number of years

_____ UNDER 3 YEARS

_____ 3 TO 6

_____ 7 TO 10

_____ 11 TO 14

_____ 15 TO 18

_____ OVER 19

APPENDIX E

QUESTIONNAIRE

1. Have you been entered into the Air Force Weight Program?

(Circle one)

1. YES

2. NO

Q-2 I will be reprimanded if I don't lose weight. (Circle number)

1 EXTREMELY LIKELY

2 QUITE LIKELY

3 SLIGHTLY LIKELY

4 NEITHER LIKELY NOR UNLIKELY

5 SLIGHTLY UNLIKELY

6 QUITE UNLIKELY

7 EXTREMELY UNLIKELY

Q-3 To me, a reprimand is: (Circle number)

1 EXTREMELY DESIRABLE

2 QUITE DESIRABLE

3 SLIGHTLY DESIRABLE

4 NEITHER DESIRABLE NOR UNDESIRABLE

5 SLIGHTLY UNDESIRABLE

6 QUITE UNDESIRABLE

7 EXTREMELY UNDESIRABLE

Q-4 Following my diet prescription exactly as my Diet Therapist instructed for the next two weeks will help me lose weight. (Circle number)

- 1 EXTREMELY LIKELY
- 2 QUITE LIKELY
- 3 SLIGHTLY LIKELY
- 4 NEITHER LIKELY NOR UNLIKELY
- 5 SLIGHTLY UNLIKELY
- 6 QUITE UNLIKELY
- 7 EXTREMELY UNLIKELY

Q-5 For me, losing weight is:

- 1 EXTREMELY DESIRABLE
- 2 QUITE DESIRABLE
- 3 SLIGHTLY DESIRABLE
- 4 NEITHER DESIRABLE NOR UNDESIRABLE
- 5 SLIGHTLY UNDESIRABLE
- 6 QUITE UNDESIRABLE
- 7 EXTREMELY UNDESIRABLE

Q-6 Following my diet exactly as my diet therapist instructed for the next two weeks will be convenient.

(Circle number)

- 1 EXTREMELY LIKELY
- 2 QUITE LIKELY
- 3 SLIGHTLY LIKELY
- 4 NEITHER LIKELY NOR UNLIKELY
- 5 SLIGHTLY UNLIKELY
- 6 QUITE UNLIKELY
- 7 EXTREMELY UNLIKELY

Q-7 For me, convenience is:

- 1 EXTREMELY DESIRABLE
- 2 QUITE DESIRABLE
- 3 SLIGHTLY DESIRABLE
- 4 NEITHER DESIRABLE NOR UNDESIRABLE
- 5 SLIGHTLY UNDESIRABLE
- 6 QUITE UNDESIRABLE
- 7 EXTREMELY UNDESIRABLE

Q-8 Following my diet prescription exactly as my diet therapist instructed for the next two weeks will help me stay healthy. (Circle one)

- 1 EXTREMELY LIKELY
- 2 QUITE LIKELY
- 3 SLIGHTLY LIKELY
- 4 NEITHER LIKELY NOR UNLIKELY
- 5 SLIGHTLY UNLIKELY
- 6 QUITE UNLIKELY
- 7 EXTREMELY UNLIKELY

Q-9 For me, staying healthy is:

- 1 EXTREMELY DESIRABLE
- 2 QUITE DESIRABLE
- 3 SLIGHTLY DESIRABLE
- 4 NEITHER DESIRABLE NOR UNDESIRABLE
- 5 SLIGHTLY UNDESIRABLE
- 6 QUITE UNDESIRABLE
- 7 EXTREMELY UNDESIRABLE

Q-10 I think that losing weight would improve my military image. (Circle number)

- 1 EXTREMELY LIKELY
- 2 QUITE LIKELY
- 3 SLIGHTLY LIKELY
- 4 NEITHER LIKELY NOR UNLIKELY
- 5 SLIGHTLY UNLIKELY
- 6 QUITE UNLIKELY
- 7 EXTREMELY UNLIKELY

Q-11 Portraying a military image is:

- 1 EXTREMELY DESIRABLE
- 2 QUITE DESIRABLE
- 3 SLIGHTLY DESIRABLE
- 4 NEITHER DESIRABLE NOR UNDESIRABLE
- 5 SLIGHTLY UNDESIRABLE
- 6 QUITE UNDESIRABLE
- 7 EXTREMELY UNDESIRABLE

Q-12 How likely is each of the following to recommend that you follow your diet prescription? (Circle number)

| | EXTREMELY LIKELY | | | | EXTREMELY UNLIKELY | | | |
|-----------------------------|------------------|---|---|---|--------------------|---|---|--|
| Diet therapist | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Spouse/Significant Other | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Friends/Peers | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Family members | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Supervisor | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Children | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |

Q-13 How important are the recommendations of the following people to you? (Circle number)

| | EXTREMELY LIKELY | | | | EXTREMELY UNLIKELY | | | |
|-----------------------------|------------------|---|---|---|--------------------|---|---|--|
| Diet therapist | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Spouse/Significant Other | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Friends/Peers | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Family members | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Supervisor | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| Children | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |

Q-14 I intend to follow my diet prescription for the next 2 weeks. (Circle number)

- 1 EXTREMELY LIKELY
- 2 QUITE LIKELY
- 3 SLIGHTLY LIKELY
- 4 NEITHER LIKELY NOR UNLIKELY
- 5 SLIGHTLY UNLIKELY
- 6 QUITE UNLIKELY
- 7 EXTREMELY UNLIKELY

Q-15 I would look better if I lost weight. (Circle one)

- 1 EXTREMELY LIKELY
- 2 QUITE LIKELY
- 3 SLIGHTLY LIKELY
- 4 NEITHER LIKELY NOR UNLIKELY
- 5 SLIGHTLY UNLIKELY
- 6 QUITE UNLIKELY
- 7 EXTREMELY UNLIKELY

Q-16 Looking better is: (Circle number)

- 1 EXTREMELY DESIRABLE
- 2 QUITE DESIRABLE
- 3 SLIGHTLY DESIRABLE
- 4 NEITHER DESIRABLE NOR UNDESIRABLE
- 5 SLIGHTLY UNDESIRABLE
- 6 QUITE UNDESIRABLE
- 7 EXTREMELY UNDESIRABLE

Q-17 Not losing weight will hurt my career in the Air Force. (Circle number)

- 1 EXTREMELY LIKELY
- 2 QUITE LIKELY
- 3 SLIGHTLY LIKELY
- 4 NEITHER LIKELY NOR UNLIKELY
- 5 SLIGHTLY UNLIKELY
- 6 QUITE UNLIKELY
- 7 EXTREMELY UNLIKELY

Q-18 To me, my career in the Air Force is:

- 1 EXTREMELY IMPORTANT
- 2 QUITE IMPORTANT
- 3 SLIGHTLY IMPORTANT
- 4 NEITHER IMPORTANT NOR UNIMPORTANT
- 5 SLIGHTLY UNIMPORTANT
- 6 QUITE UNIMPORTANT
- 7 EXTREMELY UNIMPORTANT

Q-19 Following my diet prescription will make me feel better. (Circle number)

- 1 EXTREMELY LIKELY
- 2 QUITE LIKELY
- 3 SLIGHTLY LIKELY
- 4 NEITHER LIKELY NOR UNLIKELY
- 5 SLIGHTLY UNLIKELY
- 6 QUITE UNLIKELY
- 7 EXTREMELY UNLIKELY

Q-20 Feeling better is: (Circle number)

- 1 EXTREMELY DESIRABLE
- 2 QUITE DESIRABLE
- 3 SLIGHTLY DESIRABLE
- 4 NEITHER DESIRABLE NOR UNDESIRABLE
- 5 SLIGHTLY UNDESIRABLE
- 6 QUITE UNDESIRABLE
- 7 EXTREMELY UNDESIRABLE

Some people want to maintain their weight for body building, or similar reasons.

Q-21 If I follow my diet prescription, I will be less heavy. (Circle number)

- 1 EXTREMELY LIKELY
- 2 QUITE LIKELY
- 3 SLIGHTLY LIKELY
- 4 NEITHER LIKELY NOR UNLIKELY
- 5 SLIGHTLY UNLIKELY
- 6 QUITE UNLIKELY
- 7 EXTREMELY UNLIKELY

Q-22 Being heavy is: (Circle number)

- 1 EXTREMELY DESIRABLE
- 2 QUITE DESIRABLE
- 3 SLIGHTLY DESIRABLE
- 4 NEITHER DESIRABLE NOR UNDESIRABLE
- 5 SLIGHTLY UNDESIRABLE
- 6 QUITE UNDESIRABLE
- 7 EXTREMELY UNDESIRABLE

Q-23 Your sex. (Circle number of your answer)

- 1 MALE
- 2 FEMALE

Q-24 Your present marital status. (Circle number)

- 1 NEVER MARRIED
- 2 MARRIED
- 3 DIVORCED
- 4 SEPARATED
- 5 WIDOWED

Q-25 Your present age: _____ YEARS

Q-26 Number of children you have in each age group. (If none, write "0")

Number of children

_____ UNDER 5 YEARS OF AGE

_____ 5 TO 13

_____ 14 TO 18

_____ 19 TO 24

_____ 25 AND OVER

Q-27 Number of years you have been in the service.
(Check One)

_____ UNDER 3 YEARS

_____ 3 TO 6

_____ 7 TO 10

_____ 11 TO 14

_____ 15 TO 18

_____ OVER 19

In order to explain any changes in weight you may have, please answer the following questions.

28. What kind of exercise, if any, did you do yesterday and today? Please write the time you did the exercise and how much. _____

29. Did you eat a large, medium, small or no dinner last night?

large medium small none

30. Did you eat a large, medium, small or no breakfast this morning? (Circle one)

large medium small none

31. Have you had any alcohol in the last 24 hours? (Circle one)

Yes No

32. If yes, how much? _____

33. When was your last bowel movement? _____

34. What type of uniform are you wearing today? (FOR example, BDU, short sleeve shirt and pants etc)

35. What is your height? _____ inches

39. Working on the flight line will make it more difficult to follow my diet prescription. (Circle number)

- 1 EXTREMELY LIKELY
- 2 QUITE LIKELY
- 3 SLIGHTLY LIKELY
- 4 NEITHER LIKELY NOR UNLIKELY
- 5 SLIGHTLY UNLIKELY
- 6 QUITE UNLIKELY
- 7 EXTREMELY UNLIKELY

40. I work on the flight line. (Circle one)

Yes

No

Please list any factors that would help you follow your diet prescription. _____

Please list any factors that make it harder to follow your diet prescription. _____

IT WILL BE HELPFUL IF YOU WEAR THE SAME TYPE OF UNIFORM WHEN YOU COME BACK FOR A FOLLOW-UP TO GET AN ACCURATE WEIGHT CHANGE. THANK YOU.

APPENDIX F

Date _____

Name _____

1. Which of the following best represents the way in which you followed your diet prescription? (Circle number)

1. ALWAYS
2. MOST OF THE TIME
3. SOME OF THE TIME
4. SELDOM
5. NEVER

In order to explain any changes in weight you may have, please answer the following questions.

28. What kind of exercise, if any, did you do yesterday and today? Please write the time you did the exercise and how much. _____

29. Did you eat a large, medium, small or no dinner last night?

large medium small none

30. Did you eat a large, medium, small or no breakfast this morning? (Circle one)

large medium small none

31. Have you had any alcohol in the last 24 hours? (Circle one)

Yes No

32. If yes, how much? _____

33. When was your last bowel movement? _____

34. What type of uniform are you wearing today? (FOR example, BDU, short sleeve shirt and pants etc)

35. What is your height? _____ inches

36. What was your weight today in uniform without shoes?
 _____ lbs

Please list any factors that helped you follow your diet prescription. _____

Please list any factors that made it more difficult to follow your diet prescription. _____

APPENDIX G

Correlation Analysis of all variables¹
in the Behavioral Intentions Model
of Active Duty Air Force Personnel at a Large
Air Force Base in the Southwest

Correlation Analysis of all variables¹
 in the Behavioral Intentions Model
 of Active Duty Air Force Personnel at a Large
 Air Force Base in the Southwest

| | BMI | DIET THER | SPOUSE | FRIENDS | FAMILY | SUPERVISOR |
|-------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| BMI | 1.0 0.0 | -0.003 0.98 | 0.138 0.30 | -0.065 0.61 | -0.059 0.71 | -0.122 0.35 |
| DIET THER | -0.003 0.98 | 1.0 0.0 | 0.611 0.0001 | 0.366 0.004 | 0.334 0.010 | 0.457 0.0002 |
| SPOUSE | 0.138 0.30 | 0.611 0.0001 | 1.0 0.0 | 0.342 0.009 | 0.409 0.002 | 0.396 0.002 |
| FRIENDS | -0.066 0.62 | 0.366 0.004 | 0.341 0.009 | 1.0 0.0 | 0.593 0.0001 | 0.571 0.0001 |
| FAMILY | -0.05 0.70 | 0.334 0.010 | 0.408 0.002 | 0.593 0.0001 | 1.0 0.0 | 0.565 0.0001 |
| SUPERVISOR | -0.223 0.35 | 0.457 0.002 | 0.395 0.002 | 0.571 0.0001 | 0.565 0.0001 | 1.0 0.0 |
| CHILDREN | -0.09 0.54 | 0.299 0.04 | 0.332 0.02 | 0.509 0.0002 | 0.577 0.0001 | 0.428 0.002 |
| REPRIMAND | 0.216 0.09 | -0.055 0.67 | 0.009 0.94 | -0.094 0.47 | -0.041 0.76 | -0.105 0.42 |
| WT LOSS | 0.078 0.54 | 0.545 0.0001 | 0.386 0.003 | 0.375 0.003 | 0.208 0.12 | 0.308 0.02 |
| CONVENIENCE | 0.069 0.59 | 0.349 0.006 | 0.199 0.13 | 0.082 0.53 | 0.284 0.03 | 0.150 0.25 |
| HEALTH | 0.142 0.26 | 0.453 0.0002 | 0.382 0.0003 | 0.325 0.01 | 0.311 0.02 | 0.328 0.009 |
| MIL IMAGE | 0.150 0.23 | 0.392 0.002 | 0.246 0.06 | 0.224 0.08 | 0.066 0.62 | 0.142 0.27 |

n=66, ¹BMI=kg/m², DIET THER = Diet therapist, Spouse=Spouse or Significant other, WT LOSS=Attitude toward Weight loss, CONVENIENCE=Convenience of diet, MIL IMAGE=Attitude toward Military image. [Pearson Correlation Coefficients are top numbers and Prob > |R| under Ho: Rho=0 on bottom]

Correlation Analysis of all variables¹
in the Behavioral Intentions Model
of Active Duty Air Force Personnel at a Large
Air Force Base in the Southwest

| | BMI | DIETHER | SPOUSE | FRIENDS | FAMILY | SUPERVISOR |
|----------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| LBETTER | 0.154 0.22 | 0.469 0.0001 | 0.279 0.03 | 0.420 0.0007 | 0.258 0.05 | 0.223 0.08 |
| CAREER | 0.108 0.40 | 0.262 0.04 | 0.197 0.14 | 0.188 0.15 | 0.249 0.06 | 0.091 0.49 |
| FBETTER | 0.217 0.08 | 0.466 0.0001 | 0.421 0.0009 | 0.353 0.005 | 0.240 0.07 | 0.246 0.05 |
| HEAVY | -0.033 0.79 | 0.210 0.08 | 0.131 0.32 | 0.209 0.10 | 0.082 0.54 | 0.222 0.08 |
| DINING H | 0.010 0.94 | 0.082 0.54 | -0.122 0.38 | -0.185 0.17 | 0.019 0.89 | -0.011 0.94 |
| FLT LINE | 0.047 0.74 | 0.053 0.71 | 0.254 0.08 | -0.046 0.75 | 0.091 0.53 | -0.053 0.71 |
| ATTITUDE | 0.193 0.19 | 0.595 0.0001 | 0.366 0.01 | 0.164 0.28 | 0.3001 0.047 | 0.267 0.08 |
| NORM | -0.090 0.56 | 0.692 0.0001 | 0.716 0.0001 | 0.746 0.0001 | 0.761 0.0001 | 0.787 0.0001 |
| INTEND | 0.117 0.35 | 0.481 0.0001 | 0.450 0.0004 | 0.263 0.04 | 0.239 0.07 | 0.324 0.01 |
| BEHAVIOR | -0.090 0.65 | 0.457 0.02 | 0.565 0.005 | 0.049 0.81 | 0.264 0.24 | 0.433 0.03 |
| WT CHG | 0.034 0.86 | -0.173 0.39 | -0.362 0.08 | -0.062 0.77 | -0.232 0.29 | -0.097 0.64 |

n=66, ¹BMI=kg/m², DIET THER= Diet therapist, Spouse= Significant other, L Better= attitude toward effect of diet on looking better, F Better= Attitude toward effect of diet on feeling better, WT LOSS= Attitude toward Weight loss, DINING H=Attitude toward eating in the base dining hall and losing weight, FLT LINE= Attitude toward working on the flight line and effect on weight loss, WT CHG= Follow up weight minus Initial weight, INTEND= Intention to follow diet, ATTITUDE= Sum of attitudes, NORM= Sum of Subjective Norms. [Pearson Correlation Coefficients are top numbers and Prob > |R| under Ho: Rho=0 on bottom]

Correlation Analysis of all variables¹
in the Behavioral Intentions Model
of Active Duty Air Force Personnel at a Large
Air Force Base in the Southwest

| | CHILDREN | REPRIMND | WTLOSS | CONVIEN | HEALTH | MILIMAGE |
|-------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|
| BMI | -0.092 0.54 | 0.216 0.09 | 0.078 0.54 | 0.069 0.59 | 0.141 0.26 | 0.150 0.23 |
| DIET THER | 0.299 0.04 | -0.056 0.67 | 0.545 0.0001 | 0.349 0.006 | 0.455 0.0002 | 0.392 0.002 |
| SPOUSE | 0.332 0.02 | 0.009 0.94 | 0.386 0.003 | 0.199 0.13 | 0.381 0.003 | 0.246 0.06 |
| FRIENDS | 0.510 0.0002 | -0.094 0.47 | 0.375 0.003 | 0.082 0.53 | 0.325 0.01 | 0.224 0.08 |
| FAMILY | 0.578 0.0001 | -0.040 0.76 | 0.208 0.12 | 0.284 0.03 | 0.311 0.02 | 0.066 0.62 |
| SUPERVISOR | 0.428 0.002 | -0.105 0.42 | 0.308 0.02 | 0.150 0.25 | 0.328 0.009 | 0.142 0.27 |
| CHILDREN | 1.0 0.0 | -0.027 0.86 | 0.307 0.04 | 0.036 0.80 | 0.244 0.09 | 0.102 0.49 |
| REPRIMAND | -0.027 0.86 | 1.0 0.0 | 0.015 0.91 | 0.128 0.31 | 0.122 0.33 | 0.118 0.34 |
| WT LOSS | 0.307 0.04 | 0.015 0.91 | 1.0 0.0 | 0.407 0.0009 | 0.588 0.0001 | 0.534 0.0001 |
| CONVENIENCE | 0.036 0.81 | 0.128 0.31 | 0.407 0.0009 | 1.0 0.0 | 0.379 0.002 | 0.337 0.006 |
| HEALTH | 0.244 0.09 | 0.122 0.33 | 0.588 0.0001 | 0.379 0.002 | 1.0 0.0 | 0.497 0.0001 |

n=66, ¹BMI=kg/m², DIET THER = Diet therapist, Spouse=Spouse or Significant other, WT LOSS=Attitude toward Weight loss, MILIMAGE=Military image, Convien= Attitude towards convenience of the diet, REPRIMAND = Attitude towards a reprimand. [Pearson Correlation Coefficients are top numbers and Prob > |R| under Ho: Rho=0 on bottom]

Correlation Analysis of all variables¹
in the Behavioral Intentions Model
of Active Duty Air Force Personnel at a Large
Air Force Base in the Southwest

| | CHILDREN | REPRIMND | WTLOSS | CONVIEN | HEALTH | MILIMAGE |
|-------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|
| MIL IMAGE | 0.102 0.49 | 0.118 0.35 | 0.534 0.0001 | 0.337 0.006 | 0.497 0.0001 | 1.0 0.0 |
| L BETTER | 0.282 0.05 | -0.010 0.94 | 0.693 0.0001 | 0.393 0.001 | 0.627 0.0001 | 0.568 0.0001 |
| CAREER | 0.249 0.09 | 0.146 0.25 | 0.318 0.01 | 0.306 0.01 | 0.196 0.12 | 0.391 0.001 |
| F BETTER | 0.214 0.14 | 0.087 0.49 | 0.559 0.0001 | 0.501 0.0001 | 0.681 0.0001 | 0.581 0.0001 |
| HEAVY | -0.104 0.48 | 0.152 0.23 | 0.482 0.0001 | 0.373 0.002 | 0.428 0.0003 | 0.418 0.0005 |
| DINING HALL | -0.240 0.12 | 0.088 0.50 | -0.137 0.30 | 0.109 0.41 | -0.113 0.39 | -0.287 0.02 |
| FLT LINE | -0.064 0.70 | 0.093 0.51 | 0.042 0.77 | 0.345 0.01 | 0.086 0.54 | -0.073 0.60 |
| ATTITUDE | 0.118 0.30 | 0.232 0.11 | 0.730 0.0001 | 0.700 0.0001 | 0.729 0.0001 | 0.654 0.0001 |
| NORM | 0.689 0.0001 | -0.071 0.64 | 0.486 0.0007 | 0.238 0.11 | 0.438 0.002 | 0.376 0.01 |

n=66, ¹DIET THER = Diet therapist, Spouse=Spouse or Significant other, WTLOSS=Attitude towards weight loss, MIL IMAGE=Military image, L BETTER= Attitude about effects of diet and looking better, F BETTER= Attitude about effects of diet and feeling better, DINING HALL=Attitude about eating in the base dining hall and losing weight, FLT LINE=Attitude about working on the flight line and effect on weight loss, REPRIMAND = attitude towards a reprimand, CONVIEN = Convenience of diet, ATTITUDE= Sum of attitudes, NORM= Subjective Norm (effect of others on diet). [Pearson Correlation Coefficients are top numbers and Prob > |R| under Ho: Rho=0 on bottom]

Correlation Analysis of all variables¹
 in the Behavioral Intentions Model
 of Active Duty Air Force Personnel at a Large
 Air Force Base in the Southwest

| | CHILDREN | REPRIMND | WTLOSS | CONVIEN | HEALTH | MILIMAGE |
|-----------|---------------|----------------|-----------------|-----------------|-----------------|----------------|
| INTEND | 0.151 0.31 | 0.148 0.24 | 0.431 0.0003 | 0.432 0.0003 | 0.442 0.0002 | 0.391 0.001 |
| BEHAVIOR | 0.234 0.34 | -0.062 0.76 | 0.138 0.49 | 0.233 0.24 | 0.229 0.25 | -0.009 0.96 |
| WT CHANGE | 0.191 0.43 | -0.238 0.22 | -0.015 0.94 | -0.159 0.42 | 0.124 0.53 | 0.201 0.31 |

n=66, ¹REPRIMND= Attitude towards a reprimand and its effect on diet, CONVIEN= convenience of the diet, WTLOSS=Attitude toward Weight loss, MILIMAGE=Military image, WT CHANGE = Follow up weight - Initial weight, INTEND= Intention of following diet, BEHAVIOR = Behavior of following the diet prescription. [Pearson Correlation Coefficients are top numbers and Prob > |R| under Ho: Rho=0 on bottom]

Correlation Analysis of all variables¹
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| | LBETTER | CAREER | FBETTER | HEAVY | DININGH | FLTLN |
|----------|-----------------|----------------|-----------------|-----------------|----------------|----------------|
| BMI | 0.116 0.22 | 0.108 0.40 | 0.207 0.08 | -0.033 0.79 | 0.010 0.94 | 0.047 0.74 |
| DIETTHER | 0.469 0.0001 | 0.263 0.04 | 0.466 0.0001 | 0.220 0.08 | 0.082 0.54 | 0.052 0.71 |
| SPOUSE | 0.279 0.03 | 0.197 0.14 | 0.421 0.0009 | 0.131 0.32 | -0.122 0.38 | 0.254 0.08 |
| FRIENDS | 0.420 0.0007 | 0.188 0.147 | 0.353 0.005 | 0.209 0.10 | -0.185 0.17 | -0.046 0.75 |
| FAMILY | 0.258 0.05 | 0.248 0.06 | 0.240 0.07 | 0.082 0.54 | 0.019 0.89 | 0.091 0.53 |
| SUPERVIS | 0.223 0.08 | 0.091 0.49 | 0.246 0.05 | 0.222 0.08 | -0.011 0.94 | -0.053 0.71 |
| CHILDREN | 0.282 0.05 | 0.249 0.09 | 0.214 0.14 | -0.104 0.48 | -0.240 0.12 | -0.064 0.70 |
| REPRIMD | -0.010 0.94 | 0.146 0.25 | 0.037 0.49 | 0.152 0.23 | 0.088 0.50 | 0.093 0.51 |
| WTLOSS | 0.693 0.0001 | 0.318 0.02 | 0.559 0.0001 | 0.482 0.0001 | -0.137 0.30 | 0.042 0.77 |
| CONVEN | 0.393 0.001 | 0.306 0.01 | 0.501 0.0001 | 0.373 0.002 | 0.109 0.41 | 0.345 0.01 |
| HEALTH | 0.627 0.0001 | 0.196 0.12 | 0.681 0.0001 | 0.428 0.0003 | -0.113 0.39 | 0.086 0.54 |

n=66, ¹BMI=kg/m², DIET THER = Diet therapist, Spouse= Significant other, WT LOSS=Attitude toward Weight loss, LBETTER= Attitude toward diet-looking better, FBETTER= Attitude about effects of diet vs. feeling better, DINING HALL=Attitude about eating in the base dining hall and losing weight, FLTLN=Attitude about working on the flight line and effect on weight loss, CONVEN=Convenience of diet, REPRIMAND = Attitude towards a reprimand. [Pearson Correlation Coefficients are top numbers and Prob > |R| under Ho: Rho=0 on bottom]

Correlation Analysis of all variables¹
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 of Active Duty Air Force Personnel at a Large
 Air Force Base in the Southwest

| | LBETTER | CAREER | FBETTER | HEAVY | DININGH | FLTLN |
|----------|-----------------|-----------------|-----------------|-----------------|----------------|----------------|
| MILIMAGE | 0.568 0.0001 | 0.391 0.001 | 0.581 0.0001 | 0.418 0.0005 | -0.287 0.02 | -0.073 0.60 |
| LBETTER | 1.0 0.0 | 0.358 0.003 | 0.755 0.0001 | 0.458 0.0001 | -0.118 0.36 | 0.141 0.31 |
| CAREER | 0.358 0.003 | 1.0 0.0 | 0.268 0.03 | 0.096 0.45 | -0.092 0.48 | 0.000 0.99 |
| FBETTER | 0.755 0.0001 | 0.268 0.03 | 1.0 0.0 | 0.506 0.0001 | -0.168 0.19 | 0.150 0.28 |
| HEAVY | 0.458 0.0001 | 0.096 0.45 | 0.506 0.0001 | 1.0 0.0 | -0.102 0.43 | -0.112 0.42 |
| DININGH | -0.118 0.36 | -0.092 0.48 | -0.168 0.19 | -0.102 0.43 | 1.0 0.0 | 0.299 0.03 |
| FLT LN | 0.141 0.31 | 0.000 0.99 | 0.150 0.28 | -0.112 0.42 | 0.299 0.03 | 1.0 0.0 |
| ATTITUDE | 0.806 0.0001 | 0.481 0.0005 | 0.782 0.0001 | 0.608 0.0001 | 0.202 0.17 | 0.339 0.01 |
| NORM | 0.461 0.001 | 0.308 0.04 | 0.492 0.0005 | 0.168 0.26 | -0.203 0.20 | 0.117 0.48 |
| INTEND | 0.497 0.0001 | 0.299 0.02 | 0.540 0.0001 | 0.223 0.07 | 0.033 0.80 | 0.189 0.17 |

n=66, MILIMAGE= Military image, LBETTER= Attitude about effects of diet and looking better, FBETTER= Attitude about effects of diet and feeling better, DININGH= Attitude about eating in the base dining hall and losing weight, FLTLN= Attitude about working on the flight line and effect on diet, INTEND= Intention of following diet, ATTITUDE= Sum of attitudes, NORM= Subjective Norm (effect of others on diet). [Pearson Correlation Coefficients are top numbers and Prob > |R| under Ho: Rho=0 on bottom]

Correlation Analysis of all variables¹
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| | LBETTER | CAREER | FBETTER | HEAVY | DININGH | FLTLN |
|--------|----------------|----------------|----------------|----------------|---------------|---------------|
| BEHAV | -0.002 0.99 | -0.132 0.51 | 0.136 0.50 | 0.011 0.95 | 0.122 0.57 | 0.040 0.87 |
| WT CHG | 0.172 0.38 | -0.078 0.69 | -0.173 0.38 | -0.084 0.67 | 0.104 0.62 | 0.172 0.46 |

n=66, ¹LBETTER= Attitude about effects of diet and looking better, FBETTER= Attitude about effects of diet and feeling better, DININGH= Attitude about eating in the base dining hall and losing weight, FLTLN= Attitude about working on the flight line and effect on diet, WT CHG= Follow up weight - Initial weight, BEHAV=Behavior of following the diet prescription. [Pearson Correlation Coefficients are top numbers and Prob > |R| under Ho: Rho=0 on bottom]

Correlation Analysis of all variables¹
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Air Force Base in the Southwest

| | ATTITUDE | NORM | INTEND | BEHAV | WTCHG |
|-----------|-----------------|-----------------|-----------------|----------------|----------------|
| BMI | 0.193 0.19 | -0.090 0.56 | 0.117 0.35 | -0.090 0.65 | 0.034 0.86 |
| DIET THER | 0.595 0.0001 | 0.692 0.0001 | 0.481 0.0001 | 0.457 0.02 | -0.173 0.39 |
| SPOUSE | 0.367 0.01 | 0.716 0.0001 | 0.450 0.0004 | 0.565 0.005 | -0.362 0.08 |
| FRIENDS | 0.164 0.28 | 0.746 0.0001 | 0.263 0.04 | 0.049 0.81 | -0.062 0.77 |
| FAMILY | 0.301 0.05 | 0.761 0.0001 | 0.240 0.07 | 0.264 0.24 | -0.232 0.29 |
| SUPERVIS | 0.267 0.08 | 0.797 0.0001 | 0.324 0.01 | 0.433 0.03 | -0.097 0.64 |
| CHILDREN | 0.178 0.30 | 0.689 0.0001 | 0.151 0.30 | 0.234 0.34 | 0.191 0.43 |
| REPRIMND | 0.232 0.11 | -0.071 0.64 | 0.148 0.24 | -0.623 0.76 | -0.238 0.22 |
| WT LOSS | 0.730 0.0001 | 0.486 0.0007 | 0.431 0.0003 | 0.138 0.49 | -0.015 0.94 |
| CONVEN | 0.700 0.0001 | 0.238 0.11 | 0.432 0.0003 | 0.233 0.24 | -0.159 0.42 |
| HEALTH | 0.729 0.0001 | 0.438 0.002 | 0.442 0.0002 | 0.229 0.25 | 0.124 0.53 |

n=66, ¹BMI=kg/m², DIET THER = Diet therapist, Spouse=Spouse or Significant other, WT LOSS=Attitude toward Weight loss, WT CHG= Follow up weight - Initial weight, INTEND= Intention of following diet, ATTITUDE= Sum of attitudes, NORM= Sum of Subjective Norms (effect of others on dieting behavior), BEHAV=Behavior of following the diet prescription. [Pearson Correlation Coefficients are top numbers and Prob > |R| under Ho: Rho=0 on bottom]

Correlation Analysis of all variables¹
in the Behavioral Intentions Model
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Air Force Base in the Southwest

| | ATTITUDE | NORM | INTEND | BEHAV | WTCHG |
|----------|-----------------|-----------------|-----------------|----------------|----------------|
| MILIMAGE | 0.654 0.0001 | 0.376 0.01 | 0.391 0.001 | -0.009 0.96 | 0.201 0.31 |
| LBETTER | 0.806 0.0001 | 0.461 0.001 | 0.497 0.0001 | -0.002 0.99 | 0.172 0.38 |
| CAREER | 0.481 0.0005 | 0.308 0.04 | 0.299 0.02 | -0.132 0.51 | -0.179 0.69 |
| FBETTER | 0.782 0.0001 | 0.492 0.0005 | 0.540 0.0001 | 0.136 0.50 | -0.173 0.38 |
| HEAVY | 0.608 0.0001 | 0.168 0.26 | 0.223 0.07 | 0.011 0.96 | -0.084 0.67 |
| DININGH | 0.202 0.17 | -0.203 0.20 | 0.033 0.80 | 0.122 0.57 | 0.104 0.62 |
| FLT LN | 0.339 0.02 | 0.117 0.48 | 0.189 0.17 | 0.040 0.87 | 0.171 0.46 |
| ATTITUDE | 1.0 0.0 | 0.437 0.01 | 0.533 0.0001 | 0.056 0.82 | 0.101 0.67 |
| NORM | 0.437 0.01 | 1.0 0.0 | 0.472 0.0009 | 0.481 0.04 | -0.014 0.95 |
| INTEND | 0.533 0.0001 | 0.472 0.0009 | 1.0 0.0 | 0.416 0.03 | -0.072 0.72 |

n=66, ¹MIL IMAGE=Attitude toward Military image, LBETTER= Attitude toward diet-looking better, FBETTER = Attitude about effects of diet vs. feeling better, DINING H = Attitude about eating in the base dining hall and losing weight, FLT LN = Attitude about working on the flight line and effect on weight loss, WTCHG = Follow up weight - Initial weight, INTEND= Intention of following diet, ATTITUDE= Sum of attitudes, NORM= Subjective Norm (effect of others on diet), BEHAV=Behavior of following the diet prescription. [Pearson Correlation Coefficients are top numbers and Prob > |R| under Ho: Rho=0 on bottom]

Correlation Analysis of all variables¹
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 of Active Duty Air Force Personnel at a Large
 Air Force Base in the Southwest

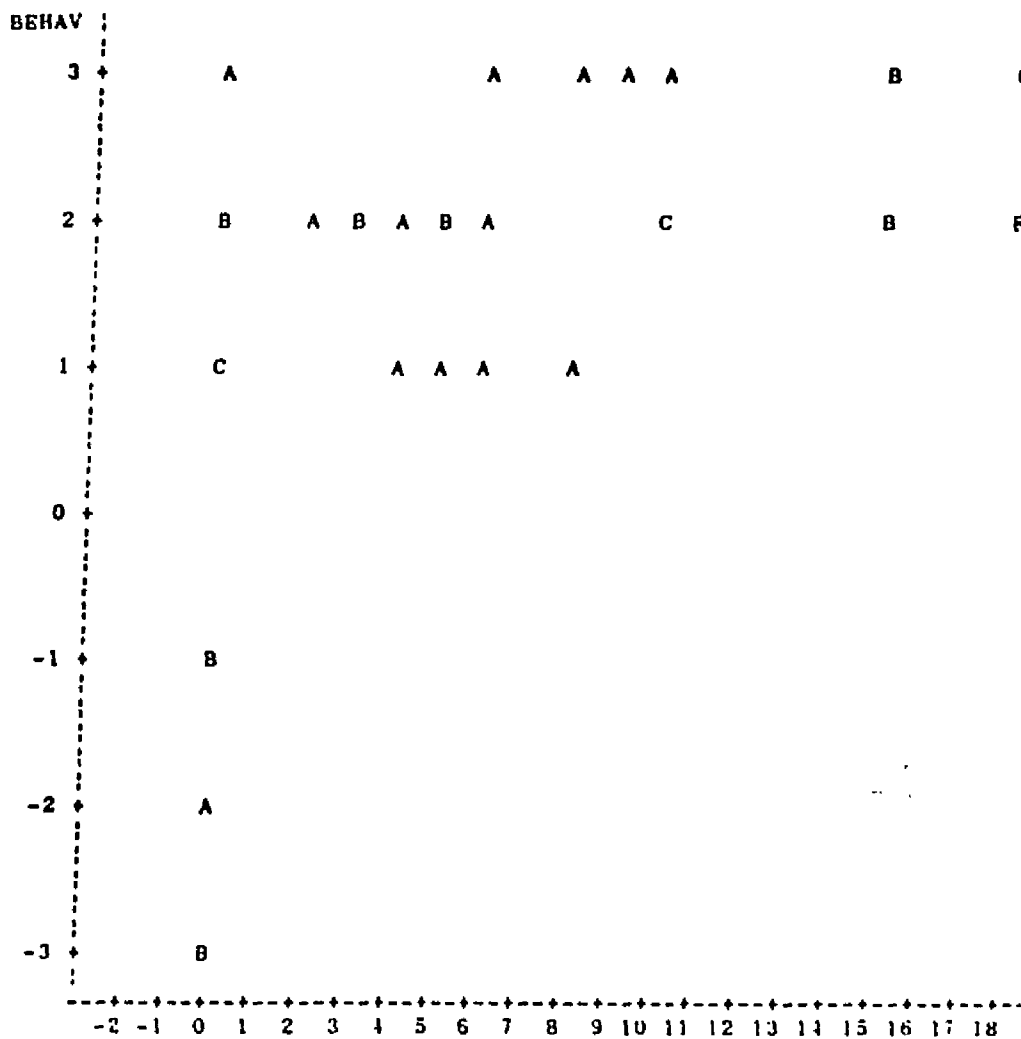
| | ATTITUDE | NORM | INTEND | BEHAV | WTCHG |
|-------|---------------|---------------|---------------|---------------|----------------|
| BEHAV | 0.056 0.82 | 0.481 0.04 | 0.416 0.03 | 1.0 0.0 | -0.414 0.03 |
| WTCHG | 0.10 0.67 | -0.01 0.95 | -0.07 0.72 | -0.41 0.03 | 1.0 0.0 |

n=66, ¹WTCHG= Follow up weight - Initial weight, INTEND= Intention of following diet, ATTITUDE= Sum of attitudes, NORM= Sum of Subjective Norms (effect of others on diet), BEHAV=Behavior of following the diet prescription. [Pearson Correlation Coefficients are top numbers and Prob > |R| under Ho: Rho=0 on bottom]

· APPENDIX H

Scatterplot of Behavior and Spouse

PLOT OF BEHAVIOR AND THE SUBJECTIVE NORM, SPOUSE

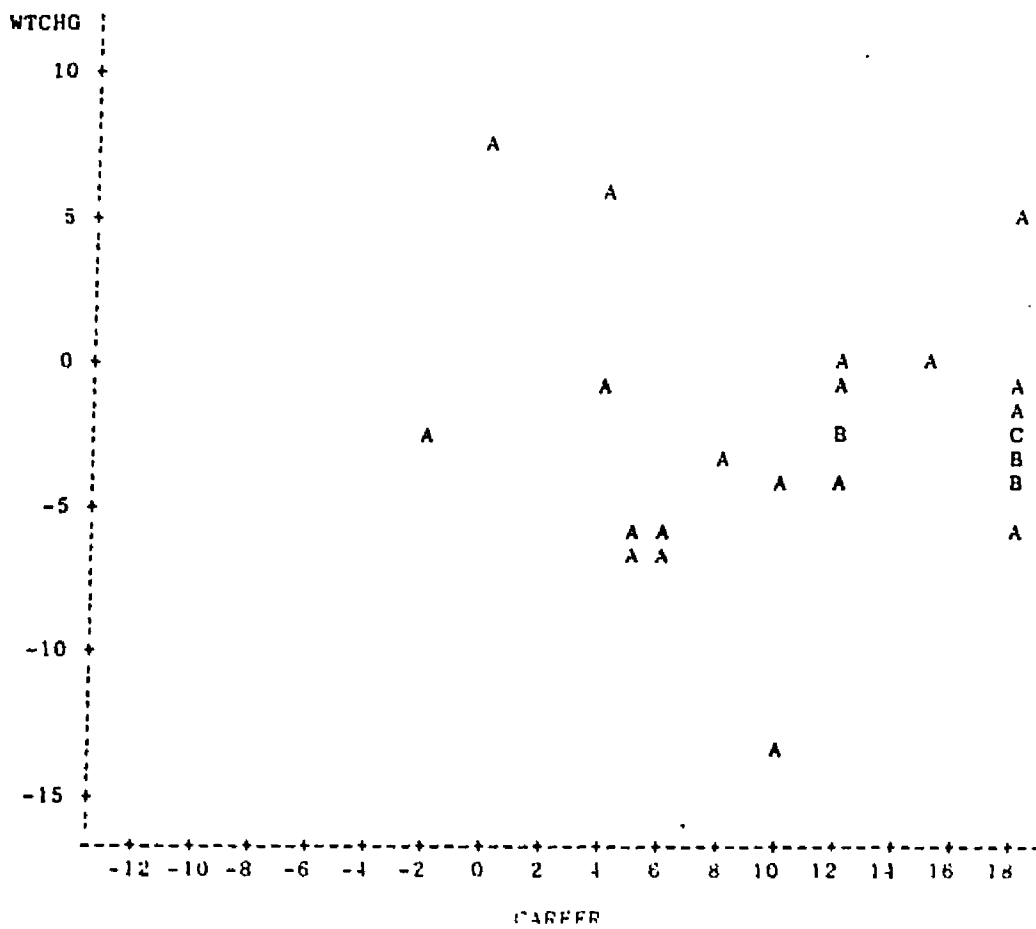


A = 1 observation, B = 2 observations, C = 3 obs. etc

APPENDIX I

Scatterplot of Weight Change and Career

PLOT OF WEIGHT CHANGE AND CAREER



A = 1 observation, B = 2 observations, C = 3 obs. etc

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