To the Graduate Council:

I am submitting herewith a dissertation written by Audrey Lynn Hay entitled "Factors Influencing the Counseling Behavior of Clinical Dietitians." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Home Economics.

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FACTORS INFLUENCING THE COUNSELING BEHAVIOR OF CLINICAL DIETITIANS

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ABSTRACT

A survey of clinical dietitians in accredited clinical and generalist dietetic internships was conducted to construct a socio-demographic profile and to investigate influences on the counseling behavior of clinical dietitians. The Ajzen and Fishbein (1980) model was used to identify relationships between external variables, preparedness to use, attitude and subjective norm toward use, intention to use, and behavior toward use of counseling strategies. External variables included demographic characteristics, situational characteristics, and attitude toward targets. The five categories of counseling strategies were: assessment, educational, motivational, behavioral, and evaluation.

Respondents felt most capable using counseling skills requiring active interaction and least capable using skills of a facilitating nature. They felt most prepared using assessment and educational strategies and least prepared using behavioral strategies. Motivational strategies were rated most likely to promote patient compliance and most desirable to use. Evaluation strategies were rated least likely to promote patient compliance. Assessment strategies had the highest peer pressure to use, highest intention to use, and were used most in counseling patients. Behavioral strategies were the least desirable to use, had the lowest peer pressure to use, had lower intention to use, and were used least in counseling patients.

A socio-demographic profile was constructed using significant correlations ($p < .05$) between the external variables. Influences

affecting counseling behavior were identified using regression analysis. The strongest determinant of counseling behavior was intention to use counseling strategies. Attitude toward use of counseling strategies influenced intention more than did subjective norm. Preparedness had a stronger influence on attitude than subjective norm, and has as much influence on intention as subjective norm. The external variables had a weak and mixed pattern (positive and negative) of influence on preparedness and an indirect influence on attitude, subjective norm, intention, and behavior, but did not influence the stability of the attitude-behavior relationship.

In conclusion, basic dietetic training programs should incorporate more behavioral and motivational theory and emphasize more patient interaction skills.

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I. INTRODUCTION

The planning and practice of dietary management is a critical tool in the maintenance of health status and in the prevention of disease and disability (McGinnis, 1980). A major problem is the increasing number of patients that do not follow recommended therapeutic plans. Failure to follow recommendations for medication, diet, exercise and/or change in life-style contributes to increased use of health-care facilities, increased costs of health care and lowering of the quality of life. While patient's failure to comply with instructions is interpreted as lack of cooperation, providers of patient care do share some of the responsibility. This responsibility includes both the attitudes toward the patient and the strategies (methods or techniques) used to communicate changes required in medication, diet, exercise, or life-style. It is important to study the use of counseling strategies because patient compliance varies with the use of different counseling strategies. Scherwitz and Leventhal (1978) reported that communication was a major problem encountered by patients in the delivery of health care. In a review of literature regarding patient compliance with medical regimens, Marston (1970) found that the attitudes of physicians toward medication and treatment were important in determining patient compliance. The attitudes of physicians determined in part what the patients were told. Similarly, Glanz (1979b) found that role perceptions and attitudes toward the setting affected the counseling behavior of dietitians.

Following a prescribed diet is somewhat unusual in the class of health behaviors in that: (a) the threat posed to health if the diet is not followed is future-oriented and linked to other conditions, (b) appropriate dietary action may be taken for non-health reasons, e.g., body image, social acceptance, and (c) even when identified as a health problem, conditions such as obesity may not be viewed as a health problem (Becker, Maiman, Kirscht, Haefner & Drachman, 1977). The difficulty in changing health behavior may be related to the fact that individuals do not perceive themselves sufficiently vulnerable to health problems to engage in beneficial health behavior (Gochman, 1972). According to Glanz (1979a) the "study of patient compliance is a study of intermediate objectives--compliance is a behavioral outcome which mediates dietary counseling, the dietitian's behavior, and health outcome, i.e., the changed health status of the patient." Fewer patients comply with prescribed diets than comply with medication regimens (Sackett & Haynes, 1976). An estimated one-third of all patients do not follow medical recommendations at all, while another third comply with only part of the prescribed regimen (Podel, 1975).

Causes of non-compliance are obscure, partly due to the complexity of compliance and to the fact that different factors affect compliance at different stages of therapy (Scherwitz & Leventhal, 1978). A useful tool in predicting compliance to health-related behaviors has been the Health Belief Model (Rosenstock, 1966). The model is based on motivation theory and conceptually describes

the "interaction of a person's complex belief system with social, economic, and environmental factors" (Hochbaum, 1981). Four components are emphasized: susceptibility, perceived severity, benefits of actions, and costs of action. Intervening variables include the patient's knowledge and understanding of the treatment regimen, complexity of the treatment regimen, and interpersonal relationships with health care providers and significant others. A situation at a given point in time is described, thus the model is not change oriented.

Dietary regimens possess many factors associated with high levels of non-compliance. They tend to be restrictive, require changes in life-style, and are of long duration. Often, the diet is only one aspect of a complex regimen; symptom relief may not be noticeable or may be temporary; diet may interfere with family or individual habits; and barriers such as food costs, access to proper foods, and the skill, time, and effort necessary for food preparation further decrease the likelihood of dietary compliance (Glanz, 1979b). Food-related behavior is complex and is influenced by many factors. Food practices take a life-time to establish and, therefore, are deeply rooted in one's social, cultural, and religious background and are difficult to change. As a cultural object, food is surrounded by beliefs and customs shared by members of a society and these beliefs and customs are passed on to succeeding generations. As a social object, food is surrounded by behavior shared by other people (Steelman, 1976). Food is used to express status, to promote

a feeling of security, to relieve tension, to express creativity, and to influence the behavior of others (Lowenberg, Todhunter, Wilson, Savage, & Lubawski, 1979). To initiate any long-term changes, an individual needs positive reinforcement and encouragement focused on the factors affecting the food-related behaviors.

Even though patient education and counseling techniques have gained recognition in dietetic curricula, little emphasis has been placed on the counselor's attitudes and perceived peer pressures regarding the use of counseling strategies. Dietitians have a crucial role in influencing a patient's beliefs concerning a condition and the paths of action to follow for compliance as well as mobilizing skills needed by the patient (Glanz, 1979b). A patient's beliefs and actions are affected by the counseling strategies used by the clinical dietitian to communicate information needed by the patient and to motivate the patient to follow the recommended dietary changes. In the nutrition counseling literature, emphasis has been placed on what counselors "should do" rather than what counselors "actually do" and the effectiveness of "what is done." Counseling strategies (methods, processes or techniques) used by nutrition counselors were reported in very few studies. No research was found regarding perceived preparedness in using counseling strategies or the influence of the counselor's attitudes or the perceived attitudes of the counselor's peers in relation to using counseling strategies to promote patient compliance.

Using an exploratory study, the purpose of this research was to identify variables affecting the use of counseling strategies by clinical dietitians. Two major questions guided the research. The first was "How prepared do clinical dietitians feel in using selected counseling strategies?" The second was "How do the perceived attitudes and norms of clinical dietitians influence the use of selected counseling strategies?" A model by Ajzen & Fishbein (1980) based on the theory of reasoned action was used to study these questions. The model was desirable in that it introduces the principle of social pressure which has not been considered systematically when studying the relationships between attitudes and behavior in the area of nutrition counseling. A survey of clinical dietitians employed in accredited dietetic interships was conducted to collect information needed to test the Ajzen and Fishbein model. Information regarding the perceived preparation, attitudes, and norms, and reported use of counseling strategies by clinical dietitians is important for determining changes needed in dietetic training programs to improve the counseling behaviors of clinical dietitians.

II. REVIEW OF LITERATURE

The review of literature focuses primarily on two major areas: (a) identification of counseling strategies and relation to patient compliance, and (b) discussion of traditional approaches used to define and measure attitude and behavior. A discussion of traditional approaches used to define and measure attitudes is necessary to provide background to the Ajzen and Fishbein approach measuring attitudes and behavior.

Counseling Strategies

The objective of diet counseling is the modification of food-related behavior. The counseling process includes an active exchange between the counselor and the person being counseled (Commentary, 1973). Frequently, strategies are defined based on process criteria rather than health outcome criteria (Sims, 1981b). Process criteria are professionally oriented and concern the kinds and amounts of activities performed by professionals on behalf of the client, whereas outcome criteria are client oriented and deal directly with intervention results. Two broad classes of intervention strategies are structural interventions and direct influence attempts (Glanz, 1981). Structural interventions include those modifications in the availability and presentation of food, changes in the organization and delivery of nutritional care, and alterations of dietary regimens to better suit individual lifestyles. Direct influence attempts include transmission of information as well as

motivational and behavioral strategies designed to directly affect personal nutrition-related behavior. Most educational or counseling programs are directed solely at the knowledge or cognitive level and ignore such personal attributes as attitudes, beliefs, and values which have strong and powerful influences on dietary behavior (Sims & Smiciklas-Wright, 1978). Knowledge functions as a tool only if and when an individual is ready to change (Hochbaum, 1981).

A joint committee of Community Nutrition and Diet Therapy Sections of the American Dietetic Association (1969) defined counseling as providing individualized professional guidance to assist a client (patient) in adjusting daily food intake to meet his/her health needs. The process involves three activities: interviewing, counseling, and consulting. Interviewing is the gathering of information. Counseling involves listening, accepting, clarifying, and helping a client form conclusions and develop a plan of action. Focus is on the client with the role of the diet counselor being to guide the client's thinking, focus on objectives, interpret and evaluate information accurately and effectively. Consulting is developing a plan or proposals based on observations and evaluations. Effective methods of counseling are based on the reason for the session, the skills and resources of the counselor, and the motivation, needs, and interest of the client (Committee, Diet Therapy Section, 1975).

In summary, counseling is a two-part process including first, the development of rapport, empathy, and a trusting relationship,

and, then, implementation of specific behavior change strategies and techniques directed at the client's problem (Danish, 1975). Essential relationship building skills include understanding needs as a helper, using effective non-verbal behavior, using effective verbal behavior, using effective self-involving behavior, understanding other's communication, and establishing effective helping relationships. Recommended guidelines for diet counseling given by the Committee of the Diet Therapy Section of The American Dietetic Association (1975) and by Zifferblatt and Wilbur (1977) are presented in Appendix A.

Nine strategies efficient in enhancing patient compliance with medical regimens were reported by Becker and Maiman (1980). The strategies included: (a) improve the level of information given to the patient concerning the specifics of the regimen, reinforce essential points with review, discussion, and written instructions, and emphasize the importance of the therapeutic plan, (b) take appropriate steps to reduce the cost, complexity, duration, and amount of behavioral change required by the regimen, (c) obtain a history of compliance or prior experiences with medical regimens and health beliefs and, where necessary, use strategies to modify those perceptions likely to inhibit compliance, (d) improve levels of patient satisfaction with the provider-patient relationship, (e) increase awareness of the medical staff concerning the magnitude and determinants of noncompliance, (f) use patient-provider contracts to involve the patient in therapeutic decisions, setting treatment

objectives, and creating incentives for achieving the objectives, (g) arrange for continuity of provider care, (h) establish methods of supervising the patient which involves the social support network of the patient, and (i) involve fully the assistance of all available health care providers. These strategies do not address the actual patient-counselor interaction and are more global in nature.

In a Model Workshop on Nutrition Counseling for Dietitians (Snetselaar, Schrott, Albanese, Iasiello-Vailas, Smith, & Anthony, 1981), three groups of skills emphasized were: knowledge of basic interviewing skills, behavioral weight-control counseling skills, and adherence counseling skills. Basic interviewing skills were those necessary for adequate communication between the client and counselor and included such skills as attending, use of open-closed questions, paraphrasing, responding to feelings, and integration. Definitions for these basic interviewing skills are provided in Table I. Behavioral weight control counseling skills included learning to define the specific problems, to encourage clients to try out new eating behaviors, and to implement alternate plans if those previously tried have failed. Adherence counseling skills included specific use of a variety of strategies to maintain dietary compliance. The specific strategies were not provided. The closed question, one that seeks a brief "yes" or "no" answer without encouraging further exploration, was the most frequently used response. More than half of the workshop participants did not employ responses concerned with feelings of the subject being helped. At

TABLE 1

BASIC INTERVIEWING/COUNSELING SKILLS

Category	Definition
Questions	Using definite who, what, when, where questions (inflection not included).
Minimal Encouragers	Using non-evaluative non-sentences (e.g. "uh-huh").
Approval/Praise	Evaluating the client and/or action positively.
Listening	Remaining quiet while client talks.
Paraphrasing	Repeating/rephrasing immediately what client said, no feelings involved.
Summarizing	Rephrasing/repeating and/or clarifying what was said.
Topic Jump	Moving toward a new topic without referring to client's concerns.
Reflecting Feelings Accurately	Relating or reiterating client's feelings.

Source: L. G. Snetselaar, H. G. Schrott, M. Albanese, L. Iasiello-Vailas, K. Smith, and S. L. Anthony. Model workshop on nutrition counseling for dietitians. Journal of the American Dietetic Association, 1981, 79, 678-682.

the conclusion of the workshop, participants reflected patient's feelings more, responded fewer times, and were less leading in the responses made. As a result, the responses conveyed an impression that the counselor was sincerely interested. According to Rogers (1951, 1957) responses conveying an impression of sincere interest should increase the patient's self-disclosure and self-exploration. An attitude inventory was used to assess the impact of the workshop and included questions for eight areas: use of adherence tools, importance of adherence tools, importance of incorporating commercial products into the diet, the use of diet history, the general dietary interview, perceptions of nutritionist's role in medical care, weight control methodology, and importance of diet adherence. Statistically significant difference in attitudes occurred for five of the eight areas: adherence tools, staged approach, diet histories, weight control methodology, and dietary adherence.

Gardner (1982) investigated the short-term effectiveness of three different approaches used in the counseling of overweight and obese individuals. These were medical, social, and behavioral. The medical approach included individual conferences with the patient. A typical dietary intake for a day was obtained noting details of portions, times of day, eating environment, and influence on eating habits. The energy intake of a typical day was determined and a meal pattern incorporating daily activities was developed. A written copy of the diet was provided as well as verbal instruction on the diet modifications. Reinforcement on the diet was given at each

conference and patients were given an opportunity to demonstrate familiarity with the diet. The social approach included group interaction and such topics as food plan, hunger, appetite, stress eating, and food temptation were presented in classroom situations. Weekly behavior assignments were given and adherence to the diet plan was required. Everyone was given the same diet plan. The behavioral approach included weekly conferences with the individual patients. Patients were asked to complete a questionnaire which was reviewed and discussed; to state any willingness to make a permanent change in eating habits and describe two daily dietary intakes--a typical intake and a 24-hour recall; to discuss willingness to eliminate one favorite food from diet; and, to record dietary intake before eating each item. Discussions at each session included the dietary record, energy level at which weight was lost, kilocalories contained in food eaten, degree of hunger prior to eating, and degree of preference for food eaten.

A higher level of compliance was found with the behavioral and social approaches; however, no significant difference was found in compliance between the behavioral and social approaches. Characteristics common to all three approaches were that the counselor should agree on weight loss goals with their clients, should assure adequate length of treatment, should incorporate discussion of food and food habits, and should see clients at least once a week when possible. Dietitians should make use of on-going educational and nutritional needs assessment skills, should show a continuous

response to changing educational needs of the patient, should encourage feedback, and should provide a mechanism for the patient to practice new skills and/or behaviors. They should also have a realistic appreciation of the problems and difficulties of following a dietary regimen and focus treatment skills on achieving both short-term and long-term goals.

A four-step patient education strategy incorporating the sociological approach of the health belief model, a psychological approach tested and validated by dietitians, and an educational approach based on patient-specific data (Wylie-Rosett, 1982). The four steps were: (a) assessment of patient's complaint requests and health beliefs, (b) focus on knowledge and skills development of the patient and significant others, (c) negotiate with the patient and set treatment goals, and (d) monitor patient's progress by adjusting treatment goals and/or teaching additional skills as needed.

To determine variations between different classes of strategies along dimensions of current use, perceived barriers to use, and perceived value of strategies (Glanz, 1979b), 45 traditional and innovative strategies were identified and placed in five general categories: instructional, motivational, behavioral, educational diagnosis, and assessing patient compliance/evaluating change efforts. The listing of traditional and innovative strategies in each category are given in Appendix A. These strategies included attempts to influence knowledge, attitudes, and behavior of patients;

methods for selecting counseling strategies; and techniques for on-going evaluation of nutritional care. Behavioral, educational diagnosis, and assessment of compliance strategies were rated non-traditional or innovative more often. The more innovative strategies were used less frequently and were perceived as more difficult to implement in dietetic practice. Behavioral strategies were more difficult to use and had a lower net benefit than the other strategies. Assessing patient compliance/evaluating change efforts was rated as the least difficult to use. In addition, an index, Orientation to Social Influence (OSI) Score was developed to differentiate between dietitians' emphasis on influencing people. Dietitians with a high OSI Score used more influence strategies in counseling, involved patients more in the counseling session, had patients more satisfied with the counselor/patient interaction and more able to predict compliance, and had patients with more positive health beliefs and slightly better compliance.

Attitudes: Definition and Interpretation

Attitude is defined in many ways making both measurement and interpretation difficult. The original conceptualization of attitude was unidimensional. Attitude was defined as "a mental and neural state or readiness to respond, organized through experiences exerting a directive and/or dynamic influence on behavior" (Allport, 1935). An important feature was bipolarity of evaluation, e.g., consistently responding to objects in a favorable-unfavorable way. A multi-component conceptualization of attitude presented by

researchers in social psychology included three components (Kreck & Crutchfield, 1948; Rokeach, 1968; Rosenberg & Hovland, 1960). The three components were: (a) a cognitive or perceptual component, which represents an individual's information or knowledge about an object, (b) an affective or feeling component, which deals with an individual's overall feelings of like-dislike for an attitude object, and (c) a conative or behavioral component, which refers to an individual's tendency to act toward the attitude object in a reasonably consistent way. Each component has a positive, neutral, and negative dimension which varies in valence and complexity (Krech, Crutchfield, & Ballachey, 1963).

Even though many social psychologists appear to agree with the cognition-affective-conation triology definition, few use it in research. Usually only the affective component is measured and treated as the "essence" of attitude. In practice researchers tend to intuitively select variables and particular operations to fit the specific purposes of their own work and interests. Most investigators in social psychology have not been concerned about the distinction between the concepts of attitudes, beliefs, motivations or intentions because the results of empirical research have not shown the concepts to have distinct and separate meanings (Fishbein & Ajzen, 1972, 1975). Virtually all verbal responses, and sometimes overt actions, have been considered indicators of an individual's attitudes. Likewise, measures of the variables of beliefs, feelings, and intentions have been used interchangeably.

In a review of attitude-behavior research, Schuman and Johnson (1976) specified attitude in three ways. First, the term "measured attitude" was restricted to elicited verbal attitudes, i.e., those responses to questionnaires or other direct measurement procedures and did not include spontaneous verbal attitudes, i.e., those opinions expressed by a person to friends or other people in the course of everyday life. Second, attitude was distinguished between attitude as elicited or measured and the underlying or "true" attitude. The final distinction was between attitude as a category to cover practically all nonfactual responses to questionnaires, including beliefs and behavioral intentions, and attitude as restricted to the affective or evaluative response for or against objects. In a review of food habit research, Foley, Hertzler and Anderson (1979) classified attitudes into five definitional categories: (a) preferences, likes or dislikes, feelings, (b) overt food behavior, (c) willingness or ability to change, (d) agreement among family members and (e) complexity of meanings, i.e., connotative meanings of foods.

The two most recognized conceptualizations of attitude using the triology definition are by Fishbein and Ajzen (1972, 1975) and Rokeach (1968, 1973). Fishbein and Ajzen (1972) conceptualized attitude as the evaluative or affective component of the individual's perception of a concept or relation between concepts. Attitude refers to favorableness or unfavorableness toward something measured along an evaluative continuum, i.e., good-bad, clean-dirty,

acceptable-unacceptable. The belief concept is defined as the subjective probability that a particular relationship exists between the object of belief and some other object, concept, or attribute. Beliefs are classified as: (a) primary beliefs, those that underlie the independent variable of interest, (b) proximal beliefs, those that correspond to any information item, attribute, or object association one has, (c) external beliefs, those that do not correspond to any information items presented and (d) inferential beliefs, those derived from other beliefs. Behavioral intention is viewed as a special case of beliefs, in which the object is always the person himself/herself and the attribute is always the behavior and refers to an individual's intention to perform various behaviors (Fishbein & Ajzen, 1975). Emphasis is on attitude toward the behavior.

Rokeach (1968, 1973), on the other hand, defined attitude as a relatively enduring organization of interrelated beliefs that describe, evaluate, and advocate action with respect to an object or situation predisposing an individual to respond in some preferential manner. Each belief within an attitude organization has three components: cognitive, affective, and behavioral. Behavior with respect to an object is always a function of at least two attitudes--attitude toward the object and attitude toward the situation within which the object is encountered. Value is defined as an enduring belief that a specific mode of behavior is socially or personally preferred and is a standard that guides and determines action.

The conceptualization of attitude by Fishbein and Ajzen (1972, 1975) was used in this research because it distinguished between beliefs, attitudes, intentions, and behavior and the emphasis was on attitude toward behavior. The approach seemed to be a logical and concise way to investigate the influences on the counseling behavior of clinical dietitians.

Attitude-Behavior Relationships

Studies dealing with consistency of attitude and behavior are usually based on obtaining two measures: (a) an attitude measure, requesting a verbal response via a particular object, and (b) a behavioral measure based on observations of the subject's overt response to the object. Standard procedures for assessing attitudes include specially structured choice situations devised to obtain an index of overt behavior. The assumption being that if an attitude does represent a predisposition to act toward the attitude object in a particular way, then it should be possible to predict responses on the behavioral measure from responses to the attitude questionnaire (Sims, 1981a).

In a review of 31 studies on the attitude-action relationship, Wicker (1969) concluded that attitudes are more likely to be unrelated or slightly related to overt behavior than to be closely related to actions. This had an impact on the thinking regarding attitude-behavior relationships and lead to much sociological research investigating the influence of attitude on behavior. A

consistent neglect of theoretical formulations specifying the relevance of object-centrality, attitude extremity, and attitude intensity for understanding attitude-behavior consistency was also found. The failure of empirical investigations to support the attitude-behavior relationship may be due to a gap between research and theory. Few studies investigated the relation of strength and clarity of the measured attitude to the likelihood of the corresponding behavior (Petersen & Dutton, 1975).

Another explanation of the failure of empirical support for the attitude-behavior relationship is that attitude is a complex concept consisting of cognition, affect, and conation and that measurement of any component is insufficient to predict behavior. Inconsistency in the findings is due to the lack of specific measurement of the behavioral criterion and the failure to distinguish between belief, attitudes, and intention (Fishbein, 1973). The nature of the attitude and the behavior measured is extremely important. An arbitrarily selected behavior may have little relevance to the attitude under study and, thus, there may be no theoretical basis for predicting a relationship. The degree of prediction or influence is poor when a very general attitude is studied in relation to a very specific behavior (Sims, 1981a). Mediating variables such as situational characteristics, personality variables, norms, and motivations have rarely been systematically investigated to explain the inconsistent or insignificant findings. According to Gross and Niman (1975) personal factors, situational factors, and methodological

factors were variables frequently considered responsible for attitude-behavior discrepancy.

Some investigators have supported the belief that attitudes and behavior are indeed linked and may be causally related. There may be a reciprocal causation, in that behavior often changes attitudes as people develop attitudes that justify previous behavior (Triandis, 1971). Behavior is a function of attitudes, norms, habits, and expectancies about reinforcement. When all four factors are consistent, there is consistency between attitudes and behavior; when they are inconsistent there is less consistency. Attitudes together with norms and habits predict behavior, attitudes alone do not. Kahle and Berman (1979) using cross-lagged panel correlations supported the notion of reciprocal causation between attitudes and behavior. Attitudes do predict behavior provided that the attitude measure is appropriate for the type of criterion being predicted and that the criterion itself is methodologically accepted (Fishbein, 1973).

The strength of the attitude-behavior relationship is influenced by correspondence of four elements between attitude and behavior (Ajzen & Fishbein, 1977, 1980). The elements are action, target at which action is directed, the context in which action is performed, and the time at which action is performed. In a review of 109 studies on attitude-behavior relationships by Ajzen and Fishbein (1977) focus was mostly on the correspondence of the action and target elements. Studies conducted with lack of correspondence

of both target and action between attitude and behavior resulted in mostly insignificant relationships. Of the 47 studies conducted with partial correspondence, i.e., correspondence of either target or action but not both, approximately one-third reported insignificant relationships, approximately one-third reported significant relationships of low to moderate magnitude, and the remaining one-third reported inconsistent results. Therefore, partial correspondence tended to result in inconsistent findings. In contrast, those studies conducted with high correspondence of target and action between attitude and behavior, significant attitude-behavior relations were found. The use of appropriate measures produced strong relationships and the use of inappropriate measures tended to reduce the relationship between attitude and behavior. It was concluded that low and consistent attitude-behavior relationships were attributable to low or partial correspondence between attitude and behavior. To predict behavior from attitude, high correspondence between at least action and target elements must be insured.

To predict a change or influence it is essential to distinguish between beliefs, attitudes, intention, and behavior and to measure each (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975; Bentler & Speckart, 1979). This distinction is necessary in that various factors serve as intermediate determinants and factors that serve as determinants in one situation may represent the dependent variable in another resulting in a chain of influence effects from beliefs to behavior. Behavior is ultimately determined by beliefs and,

therefore, is explained by reference to an individual's beliefs. Beliefs influence attitudes and subjective norms (peer influence); then attitudes and subjective norms influence intentions; and intentions influence behavior.

III. CONCEPTUALIZATION

The conceptual framework for this study is multidisciplinary. It was developed from theoretical investigations of food science, communication, counseling, dietetics, education, and social psychology literature. Influences affecting the behavioral and normative beliefs, behavioral attitudes and subjective norms, intention, and self-reported counseling behavior of clinical dietitians have been conceptualized using the Ajzen and Fishbein model (1980).

The Ajzen and Fishbein model demonstrates how the theory of reasoned action can be used to explain and predict behavior. According to the theory, a person's behavior logically and systematically follows from whatever information is available. Behavior is explained at different levels. At the most global level, behavior is assumed to be determined by one's intention. At the next level, these intentions are determined by attitudes toward behavior and subjective norms. Attitude toward behavior is personal in nature and is a person's positive or negative evaluation of performing a behavior. The subjective norm reflects social influence and is a person's perception of the social pressures exerted on him/her to perform or not perform a behavior. The third level of the model explains attitudes toward behavior in terms of beliefs about consequences or outcomes of performing the behavior and subjective norms in terms of beliefs about normative expectations of relevant referents. A person's beliefs represent information, which may not always be

reasonable, appropriate, correct, or complete, held about his/her world. These beliefs about various objects, actions, and events are formed from a person's experiences and they represent the result of direct observation, indirect acquisition by accepting information from outside sources, or self-generation through inference processes. Therefore, a person's behavior is ultimately determined by these beliefs. Measurement of behavioral and normative beliefs, attitude toward behavior, subjective norm, intention, and behavior must correspond in terms of the four elements of behavior: action, target at which action is directed, context in which action occurs, and the time at which action is performed. In summary, the Ajzen and Fishbein model demonstrates the systematic responses that link behavioral beliefs and normative beliefs to behavior. Each state in the sequence follows reasonably from the preceding stage.

The Ajzen and Fishbein model was adapted to explain the use of certain counseling strategies by clinical dietitians in a patient/counselor interaction. The model, Figure 1, presents the different levels as adapted to explain counseling behavior. Discussion of the model will be deductive beginning at the global level, the right side of the model, and concluding with the influence of external variables, the left side of the model.

Behavior and Intention

The identification of behavior involves three major processes: (a) identifying behavior in specific or general terms of four elements--action, target, context, and time, (b) distinguishing

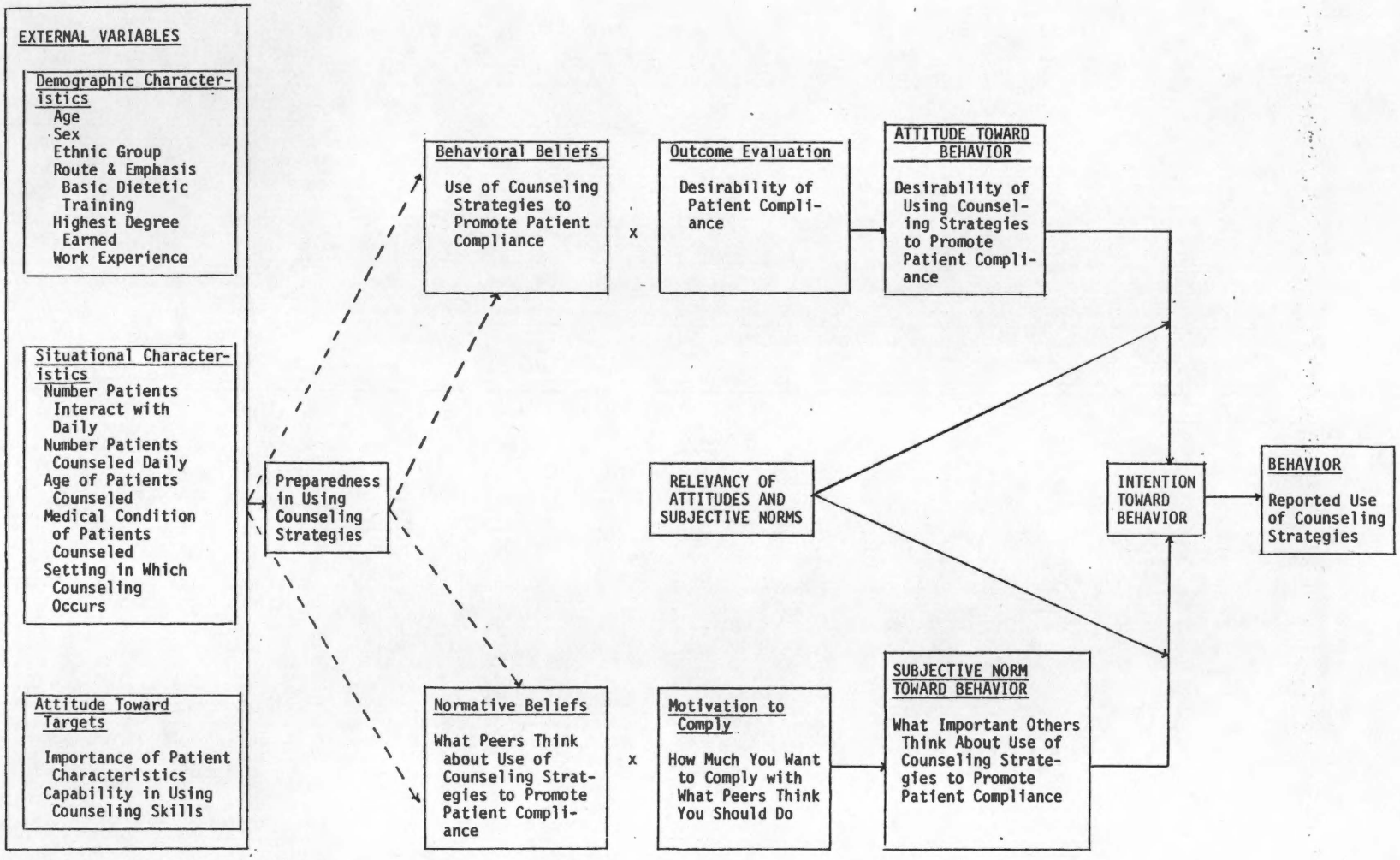


Figure 1. Conceptualization of Factors Influencing the Use of Counseling Strategies by Clinical Dietitians.

between the behaviors and occurrences that may be the outcomes of the identified behaviors, and (c) deciding if intent is to deal with a behavior or an outcome. When outcome is the point of interest, many different behaviors can lead to the same outcome and the actual point of interest may actually be in only one or more of these behaviors than in the outcome itself. In this case, the behavior, i.e., actions leading to the outcome, must be identified. Twenty counseling behaviors were identified as contributing to the outcome of counseling, patient compliance. The behavior criterion was defined as the use (action) of a counseling strategy (target or object) by clinical dietitians in counseling patients on changes in nutrition behavior (context). Time was not specified. Use was viewed across types of patients and counseling situations. The self-report method was used to obtain a relative frequency measure of behavior.

According to the model, intention is the immediate determinant of behavior. The observed relation between intention to use and self-reported use depends on two factors: (a) the correspondence between the measure of intention and the behavioral criterion in action, target, context, and time, and (b) the measure of intention predicts behavior only when intention does not change before behavior is observed. Advantage of using self-report is that a measure can be obtained without reference to time or context. Intention can change over time and the stability of intention is not under the control of the investigator. Aggregate intentions are more apt to be stable over time than individual intentions.

Most behaviors are completely under a person's volitional control whereas outcomes are not. Therefore, the outcome of patient compliance is not under complete control of the clinical dietitian. The simplest way to predict patient compliance is to ask the patients involved. In this research it is conceptualized that the counseling strategies used by a clinical dietitian are some of the external variables that influence the patient's attitudes, subjective norms, intention, and actual compliance to a recommended change in diet or life-style. The counseling strategies used by the clinical dietitian, therefore, influence patient compliance. Predictive validity of intentions depends on the extent to which intentions lead to performance of behaviors that control outcomes.

Determinants of Intention

In the Ajzen and Fishbein model, two major factors determine a person's behavioral intentions. The factors are an attitudinal or personal component and a normative or social component.

Attitude toward behavior. Attitude toward behavior is a person's positive or negative evaluation of performing a behavior and refers to a judgment that performing the behavior is good or bad, that one is in favor of or against the behavior. In theory, the more favorable a person's attitude is toward performing a behavior, the more one intends to perform that behavior; the more unfavorable the attitude to perform the behavior, the more a person intends not to perform that behavior. Stated in the context of this

research, the more favorable the attitude of the clinical dietitian is toward using a counseling strategy, the more the intention to use that counseling strategy to obtain patient compliance to recommended changes in nutrition behavior. Attitude refers specifically to a person's own performance of a behavior rather than to performance in general.

Subjective norm. The second factor, the normative component, deals with the influence of the social environment on intentions and behavior. The subjective norm refers to a person's perception that important others desire the performance or non-performance of a specific behavior. This perception may or may not reflect what the important others actually think a person should do. According to the theory, the more a person perceives that important others think a behavior should be performed, the more the person will intend to perform that behavior. That is, with other things constant, people are viewed as intending to perform those behaviors they believe important others think they should perform. Consequently, the more clinical dietitians perceive that others important to them desire that a counseling strategy should be used, the more they will intend to do so.

Relative importance of attitude and subjective norm. Intention depends on the relative importance of two components of the model, attitude and subjective norm. To predict intention, the relative importance of the two components must be identified. Each

component is given a weight reflecting its relative importance as a determinant of the intention under consideration, i.e., intention to use a counseling strategy. A component may have a very high weight or no weight at all. The weighted components are summed to predict intention. The theory assumes that the relative importance of these components depends on the intention under study. The relative importance in determining intention may vary from one behavior to another and from one individual to another. For some intentions, attitudinal considerations may be more important than normative considerations, and for others normative considerations may predominate, and in others both factors are important determinants. Assuming appropriate measures are obtained, attitudinal and normative components should always predict intention; however, the ability to predict behavior depends on the strength of the intention-behavior relationship.

In summary, a person will usually intend to perform the behavior that is evaluated positively and is believed that important others think should be performed. Therefore, the clinical dietitian uses those counseling strategies that he/she positively evaluates and that he/she believes important others think should be used.

Determinants of Attitude Toward Behavior

The two determinants of attitude toward behavior are behavioral beliefs and outcome evaluation. Since attitudes are a function of beliefs, attitudes toward any object, i.e., counseling strategy, are

determined by beliefs about that object. Beliefs about an object are formed by associating the object with various characteristics, qualities, and attributes. For example, a person may feel that the use of a counseling strategy may facilitate a patient's understanding of the diet or that it may be very time consuming to use. Favorable attitudes are held toward those objects with positive characteristics we learn to like and unfavorable attitudes are held toward those objects with negative characteristics we learn to dislike. Generally, a person who believes that using a counseling strategy leads to mostly positive outcomes will hold a favorable attitude toward using that strategy, while a person who believes that using that strategy will lead to mostly negative outcomes will hold an unfavorable attitude.

The beliefs that underlie a person's attitude toward behavior are called behavioral beliefs and those behavioral beliefs that are the immediate determinants of a person's attitude are called salient beliefs. Salient beliefs are subject to change and may be strengthened or weakened by new beliefs. To explain why a person holds a certain attitude toward an object, i.e., counseling strategy, salient beliefs about that object are identified and measured. Usually the first five to nine beliefs emitted by a person are salient beliefs about an object. In eliciting the salient beliefs, correspondence between the action, target, context, and time elements must be insured. A change in any one of the elements can elicit a completely different set of salient beliefs.

In determining behavioral beliefs, both the behavior of interest (object or target) and the associated attribute (consequence or outcome) must be identified and measured. In any behavior-outcome association, people may differ in terms of perceived likelihood that performing the behavior is associated with the outcome under consideration, i.e., likelihood that using a certain counseling strategy will promote patient compliance. Generally, a person who believes that performing a given behavior leads to mostly positive outcomes will hold a favorable attitude toward performing that behavior, while a person who believes that performing the behavior will lead to mostly negative outcomes will hold an unfavorable attitude. The second component of attitude toward behavior, outcome evaluation, represents the desirability of the attribute or consequence. For example, how desirable or important is patient compliance. In summary, attitudes toward behavior are based on the total set of a person's salient beliefs and outcome evaluations.

A person's attitude toward behavior can be predicted by multiplying the salient behavioral belief (strength of belief that using a counseling strategy leads to patient compliance) by the outcome evaluation (importance of patient compliance). The total set of behavioral beliefs is a sum of the products and is the basis for an individual's attitude toward a behavior. Thus, by measuring the belief strength and outcome evaluation a person's attitude can be predicted and information about the determinants of attitude can be obtained.

Determinants of Subjective Norm

As with attitude toward behavior, a person's subjective norm is a function of beliefs, but of a different kind. The two determinants of subjective norm are normative beliefs and motivation to comply. Normative beliefs underlie a person's subjective norm and refer to a person's belief that specific individuals or groups (referents) think a given behavior should or should not be performed. Normative beliefs are similar to the subjective norm, except they involve specific individuals or groups rather than a generalized important other. A normative belief includes only what a referent thinks a person should or should not do and does not include a belief about the referent. The second determinant of subjective norm is the person's motivation to comply with the social referent. A salient referent is a person or persons that influence the subjective norm. Generally, a person who believes that most referents with whom he/she is motivated to comply with think a certain behavior should be performed will perceive social pressure to perform that behavior. Conversely, a person who believes that most referents with whom he/she is motivated to comply think a behavior should not be performed will have a subjective norm that exerts pressure to avoid performing that behavior. Generally speaking, if one believes the clinical dietitians that he/she works with feel a counseling strategy should be used and is highly motivated to comply, that individual will perceive social pressure to use the counseling strategy.

According to theory, a person's subjective norm can be predicted from the index obtained by multiplying normative beliefs by

the corresponding motivations to comply and then summing the products. By accounting for the motivation to comply, the more important referents are given proportionately more weight in the prediction of the subjective norm. Since subjective norms are based on a total set of salient normative beliefs each weighted by motivation to comply, the theory implies no necessary relation between any single normative belief and subjective norm.

Preparedness

This variable has been added to the Ajzen and Fishbein model to account for the comfort a dietitian feels in using a specific counseling strategy. It is felt that preparedness is related to basic training and experience in counseling patients, the age and medical condition of patients counseled, and the setting in which patients are counseled. Capability in using counseling skills and importance of patient characteristics are related to the preparedness felt by clinical dietitians in using different counseling strategies. It is proposed that how prepared a person feels in using a strategy has a direct influence on both behavioral attitude and subjective norm and, indirectly, on intention to use and reported use of counseling strategies.

External Variables

Such factors as demographic characteristics, personality traits, and traditional measures of attitudes toward persons, institutions, and policies are sometimes related to the behavior of

interest and are considered external variables. However, these variables are not considered as constituting an integral part of the theory. External variables may influence beliefs held by a person or the relative importance attached to attitudinal and normative considerations and may influence behavior. No necessary relation seems to exist between any given external variable and behavior since no consistent effects of an external variable on the beliefs underlying behaviors have been observed. An external variable has an effect on behavior only to the extent that the determinants of the behavior are influenced as shown in the model. A major disadvantage of relying on external variables to explain behavior is that different kinds of external variables have to be invoked for different behavioral domains (Ajzen & Fishbein, 1980).

External variables affect behavior only indirectly and are related to behavior only if they are related to one or more of the variables specified in the model. Measures of personality and attitudes toward targets do not correspond to any single behavior but do correspond to behavioral categories. The behavioral criterion corresponding to a personality trait is a behavioral category defined in terms of a class of actions (i.e., aggressive behaviors) without specification of target, context, or time elements. In the case of attitudes toward targets, the corresponding behavioral criterion specifies the target but generalizes across actions, context, and time.

The strength of the attitude-behavior relationship is also moderated by "other variables" such as direct experience with the

attitude object, presence of other people, possession of skills required to perform the behavior, and occurrence of unforeseen extraneous events. Intention should always predict behavior provided the assumptions have been met. Other variables may have moderating effects on the strength of the intention-behavior relation if intention has changed prior to performance of the behavior. If intention is measured after the extraneous events have occurred or taken into account, a strong intention-behavior relation is obtained. Similarly, an intention formed without direct experience with counseling strategies may change greatly when the clinical dietitian is confronted with the counseling strategy. In contrast, a person who has used a counseling strategy in the past will have developed more realistic expectations, and intention is likely to remain relatively stable. Direct experience may help to preserve a stable intention and a strong intention-behavior relation but may not lead to development of more realistic expectations. Therefore, direct experience may not always influence the stability of attitudes or intention and will not always moderate the strength of the intention-behavior relationship (Ajzen & Fishbein, 1980).

The external variables identified in the adapted model were: (a) demographic variables--age, sex, ethnic group, route and emphasis of basic dietetic training, highest degree obtained, and work experience in dietetics, (b) situational variables--average number of patients interacted with daily, average number of patients counseled daily, age of patient counseled,

medical condition of patient counseled, and setting in which counseling occurs, and (c) attitude toward targets--importance of patient characteristics, and capability in using counseling skills. Other attitudes considered but not included at this time were role as counselor, role on health care team, and attitude toward institution. Research conducted by Glanz (1979b) indicated that the Orientation to Social Influence (OSI) score is an indicator of use of counseling strategies and, as such, could be conceptualized as a fourth component, Personality Traits, in the model.

Assumptions

Assumptions underlying the objectives and hypotheses in this research were:

1. Patient compliance is influenced by the counseling strategies used by clinical dietitians.

2. The clinical dietitian's attitude toward using counseling strategies is an important determinant in promoting patient compliance.

3. The clinical dietitian's attitude toward counseling strategies is an important determinant in the reported use of strategies, i.e., the type and number of strategies used, to promote patient compliance.

4. The salient belief, use of counseling strategy will promote patient compliance, is a major determinant of attitude toward the use of that counseling strategy.

5. Clinical dietitians believe that patient compliance is desirable and very important.

6. The professional peer group, clinical dietitians that one works with, is the most influential social referent.

Objectives

The objectives of the research were to: (a) construct a socio-demographic profile of practicing clinical dietitians as related to attitude toward behavior, subjective norm, intention, and reported use of counseling strategies, (b) determine the relationship between attitude toward behavior, subjective norm, intention, and use of counseling strategies by clinical dietitians in patient-counselor interactions, and (c) determine relationships among specified external variables and attitude toward behavior, intention, and counseling behavior of clinical dietitians.

Hypotheses

The specific hypotheses tested were:

1. Preparedness in using counseling strategies directly affects the attitude and subjective norm of clinical dietitians regarding use of counseling strategies and indirectly affects intention and behavior to use counseling strategies.

2. Attitude and subjective norm of clinical dietitians toward the use of counseling strategies directly influences intention to use and indirectly influences counseling behavior.

3. Intention toward use of counseling strategies directly affects the counseling behavior of clinical dietitians and is the strongest determinant of counseling behavior.

In addition, two other relationships were investigated. The first was the affect of the independent or external variables on the preparedness felt by clinical dietitians in using counseling strategies. The second was the indirect affect of the independent variables on attitude, subjective norm, and reported use of counseling strategies by clinical dietitians.

IV. METHODOLOGY

The discussion in this section will cover questionnaire construction, selection and survey of respondents, review of literature on measurement of counseling strategies and attitudes, and measurement of the variables identified in the previous section.

Questionnaire Construction

The questionnaire was designed utilizing the Total Design Method by Dillman (1978) and the Ajzen and Fishbein (1980) method was used to measure the dependent and independent variables. A major problem dealt with extensively and, not solved, was length of the instrument. The number of counseling strategies studied and the number of questions needed to assess attitude toward use of counseling strategies, subjective norms toward use of counseling strategies, and intention to use and actual use of counseling strategies dictated the length.

The questionnaire was pilot tested in August and September 1982 with 30 clinical dietitians identified on basis of personal contacts and interest in the study. Based on the pilot test, the format was changed, revisions were made to reduce the ambiguity and length and improve clarity, and some questions were added to adequately test the model.

Selection and Survey of Respondents

The population studied included clinical dietitians employed in dietetic internships with a generalist or clinical nutrition emphasis in the United States and Puerto Rico accredited by the American Dietetic Association as of December 1981. Accredited internships with a Public Health or Food Systems Administration emphasis were not included in the population as the objective of the study was to survey clinical dietitians. A total of 79 accredited dietetic internships were surveyed and 77 participated in the study.

In October 1982, questionnaire packets were sent to directors of the accredited dietetic internships with a cover letter explaining the purpose of the study and requesting the internship director to select five clinical dietitians employed by the internship to participate in the survey using the following criteria: (a) must be a Registered Dietitian, (b) had a minimum of two years work experience in clinical dietetics, (c) employed full time with a minimum of 50% time devoted to direct patient care, (d) minimum of one year in current position, and (e) each dietitian assigned to a different area of clinical dietetics, i.e., general medicine, cardiovascular. Also, each director was asked to complete and return a post-card indicating number of clinical dietitians employed by the internship and number of clinical dietitians meeting survey criteria. A total of 395 questionnaires were mailed and 284 questionnaires

(72%) were returned. One clinical dietitian returned an incomplete questionnaire and indicated she did not feel qualified to participate in the survey.

Each questionnaire packet distributed to the clinical dietitians contained a questionnaire coded as to program and clinical dietitian and a cover letter indicating the general objectives for the study and requesting his/her cooperation in completing the questionnaire. All correspondence was through the internship director providing complete anonymity to the clinical dietitians. A post-card reminder was sent to all internship directors at the end of one week reminding them to return the post-card indicating number of clinical dietitians meeting survey criteria and to forward the questionnaire packets to the clinical dietitians identified to participate in the study and thanking those who had already responded. At the end of three weeks three types of reminders were sent:

1. To the internship directors who had returned the post-card indicating number of clinical dietitians meeting survey criteria, a post-card reminder was sent indicating the code of the questionnaires not received and asking that a few minutes be taken to remind the clinical dietitians to complete and return the questionnaires as well as thanking them again for their cooperation and assistance.

2. To the internship directors who had not returned the post-card indicating number of clinical dietitians meeting survey criteria and no questionnaires had been received, a reminder letter was sent restating the survey objectives and selection criteria and

included another post-card. An opportunity was given on the post-card for the directors to indicate if they had or had not received the questionnaire packets. If the questionnaire packets had not been received, new packets were mailed.

3. To the internship directors who had not returned the post-card and some questionnaires had been received, a reminder letter was sent including a second post-card and indicating the code of the questionnaire(s) not returned and thanking those clinical dietitians who had already completed and returned their questionnaires.

Those internship directors who had not responded to any of the correspondence were contacted by telephone. Return of the completed questionnaire indicated willingness to participate in the survey.

Counseling Strategies

Literature Review of Previous Attempts to Measure Counseling Strategies

Few research studies were reported which identified counseling strategies and/or evaluated the effectiveness of various counseling skills and strategies used by clinical dietitians in attempting to change eating behavior of patients. Most dietitians attempted to change eating behavior by dispensing nutritional information; however, many clinicians felt the role of the dietitian should also include skills in behavioral counseling and diet adherence (Snetselaar, et al., 1981; Danish, 1975, 1979; Ling, Spraag, Stein, & Myers, 1975; and Ohlson, 1973).

Snetselaar et al. (1981) designed, conducted, and evaluated a model nutrition counseling workshop to help dietitians acquire behavioral counseling skills. At the conclusion of the workshop, participants were expected to demonstrate knowledge of basic interviewing skills, behavioral weight control counseling skills, and adherence counseling skills. The workshop was divided into four phases covering approximately seven months: Phase I--Preworkshop Tasks, 2 months, Phase II--Skills Workshop, 5 days, Phase III--Interim Assignments, 4 months, and Phase IV--Follow-up Workshop, 2 days. Twenty-four dietitians participated in both the skills and follow-up workshops. Knowledge and attitudes of the dietitians were measured using a 91-item knowledge test and an 84-item attitude inventory given at three times: beginning of Phase II, end of Phase II, and beginning of Phase IV. Seven sub-tests made up the knowledge test: adherence tools, obtaining diet information, staged approach, incorporating food alternatives into the diet, adherence, obesity, and lipids. A significant difference in the profiles of subtest scores from the three tests was found using a repeated measures multivariate analysis of variance. Tukey post hoc tests showed pre-test and post-test gains on five of the seven subtests, significant beyond the 0.01 level.

Attitudes in the following areas were measured: (a) use and importance of adherence tools, (b) incorporating commercial products into the diet, (c) importance of staged approach, (d) use of diet history, (e) the general dietary interview, (f) perceptions of

nutritionist's role in medical care, (g) weight control methodology, and (h) importance of diet adherence. The response options for importance of diet adherence ranged from not at all (+1) to extremely (+4). Response options for the other areas ranged from strongly disagree (+1) to strongly agree (+6).

The audiotapes were rated using an interaction analysis technique adapted to the counseling setting. Two raters individually categorized events as they occurred into one of 21 mutually exclusive and exhaustive categories. Eight of the most relevant categories were examined in tapes made before, two weeks after, and six weeks after the workshop. Significant increases were found in the use of approval/praise, encouragers, accurate feeling restatement, paraphrase, and summary. A modest improvement was found in use of listening and topic jumps and a reduction was found in the number of closed questions asked.

Olendzki, Tolpin, and Buckley (1981) evaluated the effect of nutrition intervention in atherosclerosis using retrospective clinical data. Intervention was defined as nutrition and dietary assessment, nutrition and health education, and nutrition counseling services provided to individuals and groups by primary care registered dietitians. Risk factors selected as dependent variables were serum cholesterol level, triglyceride level, weight, blood pressure, blood sugar level, and smoking and exercise behaviors. Two hundred cases, 100 seen by a dietitian and 100 not seen by a dietitian, were randomly selected from a listing of all abnormal

serum cholesterol and serum triglyceride determinations for patients seen at a neighborhood health clinic in Boston. The independent variables collected for each case were: age, sex, initial presence or absence of diabetes, diagnosed hypertension, and smoking; whether or not the patient received insulin, blood pressure medication, or lipid medication during the observation period; number of visits to dietitians where applicable, and types of diet instructions received. For both groups, number of visits to internists, nurses, and mental health workers were recorded. Observations were coded for cholesterol levels, systolic and diastolic blood pressure, triglycerides, blood sugar, and actual-to-ideal weight ratio. Due to substantial numbers of missing data for triglyceride and blood sugar levels, these variables were omitted. Multiple regression was used to test the effect of nutrition intervention through a dietitian's counseling on risk factors for coronary heart disease. Most of the variables hypothesized to affect risk-factor changes were not found to be statistically significant; but, the counseling variable was significant in almost all regressions. Specific strategies used in nutrition intervention were not investigated.

Only one researcher, Glanz (1979a, 1979b), reported studies which focused on the use of specific counseling strategies, attitudes of dietitians toward counseling strategies, and subsequent effect on patient compliance. A list of 45 strategies based on observations of clinical dietetic practice, discussions with dietitians, and knowledge of behavioral science derived from research on attitude

change, communication and persuasion, and social learning theories was developed by Glanz (1979a). The strategies were grouped into five categories: instructional, motivational, behavioral, educational diagnosis, and assessing patient compliance/evaluating change efforts. Variations between the different class of strategies along dimensions of current use, perceived barriers to use, and perceived value of the strategies, and the extent to which dietitians utilize and view traditional and innovative strategies were studied. A questionnaire was developed and distributed to 44 nutritionists and dietitians. The following questions were asked for each strategy:

1. Have you ever used this strategy? Response options were never, sometimes, often, and does not apply to my practice setting.

2. If you answered "sometimes" or "often" rate how successful you think the strategy has been in the long run, to increase patient compliance with diet regimens. Response options were no good, a little, a fair amount, very good, and felt I had no way of knowing.

3. If you were able to use this strategy (i.e., had no problem implementing it, as far as time, doctor's cooperation, etc.), how highly would you rate it in terms of your own opinion of it? Response options were of no use, of minimal use, fair, pretty good, and excellent.

4. Regardless of whether you have used or could use this strategy, please indicate how hard you think it would be to adapt and implement this strategy into dietetic practice? Response options

were very easy, somewhat easy, neither easy nor hard, somewhat hard, and very hard.

To rate the innovativeness of the strategies, a second questionnaire was independently submitted to six state nutrition consultants. Strategies were rated on a 5-point scale from "traditional" (has been routinely used for years) to "innovative" (new and relatively untested). Behavioral strategies were used infrequently, were rated more difficult to use, were rated as having a lower net benefit than the other classes. Behavioral strategies, strategies for educational diagnosis, and assessment of compliance strategies were rated as more innovative. The more innovative strategies were used less frequently and were perceived as more difficult to implement in dietetic practice. Due to methodological weaknesses, results could only be suggestive. The weaknesses were that the list of strategies did not represent the universe nor a representative sample of all possible strategies, possible nonrepresentativeness of the respondent groups, and limited sample size.

In another study, Glanz (1979b) investigated the effect of dietitians' counseling on patient compliance with dietary regimens, specifically the personal, attitudinal, and situational variables affecting adherence to diet and application of behavioral science compliance-improving strategies in nutrition counseling. Nine dietitians and twenty of their patients counseled for both normal and therapeutic regimens in a variety of settings were observed and surveyed. Counseling sessions were observed and both the dietitians

and patients were asked independently to predict rates of compliance. Patients were also questioned about the following attitudes: general health concern, belief in benefits of the diet, perceived need for social support, and satisfaction with the counseling session. One month after counseling, both the dietitians and patients were contacted by telephone to assess adherence to the dietary regimen and health outcomes.

An index, OSI score, was developed to differentiate between dietitians' emphasis on influencing people. The score was computed for each dietitian based on a weighted average of responses to the question, "If you could change anything you wanted, in order to make your practice more ideal, what would you change?" Responses were categorized as either impersonal/situational (e.g., shorter work hours, better facilities, fewer interruptions) or personal/influence attempts (e.g., communication with doctors, more contact with patients, and any mention of successful innovations or innovations in progress). Dietitians with higher OSI scores, i.e., emphasizing desire to change interpersonal and communication aspects of their jobs, used more influence strategies, involved patients more in the counseling sessions, and tended to have patients with more appropriate health attitudes and behaviors. A limitation of the pilot study was the small size of the sample and absence of probability sampling methods.

Use of Nominal Group Technique to Develop List of Counseling Strategies

Thirty dietitians representing the total population of practicing clinical dietitians in three major hospitals and two public health departments in the Knoxville, Tennessee area participated in the nominal group process. The Director of Nutrition Services or Dietary Services in each facility was contacted to obtain permission to contact the clinical dietitians and establish meeting times. Meeting times were scheduled through the Director of Nutrition Services of Dietary Services.

Two meetings were held with the clinical dietitians in each facility using the nominal group technique (Delbecg, Van de Ven, & Gustafson, 1975). Due to work loads of the clinical dietitians and difficulty of scheduling meeting times, meetings were held in each facility and not as one group. In the first meeting, the general purpose of the research was explained and the tasks to be accomplished by the group were identified. Everyone was given approximately 20 minutes to identify, in writing, what they did to assess patient needs, educate, change behavior, and monitor progress and to indicate the importance of each in their practice. Each dietitian orally discussed the items listed in writing. A concensus was reached on the counseling strategies used in each facility resulting in an exhaustive listing of strategies. The investigator then compiled the strategies obtained from all facilities into one list, combining similar strategies, rewording for clarity, and incorporating

strategies listed in the research by Glanz (1979a). The strategies were then categorized by the investigator into the five classes used by Glanz (1979a): instructional, motivational, behavioral, educational diagnosis, and assessing patient compliance/evaluating change efforts. The list of strategies categorized into the five areas was given to each dietitian three days before the second meeting to review and make comments. During the second meeting, the categories were discussed and in each facility consensus was obtained in the changes to be made in the categories, i.e., wording changes. The groups discussed each strategy and reached a consensus on the following questions: (a) Should the strategy be kept?, (b) Does the strategy mean the same to everyone?, and (c) Does the strategy belong in the category listed? Additional suggestions were obtained as well. These discussions produced five categories of counseling strategies similar to those used by Glanz (1979a) but some categories were given a different title for better interpretation of what types of strategies made up the category. The final categories of strategies were: assessment, educational, motivational, behavioral, and evaluation. Approximately 15 strategies were identified in each category. Agenda and forms for both nominal group meetings are provided in Appendix B.

Using the results of the nominal group process the investigator in consultation with graduate committee members reduced the number of strategies in each category to four. The number of strategies included in each category was limited arbitrarily to four

due to questionnaire construction restraints. Criteria used to reduce number of strategies were: (a) Was strategy representative of the category? (b) How often was the strategy used by clinical dietitians participating in the nominal group process? and, (c) How important did the clinical dietitians participating in the nominal group process feel the strategy was in promoting patient compliance?

Attitude Measurement

Literature Review of Attitude Measurement Techniques

Nutrition researchers have elaborated on the difficulty of developing and evaluating attitude measurement instruments to measure nutrition-related concepts. Two critical problems identified by Carruth and Anderson (1977) in assessing attitudes were: (a) lack of available and suitable instruments to measure attitudes toward food and nutrition, and (b) complexity of interpretation associated with descriptive, non-parametric data. Instruments were developed for specialized purposes and populations and seemed to have limited application to groups in general. The problem of interpretation was compounded by the degree of frequent intercorrelation among attitude statements and the lack of unidimensionality of instruments for assessing attitudes. Also, determination of an instrument over time was important especially if expressed attitudes were considered motivational factors and as predictors of subsequent behavior.

Measurement was defined as the assignment of numbers to observations according to some set of rules (Summers, 1970). When an entity such as attitude was measured the process became more

complicated because attitudes could not be observed directly. The existence of attitude strength must be inferred from what was observed. The primary bases of inference were self-reported beliefs, feelings, and/or intention (Sims, 1981a). Approaches commonly used to measure attitudes were: (a) self-report, which included all procedures by which an individual was asked to report attitudes either orally or written, (b) reports of others, which resulted in information based on someone else's assessment of a person's feelings, (c) sociometric procedures, which involved members of one group reporting about their attitudes about one another, and (d) existing records, which were systematic accounts of regular occurrences (Henerson, Morris, & Fitz-Gibbon, 1978). Paper-and-pencil instruments developed to measure attitudes included such scales as: (a) Likert's method of summated rating (Likert, 1932), which incorporated an internal measure of feeling, (b) Osgood's semantic differential (Osgood, Suci & Tannenbaum, 1957), which abstracted verbal labels from meaningful context and encouraged response sets, (c) Thurstone's method of equal appearing intervals (Thurstone, 1928), which made assumptions of item subjective continuity that were not borne out by fact, and (d) Guttman's scalogram (Guttman, 1944).

Sims (1981a) reviewed 51 nutrition research articles published in the 1970's that reportedly measured constructs identified as attitudes, beliefs, opinions, and the like. Ninety percent of the studies used survey methodology rather than experimental or intervention design. Most studies used Likert-type formats as the method

of measurement and the semantic differential was used only once. Some researchers used a method of measurement which asked the respondent to tell which item was true or false, correct or incorrect, right or wrong in spite of the fact that they were reportedly measuring an affective dimension on which a judgment of "correctness-incorrectness" cannot be made. Approximately 30% of the studies did not report the type of measurement method used in data collection. Few studies reported any validity and reliability assessment of the data. For 72% of the studies no validity check was indicated. Content (or face) validity was indicated for the remaining studies. Reliability assessments were reported in only 17% of the studies. Reported types of reliability determinations included the Kuder-Richardson, Cronbach's alpha, and test-retest reliability.

Measurement of the Dependent Variables

Following the conceptual model depicted in Figure 1, Section 3, page 25, a dietitian's counseling behavior is dependent upon preparedness in using counseling strategies, behavioral beliefs, evaluation of behavioral outcomes, attitude toward behavior, normative beliefs, motivation to comply, subjective norms toward behavior, and intention to perform a given behavior, i.e., use a counseling strategy. Each variable could involve a very general or a very specific action, target, context, and time elements. The level of generality is determined by the behavioral criterion of interest. In the research conducted, the behavioral criterion was specific, i.e., use of a counseling strategy.

Preparedness in using counseling strategies. Perceived preparedness or comfort was theorized to play a major role in the attitudes and subjective norms of clinical dietitians toward use of counseling strategies. If a person felt very uncomfortable using a counseling strategy, i.e., very unprepared, then desirability to use would be less and perhaps the perceived peer pressure would be greater. The preparedness in using the twenty counseling strategies was evaluated on a bipolar scale (semantic differential) as to "how prepared (comfortable) you are in using each strategy," Question 8 on survey questionnaire (Appendix C). Responses were scored from a -3 (extremely unprepared) to +3 (extremely prepared) with 0 as neutral or neither.

Behavioral beliefs. Behavioral beliefs are a set of salient beliefs which identify consequences or outcomes of a behavior. In this study, only one salient belief, "use of counseling strategies promote patient compliance" was measured. A set of salient beliefs was not obtained. The major topic of interest was patient compliance, therefore, only one salient belief, patient compliance, was measured. Twenty counseling strategies were evaluated on a bipolar scale (semantic differential) as to "how likely your use of the counseling strategy will promote patient compliance with the diet regimen." Responses were scored from a -3 (extremely unlikely) to +3 (extremely likely) with 0 as neutral or neither. Question 6 measured the salient belief in relation to the use of a counseling strategy. The strength of the salient belief was measured by

determining how certain the respondent was that using the counseling strategy would promote patient compliance, Question 7 on the questionnaire. Strength of outcome was evaluated on a 4-point unipolar scale for each of the 20 counseling strategies. Responses were scored from +1 (not at all certain) to +4 (extremely certain).

Outcome evaluation. Outcome evaluation determining desirability of patient compliance to the recommended dietary regimen was not measured. It was assumed that most clinical dietitians felt that patient compliance was very important and desirable and that this evaluation was constant across time and situations.

Attitude toward behavior. The general attitude toward the use of counseling strategies was measured on a seven-point bipolar scale. Each respondent was asked "how desirable your use of that strategy is when counseling patients," Question 5 on survey questionnaire. Responses were scored from a -3 (extremely undesirable) to +3 (extremely desirable). This measure only evaluated whether the use of a certain strategy is desirable and did not evaluate whether or not use will promote patient compliance. According to the Ajzen and Fishbein (1980) model a person's attitude toward behavior could be predicted by multiplying each of the outcome evaluations, consequences of behavior, by the strength of belief that the use of counseling strategies will lead to patient compliance. Thus, a measure of salient belief strength, i.e., "how likely use of counseling strategy will promote patient compliance," multiplied by the

outcome evaluation, i.e., "desirability or importance of patient compliance" would predict attitude toward counseling behavior. Since outcome evaluation was not measured and was assumed to be very important and constant and that a set of salient beliefs were not elicited, attitude toward behavior cannot be predicted.

Subjective norm toward behavior. The general subjective norm, the perceived pressure of "those referents important to me" to use a counseling strategy was not measured. The major interest was the influence of professional peers in the use of counseling strategies; therefore, subjective norm was defined as the perceived pressure of peer referents to use a counseling strategy multiplied by the motivation to comply with the peer referents. The salient referents were defined as the registered dietitians with whom one works. Normative belief deals with the influence of the professional environment and refers to an individual's perception that the dietitians one works with think a certain counseling strategy should or should not be used.

Respondents were asked "how likely the Registered Dietitians you work with think you should use each strategy" using a bipolar scale, Question 9 on survey questionnaire. Responses were scored from a -3 (extremely unlikely) to +3 (extremely likely). As with behavioral beliefs, only one salient referent was identified and measured. Motivation to comply with the salient referent was measured on a seven-point bipolar scale. Respondents were asked "how likely, generally speaking, you want to do what the Registered

Dietitians you work with think you should do" for each of the 20 counseling strategies, Question 10 on the survey questionnaire. Responses were scored from a -3 (extremely unlikely) to +3 (extremely likely). The range of scores for the product of normative belief and motivation to comply would be -9 to +9. If a respondent perceived it was slightly likely (+1) that peers felt a counseling strategy should be used in counseling patients and it was extremely likely (+3) that he/she wanted to do what peers thought should be done, the score for the subjective norm would be +3 or slightly positive.

Intention toward behavior. Intention to use counseling strategies was measured by asking "how likely it is that you intend to use each strategy in counseling patients," Question 12 on the survey questionnaire. Responses were on a bipolar scale and ranged from a -3 (extremely unlikely) to +3 (extremely likely).

Behavior--reported use of counseling strategies. Actual behavior was obtained through a self-report and reflected perceived use of each counseling strategy. Respondents were asked to indicate on a unipolar scale with approximately how many patients they used each strategy, Question 11 on the survey questionnaire. Responses ranged from +1 (none) to +4 (all).

Measurement of Independent Variables

The independent variables included three categories of external variables as listed in the model, Figure 1, page 25. The categories

were demographic characteristics, situational characteristics, and attitude toward targets. As various regression models were addressed, all of the dependent variables except behavior, i.e., reported use of counseling strategies, functioned as an independent variable at one time or another.

Demographic Characteristics

The demographic characteristics measured included age, sex, ethnic group, route and emphasis of basic dietetic training, highest degree earned and work experience. Work experience included number of years employed in the dietetic profession; number of years employed as a clinical dietitian in the last ten years; number of years employed in current facility; number of years experience in food service, patient care, outpatient care, research, and teaching. Nine age categories, five ethnic categories, six categories of basic dietetic programs, and five categories of basic dietetic program emphasis were identified, Questions 17, 18, 19, and 20 on the survey questionnaire. Due to low numbers in some categories for basic dietetic program, basic dietetic program emphasis, and highest degree obtained, redefining of categories was needed.

Basic dietetic program. The six educational programs originally identified were: Bachelor's-Coordinated Dietetics Program, Bachelor's + Internship, Bachelor's + Traineeship, Bachelor's + Preplanned Work Experience, Combined Internship + Master's, and Master's + Work Experience. Two categories, Bachelor's +

Traineeship and Bachlor's + Preplanned Work Experience were collapsed into one category due to low numbers in each category and similarity of training experiences. For factor analysis and regression models, five dummy variables were identified and one, B. S. + Traineeship or Preplanned Work Experience was suppressed in the regression models.

Basic dietetic program emphasis. The five program emphases identified initially were: clinical dietetics, community dietetics, food systems management, generalist, and public health nutrition. Due to low numbers in the community dietetics and public health nutrition emphases and the similarity of the two, the areas were combined. Depending on the level of entry to the dietetic profession, the basic dietetic program could be at the undergraduate level or graduate level. A program with emphasis in community nutrition is called community dietetics at the undergraduate level and public health nutrition at the graduate level. For factor analysis and the regression models, four dummy variables were identified and one, Food Systems Administration, was suppressed in the regression model.

Highest degree obtained. The three categories for highest degree obtained were: Bachelor's, Master's, and Doctorate. Only one person had a Doctorate degree, and as a result, that category was recoded as a missing observation. Two dummy variables were identified for the factor analysis and regression models, and one, Bachelor's degree, was suppressed in the regression models.

Situational Characteristics

The situational characteristics measured included setting where counseling takes place; medical conditions of patients counseled; age group of patients counseled; amount of time spent in providing direct patient care services; average number of patients interacted with each day; average number of patients counseled each day; and average time spent counseling patients for the first and second time. Seven categories of counseling settings, five categories of age of patient counseled, and nine categories of medical conditions were identified, Questions 26, 28, and 30 on the survey questionnaire. Respondents were asked to indicate which category of counseling settings, age of patient counseled, or medical condition of patients applied to their situation. For each of these variables, more than one category could be indicated. Responses were coded as 0 (no) and 1 (yes).

A large number of write-in and low numbers in some response categories required that the categories for counseling settings be redefined. The original eight settings were: (1) acute care facility, (2) ambulatory care-outpatient clinic, (3) ambulatory care--public health clinic, (4) day care center/nursery school, (5) home of patient, (6) residential institution for children, (7) long-term care/rehabilitation facility, and (8) public/private school. The eight categories were collapsed into four categories and defined as: (1) acute care facility, (2) ambulatory care--outpatient clinic, (3) long-term care/rehabilitation facility, and (4) non-institutional facilities.

Attitude Toward Targets

The two components of attitude toward targets identified were importance of patient characteristics and perceived capability in using basic counseling skills.

Patient characteristics. Seventeen patient characteristics were evaluated on a unipolar scale as to importance in determining what is done in the counseling process, Question 1 on the questionnaire. Responses were scored from +1 (not important) to +7 (extremely important). The patient characteristics identified by the investigator through prior work experience and consultation with peers were: attitude toward medical condition, attitude toward nutrition, attitude toward diet, control of food purchasing and preparation, cultural food habits, educational level, emotional problems, interest in food purchasing and preparation, knowledge of diet, knowledge of medical condition, living conditions, management of resources, socioeconomic status, support of family and friends, use of misinformation, variety of food available in the community, and willingness to make changes.

Counseling skills. The use of counseling strategies may be influenced by the perceived counseling skills of the clinical dietitian. The counseling skills presented in Figure 2 were identified using a review of counseling literature and consultation with peers. For each skill the respondents were asked to indicate with approximately how many patients the skill was used, Question 3 on

1. Develop rapport with patient to make more comfortable and develop trust, e.g., talk about things other than diet, ask questions about family and occupation.

2. Communicate interest to the patient by:
   a. maintaining eye contact.
   b. showing empathy.
   c. speaking slowly and clearly.
   d. being relaxed.
   e. sitting or leaning forward slightly.
   f. expressing willingness to help.

3. Actively listen to the patient, encourage the patient and facilitate the counseling process by:
   a. using open-ended questions.
   b. using minimal encouragers, e.g., "MmHm."
   c. using paraphrasing or restatement, e.g., repeating what the person has just said.
   d. using reflection of feelings or affective responses, e.g., responding to feelings other than words.
   e. silence.

4. Use simple terms understood by the patient and in the vernacular to the patient.

5. Stress minimum number of essential points in the available time.

6. Present information in a concise, logical, and organized manner.

Figure 2. Counseling Skills Used in the Survey Questionnaire.

survey questionnaire, and to indicate how prepared (capable) they felt in using the skill, Question 4. Responses for skill level were scored from a -3 (extremely incapable) to +3 (extremely capable).

Three additional questions were asked not related to the independent and dependent variables in the model. An overall measure of perceived success in using counseling strategies was desired as well as information, in general, as to what factors and individuals dietitians felt influenced their counseling behavior. A seven-point bipolar scale was used to measure the success felt by clinical dietitians in completing the following activities: (a) assess what is needed to help the patient, (b) explain to the patient changes needed in the diet regimen, (c) explain to the patient information about the disease condition, (d) motivate and encourage the patient to follow the diet regimen, and (e) evaluate how well the patient is following the recommended diet regimen, Question 2 on the survey questionnaire. The responses were scored from a -3 (extremely unsuccessful) to +3 (extremely successful). Two open-ended questions were asked to obtain information concerning which individuals and which factors influence the use of counseling strategies, Questions 14 and 15.

Data Analysis and Reduction

The Statistical Analysis System (SAS Institute, 1982a,b) was used for frequency distributions, means, factor analysis, and regression analysis. Frequency distributions and means were generated for

descriptive purposes. Principal component factor analysis with varimax rotation was used for data reduction of external variables. Only factors with eigenvalues greater than one were rotated. Those variables with a factor loading of 0.40 or higher were retained as a single variable or in an index. Index reliability was not determined since all variables included in an index had a factor loading higher than 0.40. General linear regression models were used to identify the variables influencing preparedness, attitude, subjective norm, intention to use, and use of counseling strategies. For factor analysis and regression, all categorical variables were redefined as dummy variables and mean values were substituted for the missing values of all continuous variables.

V. DESCRIPTIVE DATA

This section includes a discussion of the frequencies, percentage distributions, and means for all variables measured as well as the perceived success in certain counseling activities and what individuals and factors, in general, influence the use of counseling strategies. Section VI will include a discussion of the correlations between variables and results of the regression models for preparedness, attitude toward behavior, subjective norm, intention, and use of the 20 counseling strategies.

External Variables

Demographic Characteristics

The demographic characteristics are summarized in Table 2. All respondents but one were female and the majority were Caucasian. About half (46%) were between 26 to 30 years of age and 68% were aged between 26 to 35 years. Six percent of the responding clinical dietitians had received basic dietetic training in programs emphasizing community dietetics or management. The major route of basic dietetic training was the Bachelor's degree + Internship and major program emphasis was generalist. Approximately one-third of the respondents held a Master's degree while only 16% obtained a Master's degree for entry into the profession.

About half of the respondents had between 1 to 6 years work experience in dietetics and about three-fourths had been employed

TABLE 2

DEMOGRAPHIC CHARACTERISTICS OF CLINICAL DIETITIANS

Characteristics	Number of Respondents	Percentage of Respondents
Gender		
Males	1	<.4
Females	281	99.6
Number of Respondents[a]	282	100
Age		
20 to 25	30	10.6
26 to 30	131	46.5
31 to 35	60	21.3
36 to 40	21	7.4
41 to 45	16	5.7
46 to 50	4	1.4
51 to 55	8	2.8
56 to 60	5	1.8
Over 61	7	2.5
Number of Respondents[a]	282	100
Ethnic Background		
Black	13	4.6
Caucasian	244	87.1
Hispanic	5	1.8
Oriental	13	4.6
Asian Indian	4	1.4
African	1	<.5
Number of Respondents[a]	280	100
Highest Degree Obtained		
Bachelor's Degree	192	68.1
Master's Degree	89	31.5
Doctorate	1	<.4
Number of Respondents[a]	282	100
Route of Dietetic Training		
Bachelor's--Coordinated Dietetics	41	14.5
Bachelor's + Internship	173	61.3
Bachelor's + Traineeship or Preplanned Work Experience	21	7.5
Internship + Master's	25	8.9
Master's + Work Experience	22	7.8
Number of Respondents[a]	282	100

TABLE 2 (Continued)

Characteristics	Number of Respondents	Percentage of Respondents
Emphasis of Dietetic Training		
Clinical Dietetics	87	30.9
Community Dietetics or Public Health Nutrition	8	2.8
Food Systems Management	8	2.8
Generalist	179	63.5
Number of Respondents[a]	282	100
Years Employed in Dietetics		
1 to 1.9 years	8	2.8
2 to 3.9 years	73	25.9
4 to 5.9 years	64	22.7
6 to 9.9 years	61	21.6
10 to 14.9 years	34	12.1
15 to 24.9 years	28	9.9
25 to 40 years	14	5.0
Number of Respondents[a]	282	100
Years Employed in Facility		
Less than 1 year	5	1.8
1 to 1.9 years	41	14.5
2 to 3.9 years	117	41.5
4 to 5.9 years	50	17.7
6 to 9.9 years	35	12.4
10 to 14.9 years	15	5.3
15 to 33 years	19	6.8
Number of Respondents[a]	282	100
Years Experience--Direct Patient Care		
None	10	3.5
1 to 1.9 years	19	6.8
2 to 3.9 years	95	33.8
4 to 5.9 years	71	25.3
6 to 9.9 years	50	17.8
10 to 14.9 years	18	6.4
15 to 39 years	18	6.4
Number of Respondents[a]	281	100

TABLE 2 (Continued)

Characteristics	Number of Respondents	Percentage of Respondents
Years Experience--Food Systems Administration		
None	190	67.6
Less than 1 year	10	3.6
1 to 1.9 years	33	11.8
2 to 3.9 years	24	8.5
4 to 5.9 years	11	3.9
6 to 19 years	13	4.6
Number of Respondents[a]	281	100
Years Experience--Outpatient		
None	184	65.5
Less than 1 year	5	1.8
1 to 1.9 years	28	10.0
2 to 3.9 years	31	11.0
4 to 5.9 years	22	7.8
6 to 20 years	11	3.9
Number of Respondents[a]	281	100
Years Experience--Research		
None	255	90.7
Less than 1 year	4	1.4
1 to 3.9 years	14	5.0
4 to 16 years	8	2.9
Number of Respondents[a]	281	100
Years Experience--Teaching		
None	134	47.9
Less than 1 year	6	2.1
1 to 1.9 years	28	10.0
2 to 3.9 years	53	18.9
4 to 5.9 years	30	10.7
6 to 9.9 years	17	6.1
10 to 29 years	12	4.3
Number of Respondents[a]	280	100

[a]Number of respondents varied due to missing data. Total N = 283.

in the facility between 1 to 6 years. Sixty-six percent had between 1 to 6 years experience providing direct patient care services. Twenty-five to 30% had between 1 to 6 years experience in management and outpatient care, 40% had between 1 to 6 years teaching, and less than 10% had any experience in research. Approximately 65% reported no experience in outpatient care or food systems administration, about 50% had no experience in teaching dietetics, and about 90% had no experience in research.

Situational Characteristics

The situational characteristics are presented in Table 3. Slightly more than half of the respondents (57%) interacted with between 10 to 30 patients daily, about half (49%) counseled between 1 and 4 patients daily, and 45% counseled between 5 and 15 patients daily. The average time spent counseling patients was about 45 minutes in the first session and about 25 minutes in the second and succeeding sessions. More than 90% of the respondents counseled patients over 30 years of age and half or more counseled patients requiring nutritional support or having medical conditions involving cardiovascular disorders, diabetes and obesity, or gastrointestinal disorders. The majority of respondents (86%) counseled patients in an acute care setting and less than half (44%) counseled patients in an outpatient clinic. In response to an open-ended question, "Where does counseling frequently occur?" 77% most frequently counseled patients in acute care settings and 22% most frequently counseled patients in outpatient clinics. The

TABLE 3

SITUATIONAL CHARACTERISTICS OF CLINICAL DIETITIANS

Characteristics	Number of Respondents	Percentage of Respondents
Number of Patients Interacted With Daily		
1 to 9 patients	47	16.8
10 to 19 patients	102	36.6
20 to 29 patients	57	20.4
30 to 49 patients	36	12.9
50 to 200 patients	37	13.3
Number of Respondents[a]	279	100
Number of Patients Counseled Daily		
1 to 4 patients	136	49.3
5 to 9 patients	89	32.3
10 to 14 patients	36	13.0
15 to 30 patients	15	5.4
Number of Respondents[a]	276	100
Average Time Counsel Patients-First Time		
10 to 25 minutes	34	12.2
30 to 40 minutes	87	31.2
45 to 55 minutes	72	25.8
60 to 120 minutes	86	30.8
Number of Respondents[a]	279	100

TABLE 3 (Continued)

Characteristics	Number of Respondents	Percentage of Respondents
Average Time Counsel Patients-Second Time		
Under 10 minutes	9	3.2
10 to 25 minutes	172	61.6
30 to 40 minutes	85	30.5
45 to 60 minutes	13	4.7
Number of Respondents[a]	279	100
Age of Patients Counseled[a]		
Children - 1 to 10 years	58	20.6
Adolescents - 11 to 18 years	86	30.6
Young Adults - 19 to 29 years	189	67.3
Adults - 30 to 59 years	261	92.9
Older Adults - 60 years and older	249	88.6
Number of Respondents[a]	281	[b]
Medical Condition of Patients Counseled[a]		
Allergies	29	10.4
Cardiovascular Disorders	170	60.7
Diabetes/Obesity	235	83.9
Gastrointestinal Disorders	138	49.3
Liver Disorders	97	34.6
Nutritional Support	142	50.4
Pregnancy and/or Lactation	43	15.4
Renal Disorders	99	35.4
Other: Alcoholism, Drug Abuse, Normal Nutrition, Orthopedic, GYN	23	8.2
Number of Respondents[a]	280	[b]

TABLE 3 (Continued)

Characteristics	Number of Respondents	Percentage of Respondents
Settings In Which Patients are Counseled[a]		
Acute Care Facility	241	85.7
Ambulatory Care - Outpatient Clinics	124	44.1
Long Term Care/Rehabiliation	21	7.5
Non-Institutional, i.e. Patient Home, Physician Office, Private Practice	11	3.9
Number of Respondents[a]	281	b

[a]Number of Respondents varied due to missing data. Total N = 283.

[b]Percentages do not add to 100 because respondents answered more than one category.

large number of respondents counseling patients in acute care settings was expected as the majority of dietetic internships are affiliated with acute care settings.

Attitude Toward Targets

The ratings of clinical dietitians regarding the importance of 17 patient characteristics in selecting strategies for use in counseling patients are summarized in Table 4. Eighty to 86% of the respondents rated attitude toward medical condition, attitude toward diet, and willingness to make changes as quite to extremely important. More than 60% rated management of resources, socioeconomic status, interest in food purchasing and preparation, and variety of foods available in the community as not important or slightly important. Even though socioeconomic status was not considered very important, 67% of the respondents considered educational level as quite to extremely important. Between 40% to 50% rated control of food purchasing and preparation, living conditions, support of family and friends, and use of misinformation as quite to extremely important. In summary, the most important patient characteristic was patient willingness to make changes, Mean = 2.36, and the least important was variety of foods available in the community, Mean = 0.76.

The ratings regarding how capable clinical dietitians felt in using 15 counseling skills are presented in Table 5. Over 50% of the respondents felt extremely capable in maintaining eye contact and expressing willingness to help while 42% felt extremely

TABLE 4

FREQUENCIES, PERCENTAGE DISTRIBUTIONS, MEANS, AND STANDARD DEVIATIONS FOR IMPORTANCE[a] OF PATIENT CHARACTERISTICS IN SELECTING COUNSELING STRATEGIES

Patient Characteristics	Slightly Important		Quite Important		Extremely Important		Mean	S.D.	N
	N	%	N	%	N	%			
Attitude Toward Medical Condition	41	14.6	107	38.1	119	42.4	2.17	0.87	281
Attitude Toward Nutrition	61	21.8	80	28.6	109	39.9	1.92	1.11	280
Attitude Toward Diet	40	14.2	95	33.8	130	46.3	2.19	0.92	281
Control of Food Purchasing and Preparation	72	25.6	99	35.2	42	14.9	1.33	1.15	281
Cultural Food Habits	69	24.6	103	36.7	65	23.1	1.62	1.10	281
Education Level	50	17.7	85	30.1	105	37.2	1.83	1.23	282
Emotional Problems	80	28.7	91	32.6	54	19.4	1.47	1.13	279
Interest in Food Purchasing and Preparation	95	33.9	80	28.6	25	8.9	1.09	1.10	280
Knowledge of diet	48	17.1	108	38.6	93	33.2	1.87	1.16	280
Knowledge of Medical Condition	78	27.9	101	36.1	51	18.2	1.52	1.05	280
Living Conditions	88	31.3	89	31.7	39	13.9	1.29	1.13	281
Management of Resources	88	31.7	64	23.0	28	10.1	.91	1.27	278
Socio-Economic Status	75	26.6	80	28.4	27	9.6	.94	1.29	282
Support of Family and Friends	78	27.8	82	29.2	60	21.3	1.44	1.18	281

TABLE 4 (Continued)

Patient Characteristics	Slightly Important N	Slightly Important %	Quite Important N	Quite Important %	Extremely Important N	Extremely Important %	Mean	S.D.	N
Use of Misinformation	85	30.6	86	30.9	42	15.1	1.28	1.19	278
Variety of Foods Available in the Community	82	29.2	49	17.4	31	11.0	.76	1.33	281
Willingness to Make Changes	30	10.8	89	31.9	151	54.1	2.36	0.86	279

S.D. = Standard Deviation.

N = Number of Respondents, Total N = 283.

[a]Importance scale ranged from -3 (Not Important) to +3 (Extremely Important). Only the Slightly to Extremely Important part of the scale is reported.

TABLE 5

FREQUENCIES, PERCENTAGE DISTRIBUTIONS, MEANS, AND STANDARD DEVIATIONS FOR CAPABILITY[a] OF CLINICAL DIETITIANS IN USING COUNSELING SKILLS

Counseling Skill	Slightly Capable		Quite Capable		Extremely Capable		Mean	S.D.	N
	N	%	N	%	N	%			
Develop rapport with patient	36	12.9	126	45.0	106	37.9	2.14	0.88	280
Communicate interest to patient by:									
-maintaining eye contact	27	9.6	100	35.5	148	52.5	2.37	0.79	282
-showing empathy	38	13.5	132	47.0	94	33.5	2.07	0.88	281
-speaking slowly and clearly	43	15.3	132	46.8	85	30.1	1.98	0.91	282
-having a relaxed body	49	17.4	127	45.0	84	29.8	1.95	0.93	282
-sitting or leaning forward slightly	35	12.4	115	40.8	111	39.4	2.10	0.98	282
-expressing willingness to help	24	8.5	104	36.8	149	52.8	2.40	0.74	282
Actively listen to patient, encourage patient, and facilitate counseling process by:									
-using open-ended questions	59	20.9	127	45.0	57	20.2	1.66	1.07	282
-using minimal encouragers	68	24.3	100	35.7	47	16.8	1.31	1.32	280
-using paraphrasing or restatement	74	26.2	115	40.8	48	17.0	1.47	1.21	282
-using reflection of feelings or affective responses	82	29.3	106	37.9	43	15.4	1.42	1.14	280
-silence	67	24.0	66	23.7	30	10.8	.65	1.59	279
Use Simple Terms	29	10.3	123	43.8	119	42.4	2.24	0.82	281
Stress Minimum number of essential points	44	15.7	111	39.5	97	34.5	1.93	1.11	281

TABLE 5 (Continued)

Counseling Skill	Slightly Capable N	Slightly Capable %	Quite Capable N	Quite Capable %	Extremely Capable N	Extremely Capable %	Mean	S.D.	N
Present information in a concise, logical, and organized manner	38	13.7	142	51.1	87	31.3	2.08	0.82	278

S.D. = Standard Deviation

N = Number of Respondents, Total N = 283.

[a]Capability scale ranged from -3 (Extremely Incapable) to +3 (Extremely Capable). Only the Slightly to Extremely Capable part of scale is reported.

capable using simple terms understood by the patient. More than 40% felt incapable using silence effectively in the counseling process. Seventy-five percent or more of the respondents felt quite to extremely capable using counseling skills to communicate interest and about 65% or less felt quite to extremely capable using facilitating counseling skills. Seventy-four percent felt quite to extremely capable stressing the minimum number of essential points in the time available. Generally, clinical dietitians felt least capable using counseling skills of a facilitating nature which places responsibility for patient involvement on the patient and most capable using counseling skills requiring active interaction with the patient.

Success in Counseling Activities

The perceived success in completing five general counseling activities is presented in Table 6. Respondents felt most successful explaining changes needed in the diet regimen and least successful in evaluating patient compliance to the diet regimen. More than 70% felt quite to extremely successful in completing three of the counseling activities: assessing patient needs, explaining diet changes, and explaining information about medical condition. Less than 46% felt quite to extremely successful motivating patients to follow diet regimens or evaluating patient compliance. The lack of success in motivating patients to follow a diet regimen may be associated with lack of facilitating counseling skills which places responsibility of following the diet regimen on the patient.

TABLE 6

FREQUENCIES, PERCENTAGE DISTRIBUTIONS, MEANS, AND STANDARD DEVIATIONS FOR SUCCESS FELT BY CLINICAL DIETITIANS IN COMPLETING FIVE GENERAL COUNSELING ACTIVITIES

Counseling Activity	Slightly Successful		Quite Successful		Extremely Successful		Mean	S.D.	N
	N	%	N	%	N	%			
Assess what is needed to help the patient	42	15.0	196	69.8	38	13.5	1.93	0.68	281
Explain to the patient changes needed in the diet regimen	21	7.5	197	70.6	56	20.1	2.07	0.69	279
Explain to the patient information about the disease condition	72	25.7	164	58.6	34	12.1	1.77	0.79	280
Motivate and encourage the patient to follow the diet	130	46.6	95	34.1	27	9.7	1.34	1.02	279
Evaluate how well the patient is following the recommended diet regimen	96	34.4	106	38.0	22	7.9	1.15	1.26	279

S.D. = Standard Deviation

N = Number of Respondents, Total N = 283.

[a]Success scale ranged from -3 (Extremely Unsuccessful) to +3 (Extremely Successful). Only the Slightly to Extremely Successful part of the scale is reported.

Individuals and Factors Influencing the Use of Counseling Strategies

Responses to two open-ended questions regarding what individuals other than patients and what factors influence the use of counseling strategies are summarized in Tables 7 and 8. Peers (other dietitians) and role models (who may or may not be dietitians) in training programs or workshops were noted by about 70% of the respondents as influencing the use of counseling strategies. Physicians, nurses, including nurse educators and clinicians, and patient's family or friends were each noted by 20% to 25% of the respondents.

The factors influencing the use of counseling strategies the most were patient characteristics and time. Over 90% of the respondents listed patient characteristics as influencing factors and approximately 40% listed time. Patient characteristics noted frequently were attitude, acceptance, interest and willingness to follow diet, and education. The results of these two questions supported the assumption that professional peers, i.e., dietitians, exert the most peer influence regarding counseling behavior and that patient characteristics were important factors in determining use of counseling strategies. Another strong influencing factor, time, was not investigated in this study but should be addressed in relationship to counseling behavior of clinical dietitians.

TABLE 7

INDIVIDUALS OTHER THAN PATIENTS INFLUENCING THE USE OF COUNSELING STRATEGIES

Individuals	Number of Respondents	Percentage of Respondents
Peers, i.e. other dietitians	98	39.4
Role models in training programs or workshops	77	30.9
Physicians	61	24.5
Patient's family or friends	51	20.5
Nurses, nurse educators, or nurse clinicians	50	20.1
Social workers, psychologists, or other members of health care team	33	13.3
Philosophy and expectations of superiors	14	5.6
Role model for or working with dietetic interns, medical students or interns	15	6.0
Other: past working relationships with health professionals, educational resource personnel, friends and relatives of dietitians, self trial and error	16	6.4
Number of Respondents	249	[a]

[a]Percentage does not add to 100 because respondents could list more than one answer.

N = 283.

TABLE 8

FACTORS INFLUENCING THE USE OF COUNSELING STRATEGIES

Factors		Number of Respondents	Percentage of Respondents
Patient Characteristics:		238	92.6
Age	14		
Attitude, acceptance, interest, and willingness to follow diet	73		
Attention span	4		
Economic	17		
Education	38		
Ethnic group	4		
Family support or presence of family members	16		
Feedback from patients	6		
Food habits	4		
Living conditions	9		
Mental state	5		
Motivation	16		
Physical condition	7		
Understanding of diet and medical condition	15		
Likelihood for compliance	10		
Time		101	39.3
Past experience for counseling, i.e. dietetic training and success with patient counseling		50	19.5
Reading, lectures, conferences		35	13.6
Attitude and support of dietary and the health care team		16	6.2
Availability of audiovisual materials		16	6.2
Workload		13	5.1
Disease state of patient and type of diet prescription, i.t. complexity, difficulty		13	5.1

TABLE 8 (Continued)

Factors	Number of Respondents	Percentage of Respondents
Counseling environment	10	3.9
Opportunity for follow-up	10	3.9
Dietary department policies and procedures	9	3.5
Role model for students	5	2.0
Appropriateness of diet, i.e. realistic goals	4	1.6
Rapport with patient	4	1.6
Number of Respondents	257	[a]

N = 283.

[a]Percentage does not add to 100 because respondents could list more than one answer.

Counseling Strategies

The counseling strategies identified in the nominal group process are given in Table D-1. Fifty-two strategies were grouped into five categories: assessment, educational, motivational, behavioral, and evaluation of patient compliance. The 20 strategies, four in each category, included in the survey instrument are presented in Table 9. The frequencies, percentage distributions, means, and standard deviations for preparedness, behavioral beliefs, attitude, subjective norm, intention and reported use of the counseling strategies are presented in Tables D-2 to D-7, and the means and standard deviations are summarized in Table 10. To simplify the discussion, in some cases, the number listed for each strategy in Table 9 will be used for reference purposes.

Preparedness to Use

According to the means for preparedness to use counseling strategies, Table 10, respondents felt most prepared obtaining an in-depth dietary history and teaching principles of the diet, specific foods, or restrictions and least prepared assisting patients in making non-food changes in life-style. Over 90% of the respondents were quite to extremely prepared using #1, #6, and #9. Sixty-eight percent or less were quite to extremely prepared using #5, #14, #16, and #18 (Table D-2). The strategies with the most variation in responses, standard deviation greater than 1.0, were #5, #14, #16, and #18. In general, respondents felt most prepared

TABLE 9

COUNSELING STRATEGIES USED IN THE SURVEY QUESTIONNAIRE

Category	Counseling Strategy Number	Counseling Strategy
Assessment	1.	Obtain an in-depth dietary history.
	2.	Identify environmental factors and cues affecting compliance.
	3.	Determine willingness or resistance of patient to follow the diet regimen.
	4.	Identify patient understanding of the relationship of diet and disease to the feeling of wellness.
Educational	5.	Use charts, pamphlets, audiovisual aids or computer assisted instruction to help explain the disease condition, physiologic condition, physiologic process or medication as well as relationship to nutrition.
	6.	Teach principles of the diet first, then discuss specific foods or restrictions.
	7.	Use questions periodically to determine areas that may be unclear.
	8.	Have patient plan a menu or a day's meals (without your help) that could be prepared at home.
Motivational	9.	Discuss ways in which the diet regimen can be worked into the life-style of the patient.
	10.	Show approval for or reward patient for following some part of the diet regardless of present nutritional status.

TABLE 9 (Continued)

Category	Counseling Strategy Number	Counseling Strategy
	11.	Help patient feel he/she can have some control over his/her own health, life, or eating.
	12.	Involve patient and significant other in identifying priority problems and changes needed to deal with those problems.
Behavioral	13.	Determine what part of the diet the patient can realistically follow and set goals with the patient for that part of the diet regimen.
	14.	Identify self-monitoring measures.
	15.	Identify measures to control the patient's eating environment.
	16.	Assist patient in making other (non-food) changes in his/her life that might have a direct effect on eating behavior.
Evaluation	17.	Monitor laboratory values.
	18.	Ask significant others, e.g. family member or friend, to what extent patient has been following the diet regimen and whether patient has talked about diet problems.
	19.	Determine from patient any problems following the diet.
	20.	Have patient keep a food record and/or obtain a 24-hour recall during visit and review with patient to identify examples of compliance and non-compliance.

TABLE 10

MEANS AND STANDARD DEVIATIONS FOR PREPAREDNESS, BEHAVIORAL BELIEFS, ATTITUDES, SUBJECTIVE NORM, INTENTION, AND REPORTED USE BY CLINICAL DIETITIANS OF 20 COUNSELING STRATEGIES

Counseling Strategy	Preparedness[a]		Behavioral Belief[b]		Attitude[c]		Subjective Norm[d]		Intention[e]		Reported Use[f]	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Assessment												
1.	2.46	0.70	3.48	4.05	2.04	0.97	4.41	3.79	1.89	1.43	3.61	1.07
2.	1.96	0.83	5.68	3.48	2.22	0.68	4.27	3.55	2.18	0.87	3.87	0.86
3.	2.08	0.74	6.60	4.24	2.47	0.65	5.03	3.80	2.56	0.64	4.42	0.67
4.	2.07	0.74	6.06	3.40	2.18	0.76	4.65	3.51	2.34	0.71	4.19	0.74
Educational												
5.	1.65	1.13	4.43	3.74	1.68	1.03	3.38	3.52	1.46	1.50	3.29	1.19
6.	2.44	0.61	6.09	3.57	2.29	0.77	4.39	3.54	2.38	0.75	4.30	0.76
7.	2.18	0.80	5.64	3.43	2.39	0.63	4.58	3.55	2.29	0.79	4.19	0.75
8.	2.19	0.82	5.66	3.70	2.05	0.90	3.78	3.40	1.43	1.29	3.07	1.05
Motivational												
9.	2.29	0.62	7.83	3.05	2.57	0.55	4.74	3.52	2.33	0.71	4.17	0.79
10.	1.89	0.98	5.29	3.26	1.97	0.97	2.99	3.34	1.89	1.07	3.62	1.07
11.	1.93	0.90	6.70	3.43	2.43	0.68	3.78	3.56	2.16	0.84	3.98	0.83
12.	1.88	0.94	5.52	3.19	2.20	0.70	3.72	3.50	1.87	0.98	3.47	0.93
Behavioral												
13.	2.14	0.76	7.21	3.45	2.29	0.81	4.31	3.50	2.20	0.83	3.92	0.85
14.	1.67	1.08	3.72	3.32	1.56	1.05	2.47	3.01	1.10	1.36	2.74	1.01
15.	1.80	0.88	3.79	2.87	1.73	0.90	2.86	3.21	1.46	1.17	3.04	0.91
16.	1.23	1.24	3.89	3.45	1.43	0.99	2.29	3.11	1.14	1.45	2.75	1.01
Evaluation												
17.	2.10	0.89	3.45	4.02	2.08	0.87	4.14	3.56	2.06	1.16	3.85	1.10
18.	1.59	1.15	2.59	3.38	1.26	1.19	2.50	3.05	1.05	1.51	2.79	1.00
19.	2.12	0.82	4.74	3.29	2.17	0.72	3.96	3.54	2.12	0.75	3.78	0.83
20.	2.21	0.84	4.54	3.60	1.93	1.02	3.44	3.46	1.37	1.38	2.99	1.12

[a]Preparedness scale ranged from -3 (Extremely Unprepared) to +3 (Extremely Prepared).

[b]Behavioral Belief score ranged from -12 (Extremely Unlikely) to +12 (Extremely Likely). Score was product of question 6 which measured strength of salient belief on scale ranging from -3 (Extremely Unlikely) to +3 (Extremely Likely) and of question 7 which measured certainty of counseling outcome on scale ranging from +1 (Not at All Certain) to +4 (Extremely Certain).

[c]Attitude scale from -3 (Extremely Undesirable) to +3 (Extremely Desirable).

[d]Subjective Norm score ranged from -9 (Extremely Unlikely) to +9 (Extremely Likely). Score was product of question 9 which measured perceived peer pressure to use a strategy on scale ranging from -3 (Extremely Unlikely) to +3 (Extremely Likely) and question 10 which measured motivation to comply with peers on scale ranging from -3 (Extremely Unlikely) to +3 (Extremely Likely).

[e]Intention scale ranged from -3 (Extremely Unlikely) to +3 (Extreme Likely).

[f]Reported Use scale ranged from +1 (none) to +4 (all patients).

using assessment and educational strategies and least prepared using behavioral strategies.

Behavioral Beliefs Toward Use

Behavioral belief was the product of the responses to how likely and how certain the use of a counseling strategy will increase patient compliance. The responses slightly to extremely likely and slightly to extremely certain are presented in Table D-3 and a summary of the means and standard deviations for the behavioral belief score are presented in Table 10. The strategies most likely to promote patient compliance were incorporating the diet regimen into the life-style of the patient and determining parts of the diet the patient can realistically follow. Eighty to 90% of the respondents felt these strategies were both quite to extremely likely and certain to promote patient compliance. About 50% or less felt that obtaining an in-depth dietary history, identifying self-monitoring measures, identifying measures to control eating environment, assisting patients in making non-food changes in life-style, monitoring lab values, and checking with significant others to what extent patient has been following the diet were both quite to extremely likely and certain to promote patient compliance. The strategy perceived least likely to promote patient compliance was asking significant others if patient has had problems following the diet. Strategies with a mean behavioral belief score between 6.00 and 7.00 were #3, #4, #6, and #11 indicating these strategies were

quite likely to promote patient compliance. In general, motivational strategies were rated as most likely to promote patient compliance and evaluation strategies were least likely to promote patient compliance.

Attitudes Toward Use

The attitudes of clinical dietitians, ratings slightly to extremely desirable, in using the 20 counseling strategies are given in Table D-4, and the means and standard deviations are summarized in Table 10. The most desirable strategy to use was discussing ways to work the diet regimen into life-style of the patient, Mean = 2.57, and the least desirable was checking with significant others regarding how well the patient was following the diet, Mean = 1.26. Between 90 to 95% of the respondents felt that #3, #6, #7, and #11 were quite to extremely desirable to use and between 50 to 70% felt that #5, #14, #15, and #16 were quite to extremely desirable to use. The strategies with largest variation in responses, standard deviation greater than 1.0, were #5, #14, #18, and #20. In general, the motivational strategies were the most desirable to use and the behavioral strategies were the least desirable.

Subjective Norm (Peer Influence)

The subjective norm (peer influence) was the product of responses to two questions: (a) How likely the Registered Dietitians you work with think you should use each strategy? and (b) How likely, generally speaking, you want to do what the Registered Dietitians you

work with think you should do? The ratings for slightly likely to extremely likely for both (a) and (b) are presented in Table D-5, and the means and standard deviations for subjective norm are summarized in Table 10. The strategy with highest subjective norm mean was determining willingness or resistance of patient to follow the diet and the strategy with the lowest subjective norm mean was assisting patient in making non-food changes in life-style of patient. Approximately 80% to 90% of the respondents rated both (a) and (b) quite to extremely likely for seven strategies: #2, #3, #4, #6, #7, #9, and #13. Approximately 50% or less of the respondents rated both (a) and (b) quite to extremely likely for three strategies: #14, #16, and #18. In general, the most peer pressure was felt for the use of assessment strategies and the least peer pressure was felt for the use of behavioral strategies.

Intention to Use

Ratings of the intention, slightly to extremely likely, of clinical dietitians to use the 20 counseling strategies are presented in Table D-6, and a summary of the means and standard deviations are presented in Table 10. In counseling patients, respondents intended most to determine willingness of patient to follow the diet, Mean = 2.56, and intended least to check with significant others as to problems patient has had following the diet, Mean = 1.05. Between 85% to 95% of the respondents rated intention as quite to extremely likely to use eight strategies: #2, #4, #6, #7, #9, #11, #13, and #19 and less than 50% rated intention

as quite to extremely likely to use three strategies: #14, #16, and #18. Generally, there was a high intention to use the assessment strategies and a low intention to use the behavioral strategies.

Behavior or Reported Use

Behavior was measured in terms of approximately how many patients a dietitian used a counseling strategy. Ratings of using the 20 counseling strategies with about half, more than half, or all patients are presented in Table D-7, and the means and standard deviations are summarized in Table 10. The strategy with the highest behavior mean was determining willingness or resistance of patient to follow the diet and the strategies with the lowest behavior mean were identifying self-monitoring measures and assisting patient in making non-food changes in life-style. Between 80% to 90% of the respondents used #4, #6, #7, and #9 in counseling more than half or all patients. Approximately 30% to 50% of the respondents counseled more than half or all patients using six strategies: #5, #8, #12, #15, #18, and #20. In general, the assessment strategies were used in counseling the most patients and the behavioral strategies were used with the least number of patients.

In summary, discussing ways to work the diet regimen into the life-style of the patient (#9) was rated the most likely to promote patient compliance, most desirable to use, and was rated high in peer pressure to use and intention to use. Strategy #3, determine willingness or resistance of patient to follow the diet regimen, had the highest rating in peer pressure to use, intention

to use, and reported use. The strategies receiving the lowest ratings overall were identifying self monitoring measures (#14), assisting patients in making non-food changes in life-style (#16), and determining from patient any problems following the diet (#18). Strategy #18 was rated least likely to promote patient compliance, least desirable to use, and lowest in intention to use. Strategy #16 was rated the least prepared to use and lowest in peer pressure to use and reported use. Strategy #14 was also rated the least prepared to use, lowest in reported use, less likely to promote patient compliance, and less desirable to use. Considering the strategies in categories, the behavioral strategies received the lowest rating for preparedness, desirability, peer pressure, intention to use, and reported use. Evaluation strategies were rated as least likely to promote patient compliance. Respondents seemed the most prepared using assessment and educational strategies. Motivational strategies were most likely to promote patient compliance and were the most desirable to use. However, assessment strategies had the highest peer pressure to use, highest intention to use, and were used with the most patients.

VI. RESULTS AND DISCUSSION

Inferences concerning the relationships among variables affecting counseling behavior were investigated using correlation and regression analyses. The four major areas addressed were: (a) data reduction of external variables, (b) correlations between the external variables, (c) bivariate correlations between external variables and dependent variables, and (d) variables influencing counseling behavior.

Data Reduction of External Variables

Factor analysis, a tool useful in identifying intercorrelations among measures of external variables and aiding in data reduction was used to reduce the 73 external variables into 24 single variable and multiple variable indices. Three factor analyses were conducted: (a) all external variables, (b) patient characteristics only, and (c) counseling skills only. The 21 factors that emerged from the factor analysis of all external variables as well as the factor analysis of both patient characteristics and counseling skills are presented in Table 11. Only variables with a factor loading of .40 or higher are presented. Variables loading together in a factor but intuitively different were kept as separate variables. When two dummy variables emerged in a factor and had high negative and positive factor loadings and when combined together would represent the majority of the population for that variable, an arbitrary decision was made to omit one. Variables involved included basic

TABLE 11

RESULTS OF FACTOR ANALYSIS OF EXTERNAL VARIABLES IDENTIFIED IN THE CONCEPTUAL MODEL WITH FACTOR LOADING ABOVE .40

Factors	Factor Loading[a]	Factor Loading[b]	Factor Loading[c]
Factor 1			
Develop rapport with patients[e]	0.46		0.35
Actively listen to patient by:			
Using open-end questions	0.60		0.57
Using minimal encouragers	0.76		0.81
Using paraphrasing or restatement	0.74		0.70
Using reflection of feelings or affective responses	0.63		0.59
Using silence	0.63		0.68
Factor 2			
Age	0.82		
Years employed in facility	0.90		
Years employed in dietetics	0.89		
Years employed as a clinical dietitian[e]	0.75		
Years experience--patient care	0.85		
Years experience--teaching	0.63		
Factor 3			
Control of food preparation and purchasing	0.67	0.73	
Cultural food habits	0.58	0.62	
Educational level	0.48	0.52	

TABLE 11 (Continued)

Factors	Factor Loading[a]	Factor Loading[b]	Factor Loading[c]
Emotional problems	0.56		0.52[f]
Interest in food preparation and purchasing	0.60	0.57	
Living conditions	0.76	0.62	
Management of resources[e]	0.77	0.56	0.56[f]
Socio-economic status	0.81	0.74	
Support of family and friends	0.51		0.71[f]
Use of misinformation	0.62		0.49[f]
Variety of food available in community	0.65	0.62	
Willingness to make changes			0.68[f]
Factor 4			
Dietetic program:			
Internship + Master's degree[d]	-0.57		
Master's degree + work experience[d]	-0.45		
Highest degree earned:			
Bachelor's degree[e]	0.94		
Master's degree	-0.94		
Factor 5			
Age of patient counseled:			
Children	0.82		
Adolescents	0.87		
Young adults	0.46		
Medical condition of patients counseled:			
Pregnancy and/or lactation	0.50		

TABLE 11 (Continued)

Factors	Factor Loading[a]	Factor Loading[b]	Factor Loading[c]
Factor 6			
Emphasis of basic dietetic program:			
Clinical dietetics[e]	-0.92		
Generalist	0.91		
Factor 7			
Medical condition of patients counseled:			
Allergies	0.49		
Cardiovascular disorders	0.46		
Diabetes/obesity	0.50		
Gastrointestinal disorders	0.81		
Liver disorders	0.75		
Nutritional support	0.43		
Factor 8			
Years experience--outpatient clinic	0.76		
Setting where patient counseled:			
Acute care facility	-0.72		
Ambulatory care--outpatient[e]	0.67		
Factor 9			
Patient characteristics:			
Attitude toward medical condition	0.66	0.58	
Attitude toward nutrition	0.78	0.83	
Attitude toward diet	0.74	0.81	

TABLE 11 (Continued)

Factors	Factor Loading[a]	Factor Loading[b]	Factor Loading[c]
Factor 10			
Years experience--food systems administration	0.49		
Setting where patient counseled:			
Long term/rehabilitation facility	0.78		
Factor 11			
Age patient counseled:			
Adults	0.76		
Older adults	0.60		
Factor 12			
Emphasis of basic dietetic program:			
Food systems administration[e]	0.72		
Factor 13			
Emphasis of basic dietetic program:			
Community dietetics or public health	0.81		
Factor 14			
Average number of patients interacted with daily	0.67		
Average number of patients counseled daily	0.66		

TABLE 11 (Continued)

Factors	Factor Loading[a]	Factor Loading[b]	Factor Loading[c]
Factor 15			
Communicate interest by:			
Maintaining eye contact	0.60		0.68
Showing empathy	0.46		0.59
Speaking slowly and clearly	0.62		0.67
Being relaxed	0.66		0.70
Sitting or leaning forward slightly	0.67		0.65
Expressing willingness to help	0.55		0.56
Actively listen to the patient by:			
Using reflection of feelings or affective responses[d]			0.45
Factor 16			
Basic dietetic program:			
Bachelor's + Traineeship or preplanned work experience	-0.72		
Bachelor's + Internship	0.41		
Factor 17			
Medical condition counseled:			
Renal disorders	0.81		
Factor 18			
Knowledge of diet	0.46	0.69	
Knowledge of medical condition	0.79	0.81	
Educational level[d]		0.41	

TABLE 11 (Continued)

Factors	Factor Loading[a]	Factor Loading[b]	Factor Loading[c]
Factor 19			
Using simple terms understood by the patient and in the vernacular to the patient	0.67		0.68
Stress minimum number of essential points in time available	0.64		0.75
Present information in a concise, logical, and organized manner	0.76		0.82
Communicate interest to the patient by: Expressing willingness to help[d]			0.43
Factor 20			
Basic dietetic program: Bachelor's--CUP[e]	0.77		
Bachelor's + Internship	-0.55		
Factor 21			
Basic dietetic program: Internship + Master's	-0.52		
Master's + work experience[e]	0.73		

[a]Loadings of factor analysis of all external variables, N=279.

[b]Loadings of factor analysis of patient characteristics only, N=283.

TABLE 11 (Continued)

[c]Loadings of factor analysis of counseling skills only, N=283.

[d]Variable loaded higher on another factor.

[e]Variable omitted.

[f]Represents loadings of a second factor for patient characteristics.

dietetic program, basic dietetic program emphasis, highest degree earned, and counseling setting. The identification of indices for patient characteristics and counseling skills was based on the factor analysis of each; however, for the most part the factor loadings were similar to those found in the factor analysis of all external variables. When a variable emerged in more than one factor with a loading higher than .40, it was retained in the factor with the highest loading and the resulting index. The redefined external variables and indices are presented in Table 12. The total index for each respondent was computed by summing responses to each variable in the index with missing data assigned the sample mean for each variable.

Correlations Between External Variables

The correlation matrix, means, and standard deviations for measures of the 24 redefined external variables are presented in Table 13. Variables significant at $p < .05$, $p < .01$, $p < .001$ are indicated and discussed as being correlated with the dependent variable. Since the intent was to identify the external variables that were significantly associated, those variables with correlations above .10, negative or positive, and were not significant will not be discussed. It is recognized that these variables are correlated but have a weaker association.

TABLE 12

REDEFINED EXTERNAL VARIABLES USED IN THE REGRESSION MODELS TO EXAMINE INFLUENCES ON THE COUNSELING BEHAVIOR OF CLINICAL DIETITIANS

Category	Variable Number	External Variables
Demographic Characteristics	1.	Age
	2.	Bachelor's + Internship Program[a]
	3.	Internship + Master's Program[a]
	4.	Generalist Emphasis[b]
	5.	Community Emphasis[b]
	6.	Master's Degree[c]
	7.	Work Experience Index: Years Employed in Facility Years Employed in Dietetics Years Experience-Direct Patient Care Years Experience-Teaching
	8.	Years Experience-Food Systems Administration
	9.	Years Experience-Outpatient
Situational Characteristics	10.	Patient Contact Index: Number of patients interacted with daily Number of patients counseled daily
	11.	Patient Age: A Index: Children Adolescents Young Adults
	12.	Patient Age: B Index: Adults Older Adults
	13.	Acute Care Facility[d]
	14.	Long Term Care/Rehabilitation Facility[d]
	15.	Medical Condition Index: Allergies Cardiovascular Disorders Diabetes-Obesity Gastrointestinal Disorders Liver Disorders Nutritional Support
	16.	Pregnancy and/or Lactation
	17.	Renal Disorders

TABLE 12 (Continued)

Category	Variable Number	External Variables and Indices
Attitude Toward Targets	18.	Patient Characteristics: Attitudes Index Attitudes toward medical condition Attitude toward nutrition Attitude toward diet
	19.	Patient Characteristics: Socio-cultural Index Control of food preparation and purchasing Cultural food habits Educational level Interest in food preparation and purchasing Living conditions Socio-economic status Variety of food available in the community
	20.	Patient Characteristics: Psychological Index Emotional problems Support of family and friends Use of misinformation Willingness to make changes
	21.	Patient Characteristics: Knowledge Index Knowledge of diet Knowledge of medical condition
	22.	Counseling Skills: Active Listening Index Use open-ended questions Use minimal encouragers Use paraphrasing or restatement Use reflection of feelings or affective responses Silence
	23.	Counseling Skills: Communicate Interest Index Maintain eye contact Show empathy Speak slowly and clearly Be relaxed

TABLE 12 (Continued)

Category	Variable Number	External Variables and Indices
		Sit or lean forward slightly
		Express willingness to help
	24.	Counseling Skills: Organization Index
		Use simple terms understood by the patient
		Stress minimum number of essential points
		Present information in a concise, logical, and organized manner

[a]Measure of Basic Dietetic Program.

[b]Measure of Basic Dietetic Program Emphasis.

[c]Measure of Highest Degree Earned.

[d]Measure of Setting Where Patients Are Counseled.

TABLE 13

CORRELATION MATRIX, MEANS, AND STANDARD DEVIATIONS OF 24 EXTERNAL VARIABLES USED IN THE REGRESSION MODELS TO EXAMINE INFLUENCES ON THE COUNSELING BEHAVIOR OF CLINICAL DIETITIANS

Variable	Demographic Characteristics									Situational Characteristics								Attitude Toward Targets						Mean	S.D.
	X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}	X_{11}	X_{12}	X_{13}	X_{14}	X_{15}	X_{16}	X_{17}	X_{18}	X_{19}	X_{20}	X_{21}	X_{22}	X_{23}		
X_1																								2.90	1.76
X_2	.16**																							.61	.49
X_3	-.07	-.39***																						.09	.29
X_4	.04	.38***	-.18**																					.64	.48
X_5	.03	-.17**	-.05	-.23***																				.03	.17
X_6	.04	-.28***	.41***	-.07	.07																			.32	.47
X_7	.81***	.24***	-.08	.14	-.04	-.02																		20.68	17.84
X_8	.47***	.07	.01	.11	.09	-.02	.40***																	1.03	2.61
X_9	.37***	.06	.03	-.06	.01	.04	.22***	.04																1.15	2.54
X_{10}	.05	-.03	.01	-.08	-.10	.01	.03	.14*	-.08															30.49	25.38
X_{11}	.11	-.03	-.01	.09	.09	.02	.09	.08	.10	-.14*														1.19	1.04
X_{12}	-.06	.06	-.04	.06	.07	-.15**	-.06	-.02	-.09	-.02	.03													1.82	.47
X_{13}	-.26***	-.01	-.02	.09	-.05	-.09	-.11	-.26**	-.48**	-.06	-.11	.06												.86	.35
X_{14}	.08	.06	.01	.10	-.05	-.11	.14*	.22***	-.09	.09	-.01	.05	-.12*											.07	.26
X_{15}	-.08	.03	-.08	.04	.06	-.15**	-.12*	-.02	-.11	-.03	.01	.24***	.17**	-.03										2.89	1.62
X_{16}	.05	.03	-.03	.07	-.01	-.06	-.00	.00	.12*	-.11	.29***	-.03	-.16**	-.08	.03									.15	.36
X_{17}	-.11	-.07	-.02	.01	.01	-.04	-.09	-.05	-.05	-.03	.11	.04	.11	-.04	.20***	-.09								.35	.48
X_{18}	.09	.04	.12*	-.02	-.01	.02	.06	-.02	.03	-.05	-.04	-.03	.07	-.06	.04	-.06	.00							6.29	2.34
X_{19}	.11	.08	-.04	.07	-.04	.02	.08	-.01	-.00	-.02	-.03	-.03	.08	-.05	.08	.07	.10	.38***							8.88	5.76
X_{20}	.16**	.10	.02	.02	.04	.04	.12*	.08	.10	.01	.02	-.06	-.01	.03	.01	.02	.09	.34***	.58***					6.54	3.13
X_{21}	.01	.08	-.02	.00	-.07	-.04	.02	-.08	.03	-.09	-.03	-.05	.11	-.09	-.09	.00	.09	.37***	.45***	.35***				3.38	1.88
X_{22}	.02	.05	-.13	.02	.04	-.05	.01	-.01	.04	-.07	-.01	-.03	-.04	-.02	.11	.05	.08	.22***	.26***	.35**	.27***			12.87	3.65
X_{23}	-.15**	-.02	-.03	.03	.13*	.02	-.10	-.13*	.07	-.04	.04	-.01	.02	-.07	.12*	.05	.05	.16**	.12*	.25***	.16**	.57***		6.54	4.71
X_{24}	-.00	-.02	-.01	.05	.08	-.01	.03	.01	.09	-.04	-.08	-.11	-.00	.03	.05	-.02	-.02	.23***	.11	.25***	.20***	.52***	.50**	6.25	2.28

[a]Variable numbers correspond to variables listed in Table 12.

*Significant at .05 level.

**Significant at .01 level.

**Significant at .001 level.

N = 283.

Demographic Characteristics

Younger respondents were significantly associated with counseling patients in acute care settings, r=-.26, and feeling prepared in using the counseling skills to communicate interest, r=-.15. Older respondents were correlated with basic dietetic training in a Bachelor's + Internship program, r=.16, experience index, r=.81, experience in food systems administration, r=.47, experience in outpatient care, r =.37, and with rating patient psychological characteristics as important in selecting counseling strategies, r=.16. Respondents trained in Bachelor's + Internship programs were positively associated with the generalist emphasis, r=.38, work experience in dietetics, r=.24, and negatively associated with the Master's degree as highest degree earned, r=-.28. Whereas, those trained in Internship + Master's programs were negatively associated with program emphases other than generalist, r=-.18, and positively associated rating patient attitudes toward diet and medical conditions as important in selecting counseling strategies, r=.12. Trainees of basic dietetic programs with a community emphasis were correlated with capability in using counseling skills to communicate interest, r=.14, indicating they felt more capable using active participation counseling skills than trainees in the generalist, clinical nutrition, or food systems administration emphasis. Respondents who obtained a Master's degree as the highest degree earned were associated less with counseling adults and older adults, r=-.15, and less with counseling patients with such medical conditions as allergies,

cardiovascular disorders, gastrointestinal disorders, diabetes, obesity, liver disorders, or needing nutritional support, r=-.15, than those who obtained a Bachelor's degree as highest degree.

Increased experience in facility where employed, in dietetics, and in teaching, was associated with more experience in outpatient care, r=.22, and food systems administration, r=.40, and with counseling patients in long term/rehabilitation facilities, r=.14, and rating patient psychological characteristics as important in selecting counseling strategies, r=.12. They were less likely to counsel patients on medical conditions included in the medical condition index, r=-.12. Respondents with more experience in food systems administration were associated with more patient contact, r=.14, and counseling patients more in long term/rehabilitation facilities, r=.22, than in acute care facilities, r=-.26, and with less capability in using counseling skills to communicate interest, r=-.13. On the other hand, more experience in outpatient care was associated with counseling patients who were pregnant and/or lactating, r=.12, and counseling patients in settings other than acute care facilities, r=-.48.

Situational Characteristics

The patient contact index was negatively correlated with counseling children, adolescents, and young adults, r=-.14. This indicates that respondents had less interaction with and counseled fewer children, adolescents, and young adults. The condition,

pregnancy and/or lactation, was associated more with younger age groups counseled, i.e., adolescents and younger adults, r=.29. Adults and older adults counseled were associated more with the medical conditions included in the medical condition index, r=.24. Respondents counseling patients with medical conditions included in the index were more likely to counsel patients in an acute care facility, r=.17, felt more prepared using the counseling skills to communicate interest, r=.12, and were less likely to counsel patients with renal disorders, r=.20. Respondents counseling patients in acute care facilities were less likely to counsel patients in long-term rehabilitation facilities, r=.12, and were less likely to counsel pregnant and lactating patients, r=.16.

Attitude Toward Targets

The four indices representing importance of patient characteristics and three indices representing capability in using counseling skills were all significantly intercorrelated but two, r=.12 to r=.58. The two indices not significantly associated were socio-cultural patient characteristics and organization counseling skills. The more important patient characteristics were rated in selecting counseling strategies, the more prepared respondents felt in using all the counseling skills, r=.11 to r=.37. Also, the more prepared they felt in using counseling skills in one index the more capable they felt in using counseling skills in the other two indices, r=.50 to r=.57.

Bivariate Correlations Between External and Dependent Variables

Twenty-four measurements (Table 12, page 102) representing 64 external variables were entered into correlation models for preparedness attitude, subjective norm, intention, and reported use of the 20 counseling strategies. The bivariate correlation coefficients are presented in Tables E-1 to E-5. Those correlations significant at $p < .05$, $p < .01$, and $p < .001$ are indicated. The bivariate correlations are important only to note significant trends. The magnitude of the bivariate correlations, generally, was not very high between the demographic or situational characteristics and the dependent variables. Correlations tended to be less than .20 with majority less than .06 indicating a weak association. However, the magnitude of the bivariate correlations between the indices for importance of patient characteristics or capability in using counseling skills and the dependent variables were generally high. Approximately 60% of the correlations were between .15 and .50 of which 50% were between .20 and .50 indicating a strong direct association.

Variables Influencing Counseling Behavior

Multiple regression was employed to examine the influences of more than one independent variable on a dependent variable. Regression "explains" a single known, explained, and measured dependent variable through the independent variables (Neter and Wasserman, 1974).

The procedure allows the researcher to control for an independent variable while examining the affect of other independent variables. An advantage is its ability to yield quantitative estimates of the relationships between the dependent variable and each of several independent variables if such relationships are statistically significant. The estimated coefficient for an independent variable is interpreted as the quantitative change in the dependent variable per unit change in the independent variable, while all other independent variables held constant.

Regression infers a causal model, however, causal order cannot be indicated. Since the study was cross-sectional, no evidence is available to verify that the assumed causal order is correct. Time-series data are needed to test causal order. Any causal effects are discussed as the relative affect or influence of the independent variable on the dependent variable. The findings can only be suggestive and do not represent cause-and-effect.

A full regression model for each counseling strategy was used to examine the cumulative affect of the interdependent (external) variables. The best indication of the cumulative affect of a large set of independent variables in regression analysis is the multiple coefficient of determination, R^2. The R^2 expresses the amount of variation in the dependent variable explained by the independent variable. It can be interpreted as the percentage of the total variation in the dependent variable accounted for by the independent variables (Kerlinger & Pedhazur, 1973).

The standardized regression coefficients (beta weights) and multiple coefficients of determinants (R^2) of the models for preparedness, attitude, subjective norm, intention, and reported use of the twenty counseling strategies are presented in Tables F-1 to F-5. Standardized regression coefficients are the best indicator of the relative importance of each independent variable (Kerlinger & Pedhauzer, 1973). All variables with beta weights significant at $p < .05$, $p < .01$, and $p < .001$ are indicated. Variables related to the counseling behavior of clinical dietitians are discussed in terms of the significant influence of each independent variable on preparedness, attitude, subjective norm, intention to use, and reported use of the counseling strategies. The independent variables were defined as the external variables, i.e., demographic characteristics, situational characteristics, and attitude toward targets, and one or more of the dependent variables depending on the regression model.

Mean standardized regression coefficients greater than .10 between components of the conceptualized model for all counseling strategies and categories of counseling strategies are presented in Figures 3-8. It is recognized that the mean beta coefficients present only suggestive findings and represent an average general direction, but averaging does provide a mechanism to discuss the data in a summary fashion.

Demographic Characteristics

The influences of demographic characteristics were measured using eight single variables and one multiple variable index. These

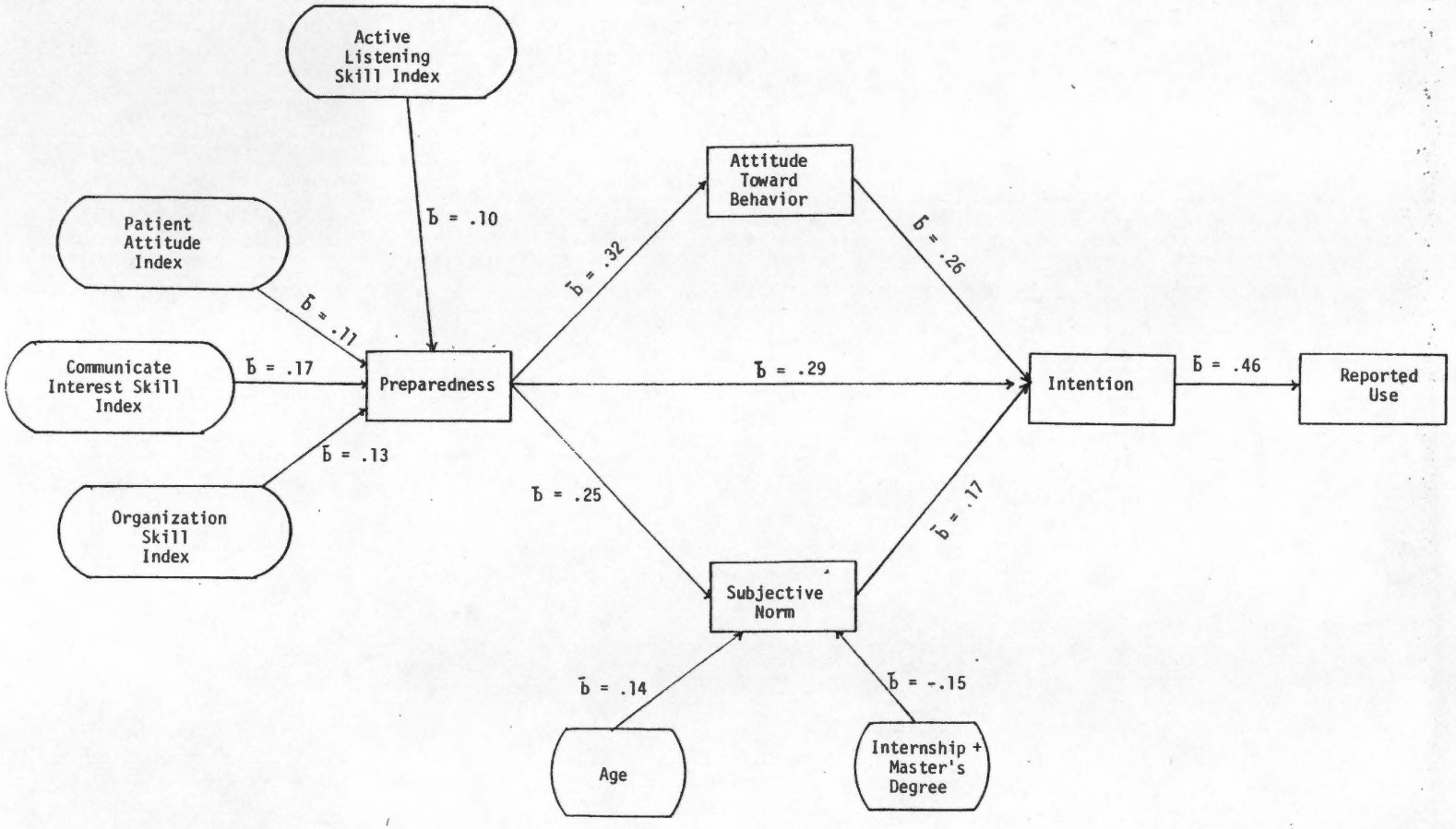


Figure 3. Mean Standardized Regression Coefficients ($\bar{b}$) Above .10 Between Components of the Conceptualized Model for the 20 Counseling Strategies.

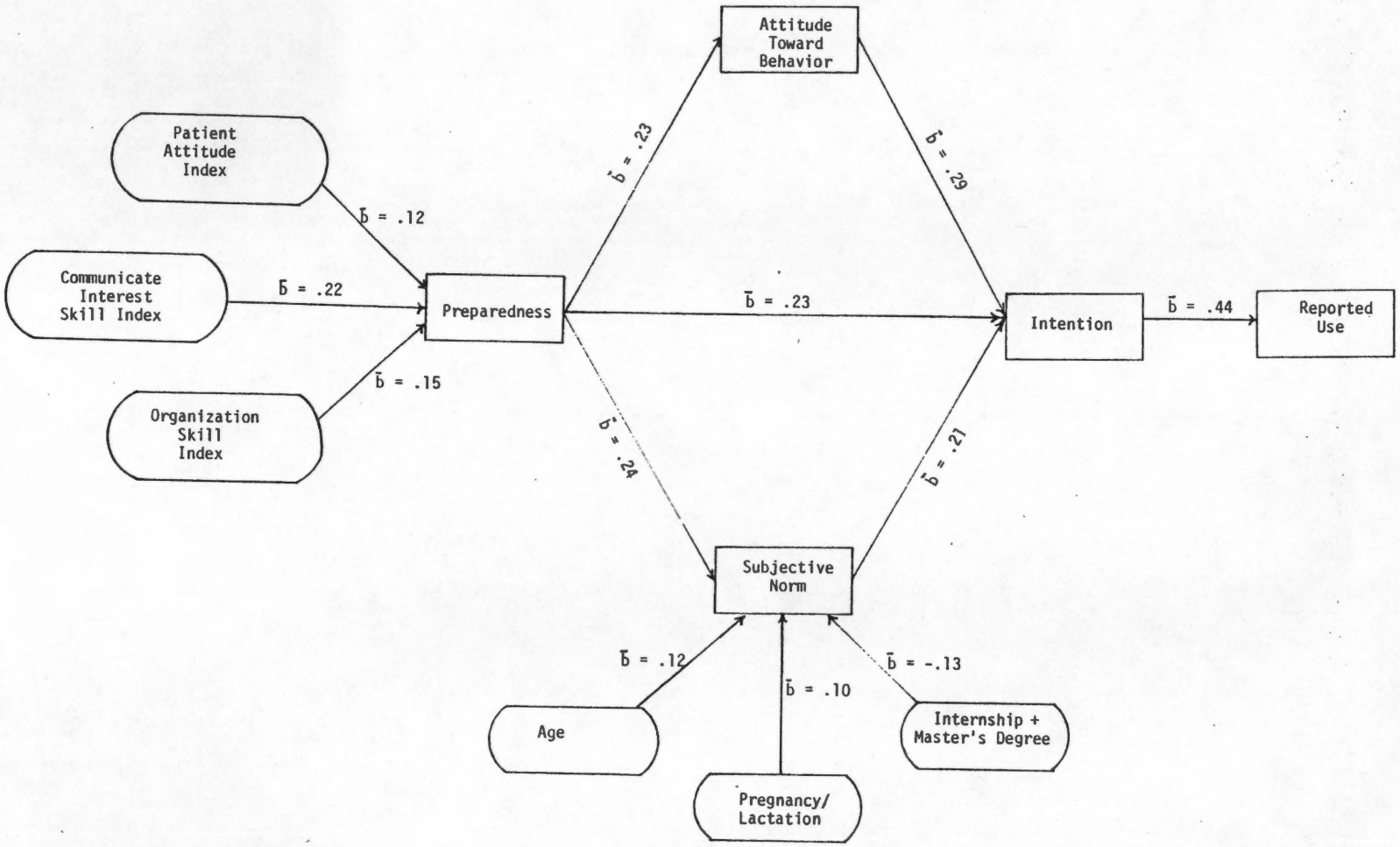


Figure 4. Mean Standardized Regression Coefficients (b) Above .10 Between Components of the Conceptualized Model for the Four Assessment Counseling Strategies.

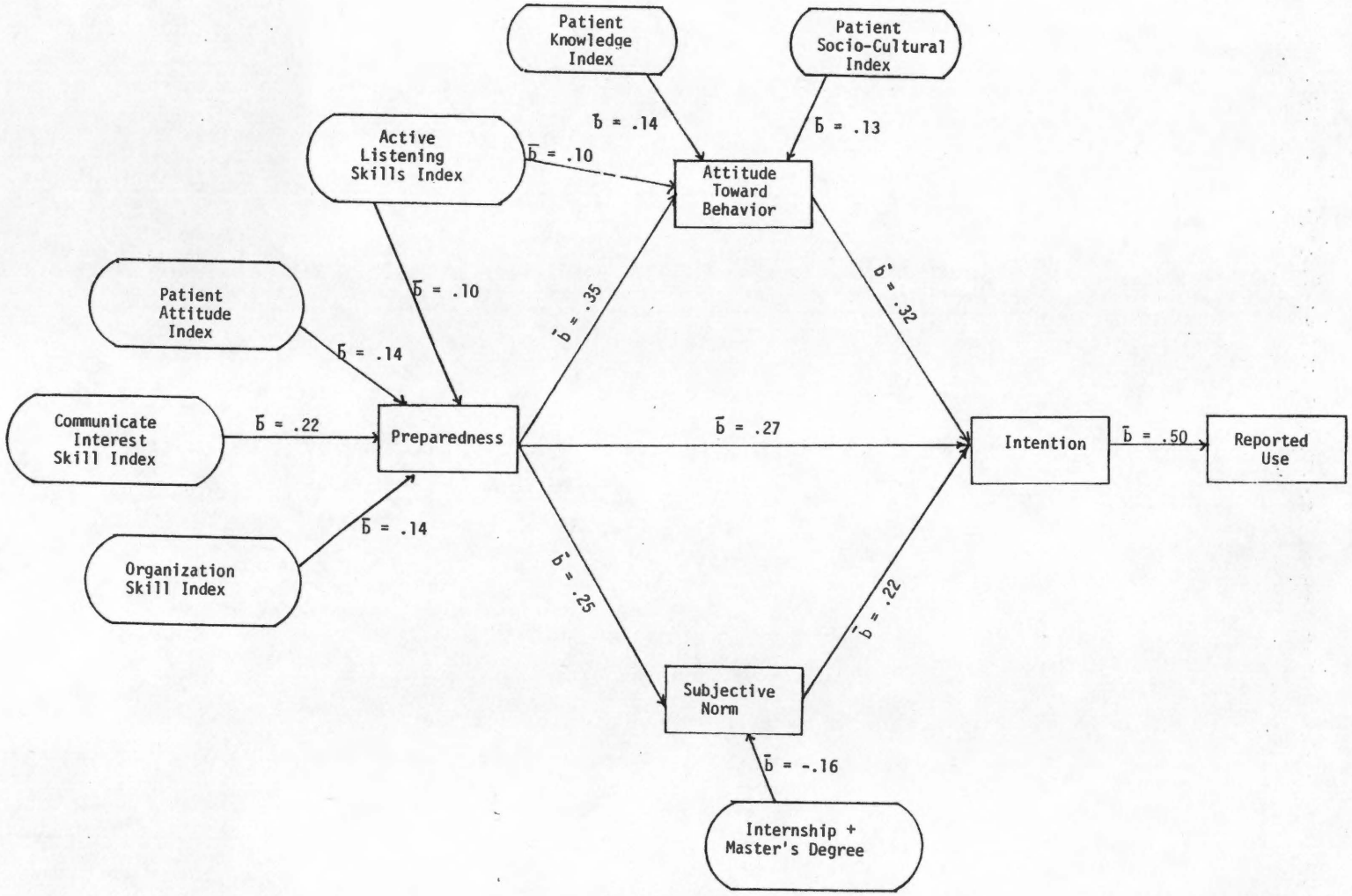


Figure 5. Mean Standardized Regression Coefficients (b) Above .10 Between Components of the Conceptualized Model for the Four Educational Counseling Strategies.

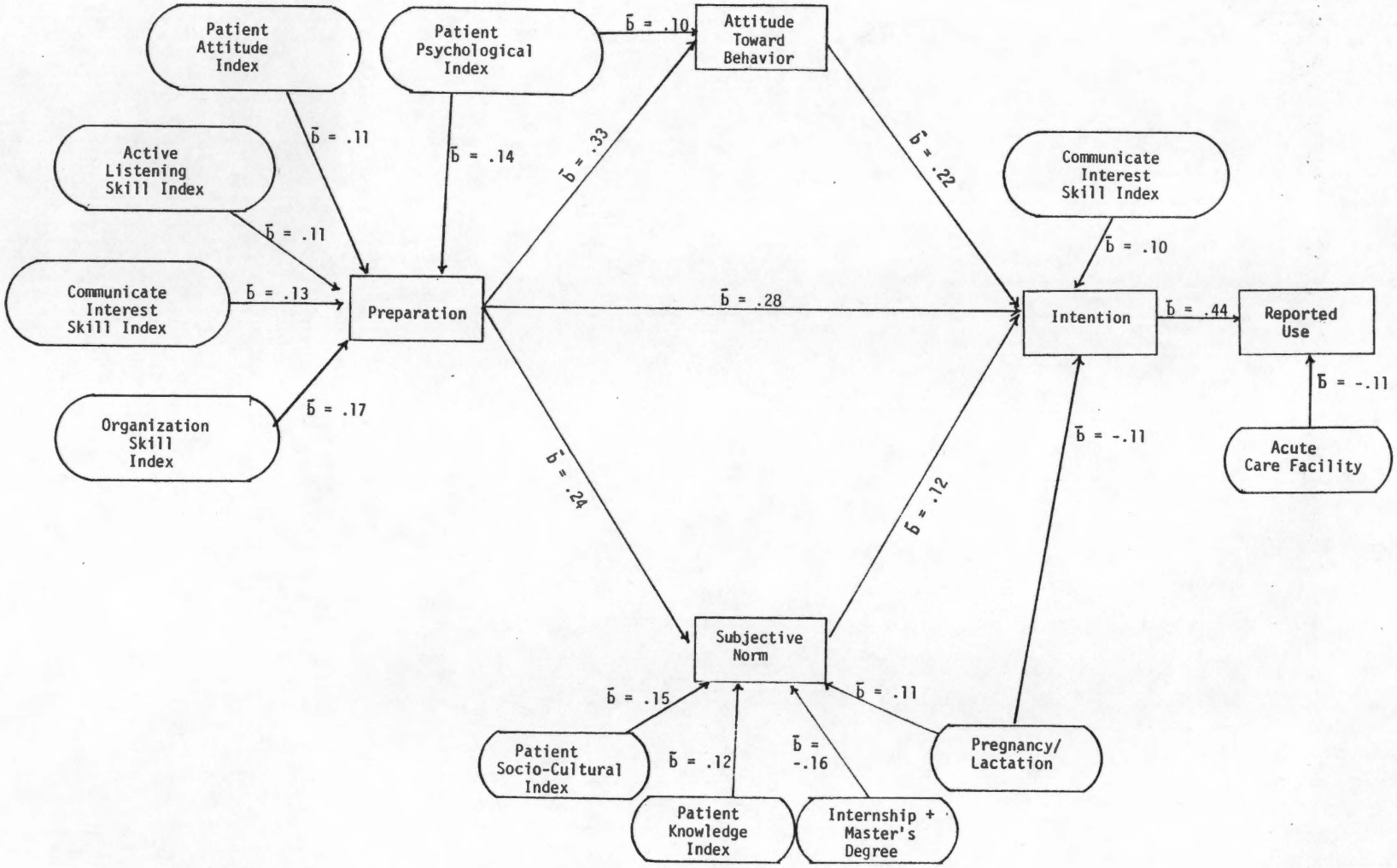


Figure 6. Mean Standardized Regression Coefficients (b) Above .10 Between Components of the Conceptualized Model for the Four Motivational Counseling Strategies.

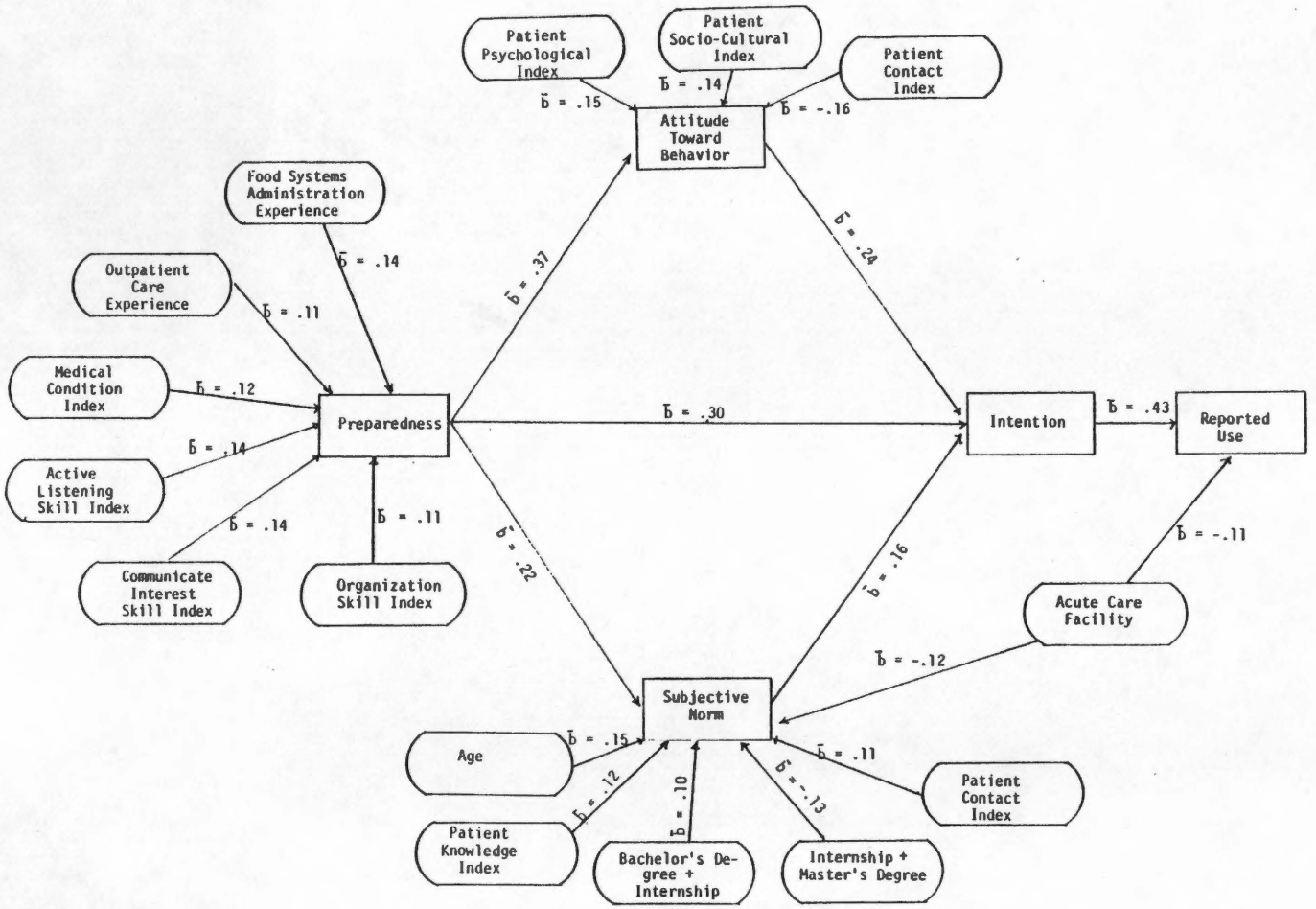


Figure 7. Mean Standardized Regression Coefficients (b) Above .10 Between Components of the Conceptualized Model for the Four Behavioral Counseling Strategies.

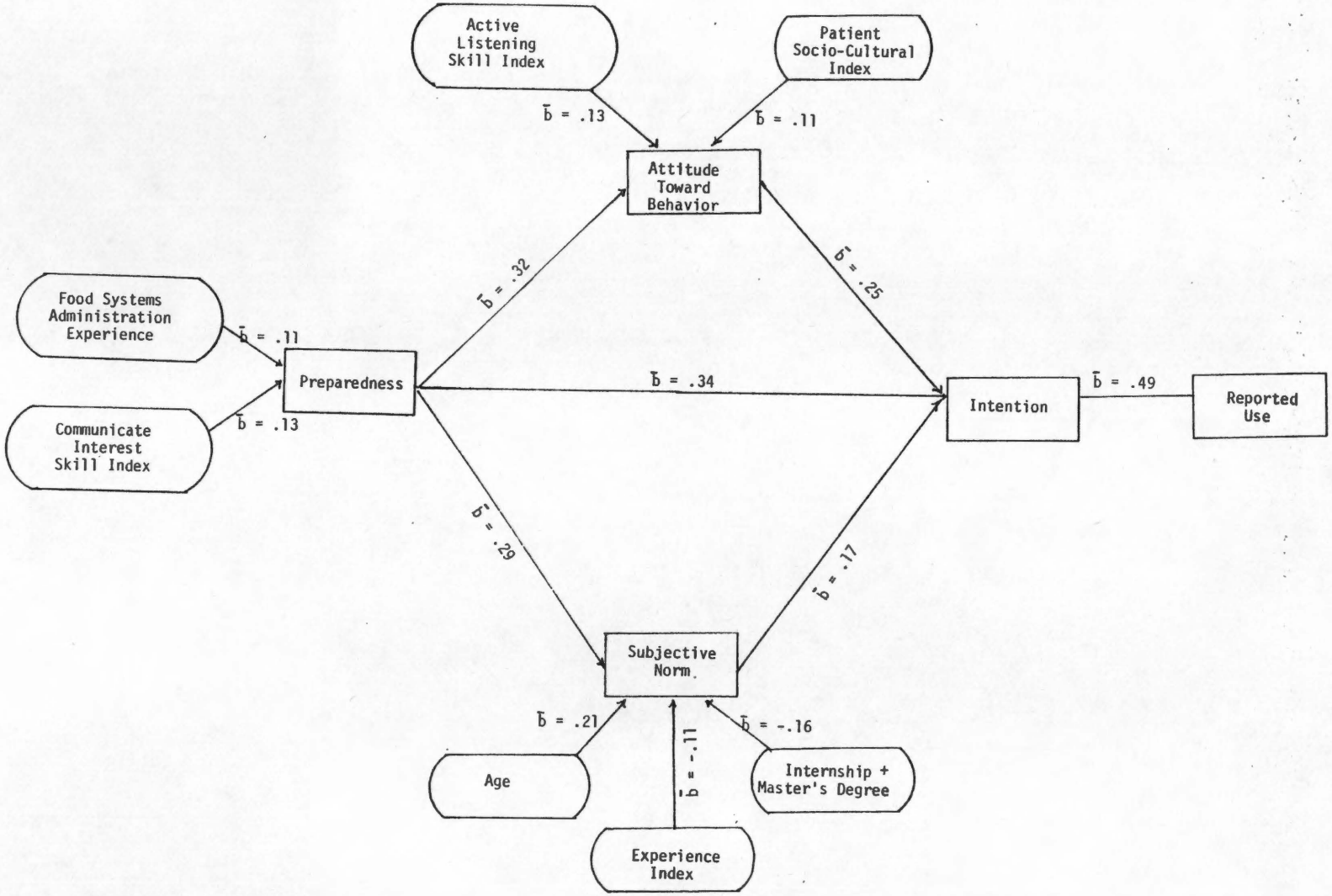


Figure 8. Mean Standardized Regression Coefficients (b) Above .10 Between Components of the Conceptualized Model for the Four Evaluation Strategies.

measurements included age of respondent; two basic dietetic program variables, Bachelor's + Internship and Internship + Master's; two basic dietetic program emphasis variables, generalist and community; Master's degree, representing the highest degree earned; years experience in food systems administration; and years experience in outpatient care; and an Experience Index representing years employed in facility, years employed in dietetics, years experience in direct patient care, and years experience in teaching.

Age. Age of respondent did not significantly influence preparedness, attitude, intention to use, or reported use of the counseling strategies. Age did negatively influence preparedness to use #18; moderately influenced the attitude toward use of #17; slightly to moderately influenced the subjective norm toward use of #8, #16, and #17; and relatively influenced the reported use of two strategies, #8 and #14, Tables F-1 to F-5. When the beta weights were averaged across counseling strategies, age slightly influenced the subjective norm of all counseling strategies, $\bar{b}$=.14, Figure 3. The mean for subjective norm toward use of assessment strategies, behavioral strategies, and evaluation strategies was above .12, Figures 4, 7, and 8.

Basic dietetic program. The Bachelor's + Internship program did not significantly influence preparedness to use any of the strategies, but did slightly influence attitude to use #3 and #13, subjective norm to use #8, intention to use #7 and #8; and negatively influenced the reported use of #11, Tables F-1 to F-5. In

contrast, the Internship + Master's program did not significantly influence preparedness or attitude to use any of the strategies, but slightly influenced intention to use #7 and the reported use of #2, and negatively influenced the subjective norm to use all the counseling strategies. The negative beta coefficients for the subjective norm indicated that graduates of an Internship + Master's program perceived less peer pressure to use a counseling strategy than graduates from other programs, i.e., Bachelor's + Internship, Bachelor's + Traineeship, Bachelor's--Coordinated Dietetic Program (CUP), or Master's + Work Experience. All strategies but four, #1, #2, #14, and #16, were significantly influenced by the Internship + Master's program indicating that the Internship + Master's program had less influence on assessment and behavioral strategies.

When the beta coefficients were averaged across counseling strategies, the Bachelor's Degree + Internship positively influenced subjective norm slightly toward use of behavioral strategies, $\bar{b}$=.10. The Internship + Master's Degree negatively influenced subjective norm toward use of all strategies, $\bar{b}$=-.15; use of assessment strategies, $\bar{b}$=-.13; use of behavioral strategies, $\bar{b}$=-.13; use of motivational counseling strategies, $\bar{b}$=-.16; and, use of evaluation strategies, $\bar{b}$=-.16, Figures 3-8. Since both Bachelor's + Internship and Internship + Master's are only two programs out of five possible dietetic programs, caution must be taken in interpreting these results. Realistically, further study is needed to identify the influence of the different basic dietetic programs on the dependent variables, especially subjective norm.

Basic dietetic program emphasis. The variables for basic program emphasis, generalist and community, did not significantly influence any of the dependent variables. The negative beta coefficients indicate that the preparedness, attitude, subjective norm, intention to use, and reported use of a strategy is less for either the generalist or community emphasis than other program emphases, Tables F-1 to F-5. The generalist emphasis did not significantly influence any of the strategies for preparedness, slightly influenced attitude to use #9, negatively influenced subjective norm to use #8 and intention to use #20, and slightly influenced reported use of #2 and #11.

The community emphasis negatively influenced preparedness to use #11, #16, and #18; negatively influenced intention to use #5 and #20; slightly influenced subjective norm to use #11 and #15; slightly influenced reported use of #11; and did not significantly influence attitude toward any strategy. The preparedness, subjective norm, and reported use of #11 was influenced more by the community emphasis than other program emphases, i.e., clinical dietetics, food systems administration, or generalist. As with basic dietetic program, caution must be used in interpreting the influence of the generalist or community emphasis. However, since neither program significantly influenced a group of strategies, further study is not recommended.

Highest degree earned. Like age, basic dietetic program, and basic dietetic program emphasis, the Master's Degree variable

representing the highest degree did not significantly influence the dependent variables. Obtaining a Master's degree did negatively influence preparedness to use and attitude toward use of #7, slightly affected subjective norm toward use of #5, did not significantly affect intention to use any strategy, and slightly affected reported use of #8 and #18, Tables F-1 to F-5.

Work experience in dietetics. The experience index did not significantly influence preparedness, attitude, or intention to use any counseling strategy, but did negatively influence subjective norm to use #17, and strongly affected the reported use of #8, Tables F-1 to F-5. When the beta coefficients were averaged across counseling strategies, the experience index slightly influenced the evaluation strategies, $\bar{b}$=-.11, Figure 8.

Experience in food systems administration moderately influenced the preparedness to use #15 and #18, and slightly reported use of #10, Tables F-1 to F-5. It did not significantly influence attitude, subjective norm, or intention to use any counseling strategy. When beta coefficients were averaged across counseling strategies, experience in food systems administration slightly influenced preparedness to use the behavioral strategies, and evaluation strategies, $\bar{b}$=.14 and $\bar{b}$=.11, Figures 7 and 8.

Experience in Outpatient Care slightly affected preparedness to use three strategies, #6, #13, and #16; negatively affected preparedness to use two strategies, #8 and #20; and slightly affected subjective norm to use #20 and reported use of #1, Tables F-1 to

F-5. The index did not significantly influence attitude or intention to use any of the counseling strategies. Of the three measurements of experience, outpatient care had the most influence, significantly affecting preparedness to use two educational, two behavioral, and one evaluation strategy. Overall, experience in outpatient care had a slight influence on preparedness to use behavioral counseling strategies, $\bar{b}$=.11, Figure 7.

In summary, the demographic characteristics had little influence on the preparedness, attitude, subjective norm, intention, or reported use of counseling strategies. Older respondents were more likely to be influenced by peer pressure toward the use of most strategies, especially the assessment, behavioral, and evaluation strategies. Respondents who had completed an Internship + Master's program indicated that peer influence was less likely to influence the use of most strategies, especially the assessment, behavioral, motivational, and evaluation strategies. Low beta weights and a mixed pattern of positive and negative beta coefficients indicated a weak, unstable relationship between the demographic characteristics and the dependent variables, with the exception of age and Master's + Internship program on subjective norm.

Situational Characteristics

The influence of situational characteristics on the dependent variables was measured using four indices and four single variables. The variables were the Patient Contact Index, Patient Age-A Index,

Patient Age-B Index, acute care facility, long term/rehabilitation facility, Medical Condition Index, pregnancy and/or lactation, and renal disorders. As with the demographic characteristics, situational characteristics did not, generally, significantly influence the dependent variables.

Patient contact. The Patient Contact Index slightly influenced preparedness to use #5 and negatively influenced preparedness to use #10; negatively influenced attitude to use #13, #15, and #16; and slightly influenced subjective norm to use #8, #14, #15, and #18. The index negatively influenced intention to use #1 and weakly influenced reported use of #17, Tables F-1 to F-5. When beta coefficients were averaged across counseling strategies, the Patient Contact Index negatively influenced attitude and positively influenced subjective norm toward use of behavioral strategies slightly, $\bar{b}$=-.16 and $\bar{b}$=.11, Figure 7, page 117.

Age and medical condition of patients counseled. Patient age and medical condition had little influence on the dependent variables. The Age-A Index representing children, adolescents, and young adults negatively influenced preparedness to use #3, slightly influenced the attitude toward use of #10, negatively influenced intention to use #17, and negatively influenced reported use of #3 and #20. Subjective norm was not significantly influenced toward the use of any of the strategies, Tables F-1 to F-5. The Age-B

Index representing adults and older adults slightly influenced preparedness to use #9, negatively influenced attitude toward use of #7, slightly influenced intention to use #9, and slightly influenced reported use of #16. The subjective norm was not significantly influenced by the Age-B Index.

The Medical Condition Index represented six medical conditions: allergies, cardiovascular disorders, diabetes/obesity, gastrointestinal disorders, liver disorders, and nutritional support. The index moderately influenced preparedness to use #14 and #16 and negatively influenced preparedness to use #6. It negatively influenced intention to use #8, #14, and #20; negatively influenced reported use of #12; and did not significantly influence attitude or subjective norm toward use of any of the strategies, Tables F-1 to F-5. The mean beta coefficient for preparedness to use behavioral strategies was .12, Figure 7, page 117, indicating that counseling patients with medical conditions represented in the index slightly influenced preparedness to use behavioral strategies.

The condition, pregnancy and/or lactation, negatively influenced preparedness to use #12; negatively influenced attitude toward use of #17 and #18; and slightly influenced subjective norm toward #9 and #11. It negatively influenced intention to use #9 and #12 and slightly influenced intention to use #19; and did not significantly influence reported use of any of the strategies, Tables F-1 to F-5. When beta coefficients were averaged across counseling strategies, pregnancy and/or lactation slightly influenced

subjective norm to use assessment, $\bar{b}$=.10, and motivational strategies, $\bar{b}$=.11, and negatively influenced intention to use motivational strategies, $\bar{b}$=-.11, Figures 4 and 6, pages 113 and 115. Renal disorders slightly influenced the preparedness to use #17; slightly influenced the intention to use #1, #2, and #11; slightly influenced the reported use of #1, #12, #14, and #16; and had no significant influence on either attitude or subjective norm to use any of the strategies.

Setting where patients counseled. The setting where patients were counseled did not significantly influence the dependent variables. Acute care facility slightly influenced preparedness to use #6 and negatively influenced preparedness to use #14; negatively influenced subjective norm toward use of #14 and #15; and negatively influenced reported use of four strategies, #9, #11, #14, and #16, Tables F-1 to F-5. Two were motivational and two were behavioral. No significant influence was exerted on either attitude toward use or intention to use any of the strategies. When beta coefficients were averaged across counseling strategies, acute care facility had a slight negative influence on subjective norm, $\bar{b}$=-.12, and reported use, $\bar{b}$=-.11 for behavioral counseling strategies, Figure 7, page 117.

Long term care/rehabilitation facility negatively influenced preparedness to use #10 and #19; slightly influenced attitude to use #8; slightly influenced intention to use #3, #10, and #17; and slightly influenced reported use of #7 and negatively influenced

use of #3 and #10, Tables F-1 to F-5. The negative beta coefficients indicated that counseling patients in an acute care facility or long term/rehabilitation facility affected the preparedness, attitude, subjective norm, intention to use, or reported use less than counseling patients in other settings. Counseling patients in an acute care setting negatively influenced preparedness, subjective norm and reported use of #14. Counseling patients in a long term/rehabilitation setting had a positive influence on intention to use and a negative influence on preparedness and reported use of #10.

In summary, the situational characteristics slightly influenced the dependent variables more than did the demographic characteristics. The mean beta coefficients were greater than .10 for four variables: Patient Contact Index, Medical Condition Index, pregnancy and/or lactation, and acute care facility. Respondents interacting with and counseling more patients indicated that the behavioral strategies were more desirable to use and indicated they were influenced more by peer pressure to use the behavioral strategies. Respondents counseling patients with medical conditions such as allergies, cardiovascular disorders, diabetes/obesity, gastrointestinal disorders, liver disorders or needing nutritional support felt more prepared using the behavioral strategies. When counseling pregnant and/or lactating patients, respondents felt more peer pressure to use assessment and motivational strategies and intended less to use motivational strategies. Respondents counseling patients in acute care facilities were influenced less by peer

pressure to use motivational strategies and reported using behavioral strategies less than respondents counseling patients in outpatient clinics or long-term rehabilitation facilities. As with the demographic characteristics, the low beta weights and mixed pattern of positive and negative beta weights indicated a weak, unstable influence on the dependent variables.

Attitude Toward Targets

Seven indices representing importance of patient characteristics and preparedness in using counseling skills were used as measures of attitude toward targets in determining influence on the dependent variables. The indices included the Attitude Index, Socio-Cultural Index, Psychological Index, Knowledge Index, Active Listening Index, Communicate Interest Index, and Organization Index. The indices, in general, exerted more influence on preparedness and attitude than subjective norm, intention, or reported use.

Importance of patient characteristics. The patient characteristic indices--Attitude, Socio-cultural, Psychological, and Knowledge--varied somewhat in the influence exerted on the dependent variables. The Attitude Index influenced preparedness in using nine strategies, two of which were assessment, #3 and #4; three were educational, #5, #7, and #8; two were motivational, #9 and #12; and two were behavioral, #15 and #16. The index influenced attitude toward use of one motivational strategy, #11; influenced subjective norm toward use of one motivational strategy, #12, and one evaluation strategy, #19; and had no significant influence on intention

or reported use of any of the strategies, Tables F-1 to F-5. When beta coefficients were averaged across counseling strategies, importance of patient attitudes slightly influenced preparedness in using all strategies, $\bar{b}$=.11, preparedness toward use of assessment strategies, $\bar{b}$=.12, educational, $\bar{b}$=.14, and motivational strategies, $\bar{b}$=.11, Figures 3, 4, 5, and 6, pages 112, 113, 114, and 115, respectively.

The Socio-Cultural Index influenced preparedness toward use of one assessment strategy, #1; slightly influenced attitude toward use of #2 and #7, and moderately influenced use of two behavioral strategies, #15 and #16, and one evaluation strategy, #20. The index slightly influenced subjective norm toward use of #2 and #19; moderately influenced subjective norm to use #10; negatively influenced intention to use two educational strategies, #5 and #6; and had no significant influence on the reported use of any counseling strategy, Tables F-1 to F-5. The mean beta coefficients for patient socio-cultural characteristics indicated a slight influence on attitude toward use of educational, behavioral, and evaluation strategies, $\bar{b}$=.13, $\bar{b}$-.14, and $\bar{b}$-.11, respectively; and indicated a slight influence on subjective norm toward use of motivational strategies, $\bar{b}$=.15, Figures 3-8, pages 112-117.

The Psychological Index slightly to moderately influenced preparedness to use six strategies. One strategy was assessment, #3; two were motivational, #10 and #11; two were behavioral, #13 and #16; and one was evaluation #18. The index slightly to

moderately affected the attitude toward use of five strategies. One strategy was assessment, #3, one was motivational, #11; two were behavioral, #14 and #15; and one was evaluation, #19. It influenced intention to use two strategies, #5 and #9; and had no significant influence on the subjective norm or reported use of any of the strategies, Tables F-1 to F-5. When beta coefficients were averaged across counseling strategies, patient psychological characteristics slightly influenced preparedness to use motivational strategies, $\bar{b}$=.14 and influenced attitude toward use of motivational strategies and behavioral strategies, $\bar{b}$=.10 and $\bar{b}$=.15, Figures 7 and 8, pages 116 and 117.

The Knowledge Index exerted a moderately negative affect on preparedness to use #3, #12, and #18; slightly affected attitude to use four strategies, #4, #5, #6, and #8. Three strategies were educational. The index slightly influenced subjective norm to use five strategies, #1, #8, #9, #14, and #16, two of which were behavioral. It negatively affected intention to use #10 and #16 and did not significantly affect the reported use of any counseling strategy, Tables F-1 to F-5. When beta coefficients were averaged across counseling strategies, patient knowledge characteristics slightly influenced attitude toward use of educational strategies, $\bar{b}$=.14; subjective norm toward use of motivational strategies, $\bar{b}$=.12; and behavioral strategies, $\bar{b}$=.12, Figures 5-7, pages 114-117.

In summary, the indexes representing importance of patient characteristics in selecting counseling strategies significantly

influenced the dependent variables of more counseling strategies than did either the demographic or situational characteristics. The mean beta weights were not greater than .20 indicating a slight to moderate influence. The more important were the patient attitudes toward medical condition, nutrition, and diet, the more prepared respondents felt in using most strategies, specifically the assessment, educational, and motivational strategies. Respondents rating patient socio-cultural characteristics more important felt the use of educational, behavioral, and evaluation strategies was more desirable. The socio-cultural characteristics included such factors as control of food preparation and purchasing, interest in food preparation and purchasing, cultural food habits, educational level, living conditions, socio-economic status, and variety of food available in the community. The more important were patient psychological characteristics, the more prepared respondents felt in using motivational strategies and the more peer pressure was felt to use motivational and behavioral strategies. Patient psychological characteristics included such factors as emotional problems, support of family and friends, use of misinformation, and willingness to make changes. The more important were patient knowledge of diet and medical condition, the more desirable was the use of educational strategies and the more peer pressure was felt to use motivational and behavioral strategies.

Capability in using counseling skills. The three counseling skill indices--Active Listening, Communicate Interest, and

Organization--exerted more influence on preparedness than any of the external variables. Of the three indices, the Active Listening Index was least influential. It slightly to moderately influenced preparedness to use four strategies, #5, #10, #13, and #14, two of which were behavioral. The index negatively influenced attitude toward use of #15 and positively influenced attitude toward use of two evaluation strategies, #19 and #20; negatively influenced the reported use of #13 and slightly influenced the reported use of #18; and did not significantly affect the subjective norm or reported use of any of the strategies, Tables F-1 to F-5. When beta coefficients were averaged across counseling strategies, the active listening counseling skills slightly influenced the preparedness to use all strategies, $\bar{b}$=.10; preparedness and attitude toward use of educational strategies, $\bar{b}$=.10; preparedness to use all motivational and behavioral strategies, $\bar{b}$=.11 and $\bar{b}$=.14; and attitude toward use of evaluation strategies, $\bar{b}$=.13, Figures 3, 5, 6, 7, and 8, pages 112, 114, 115, 116, and 117, respectively.

The Communicate Interest Index influenced preparedness to use all strategies but one educational, #5; three motivational, #9, #11, and #12; two behavioral, #13 and #15; and two evaluation strategies, #17 and #18. The index slightly influenced attitude toward use of #10, #16, and #17, and negatively influenced attitde toward use of #19; negatively influenced subjective norm toward use of #18; and slightly influenced intention to use four strategies, #3, #9, #10, and #11, of which three were motivational. It also

negatively influenced reported use of #1 and positively influenced the reported use of #7, Tables F-1 to F-5. When beta coefficients were averaged across counseling strategies, the counseling skills to communicate interest slightly influenced the preparedness to use all strategies, $\bar{b}$=.17; preparedness to use assessment, educational, motivational, behavioral, and evaluation strategies, $\bar{b}$=.22, $\bar{b}$=.22, $\bar{b}$=.13, and $\bar{b}$=.14; and intention to use motivational, $\bar{b}$=.10, Figures 3-8, pages 112-117.

The Organization Index influenced preparedness to use nine strategies. Two were assessment, #1 and #4; three were educational, #6, #7, and #8; three were motivational, #9, #11, and #12; and one was behavioral, #13. The index slightly influenced attitude toward use of #3 and #19; slightly influenced subjective norm toward use of #20; and slightly influenced intention to use #3 and #13; Tables F-1 to F-5. When beta coefficients were averaged across counseling strategies, organization counseling skills slightly influenced preparedness to use all strategies, $\bar{b}$=.13; and preparedness to use assessment, $\bar{b}$=.15, educational, $\bar{b}$=.14, motivational, $\bar{b}$=.17, and behavioral strategies, $\bar{b}$=.11, Figures 4-8, pages 113-117.

In summary, the three indices representing capability in using counseling skills significantly influenced the dependent variables of more counseling strategies than did demographic or situational characteristics. Of the three indices, the Communicate Interest Index had the most influence. The more capable respondents felt in using counseling skills in the Active Listening Index, the

more prepared they felt using most counseling strategies, specifically, the educational, motivational, and behavioral strategies; and the more desirable they felt was the use of educational strategies. The Active Listening Index included such counseling skills as use of open-ended questions, minimal encouragers, paraphrasing or restatement, reflection of feelings or affective responses, and the use of silence. There was a moderate relationship between capability in using skills in the Communicate Interest Index and preparedness of respondents in using the majority of strategies. The Communicate Interest Index included such counseling skills as maintain eye contact, show empathy, speak slowly and clearly, be relaxed, sit or lean forward slightly, and express willingness to help. The more capable respondents were in using counseling skills in the Organization Index the more prepared they were in using most counseling strategies, specifically, the assessment, educational, motivational, and behavioral strategies. The Organization Index included such counseling skills as use of simple terms understood by the patient, stress minimum number of essential points, and present information in a concise, logical, and organized manner.

Overall, the influence of the importance of patient characteristics in selecting counseling strategies and capability in using counseling skills was much stronger and stable in that many of the beta weights were between .10 and .35 and most were positive. The influence of the external variables on preparedness was stronger and consistent across most of the indices and gradually decreased

from preparedness to subjective norm or attitude, to intention, and to reported use. The decreasing influence from preparedness to reported use supported the Ajzen and Fishbein conceptualization in that external variables had an indirect influence on behavior (use).

Preparedness in Using Counseling Strategies

Preparedness strongly influenced both attitude and subjective norm toward use of the majority of counseling strategies. The attitude toward use of two educational strategies, #3 and #7, and subjective norm toward use of one behavioral strategy, #14, were not significantly affected by preparedness to use the strategies, Tables F-2 and F-3. Unexpectedly, as in the correlations between dependent variables, preparedness exerted a strong direct influence on intention to use counseling strategies, Table F-4. All but two assessment strategies were significantly influenced at $p < .001$ and those two were significant at $p < .01$. In regard to reported use, preparedness had the strongest influence on the assessment strategies. Preparedness significantly influenced all the assessment strategies, three of the educational and behavioral strategies and two of the motivational and evaluation strategies, Table F-5.

The mean standardized regression coefficients between dependent variables of the conceptualized model for the categories of counseling strategies are presented in Table 14. Overall, preparedness influenced attitude, $\bar{b}=.32$, subjective norm, $\bar{b}=.25$, intention, $\bar{b}=.29$, and behavior, $\bar{b}=.17$. According to the model, the influence should be greatest for the attitude and subjective norm, less on intention,

TABLE 14

MEAN STANDARDIZED REGRESSION COEFFICIENTS BETWEEN DEPENDENT VARIABLES OF THE CONCEPTUALIZED MODEL FOR FIVE CATEGORIES OF COUNSELING STRATEGIES

Category	Preparedness/ Attitude	Preparedness/ Subjective Norm	Preparedness/ Intention	Preparedness/ Behavior	Attitude/ Intention	Attitude/ Behavior	Subjective Norm/ Intention	Subjective Norm/ Behavior	Intention/ Behavior
	$\bar{b}$	$\bar{b}$	$\bar{b}$	$\bar{b}$	$\bar{b}$	$\bar{b}$	$\bar{b}$	$\bar{b}$	$\bar{b}$
ASSESSMENT	.23	.24	.23	.24	.29	.04	.21	.06	.44
EDUCATIONAL	.35	.25	.27	.16	.32	.06	.22	.13	.50
MOTIVATIONAL	.33	.24	.28	.17	.22	.13	.12	.04	.44
BEHAVIORAL	.37	.22	.30	.16	.24	.14	.16	.05	.43
EVALUATION	.32	.29	.34	.11	.25	.07	.17	.11	.49
GRAND MEAN	.32	.25	.29	.17	.26	.09	.17	.08	.46

NOTE: The mean standardized regression coefficients are suggestive only and do not represent original standardized regression coefficients for each category or for all counseling strategies.

and even less on behavior. Results supported the model except for subjective norm. The influence of preparedness on subjective norm was slightly less than on intention indicating that peer pressure was influenced less than either preparedness or attitude. Preparedness had the most influence on attitude toward use of behavioral strategies, $\bar{b}$=.37; subjective norm and intention to use evaluation strategies, $\bar{b}$=.29 and $\bar{b}$=.34; and reported use of assessment strategies, $\bar{b}$=.24. It had the least influence on attitude and intention to use assessment strategies, $\bar{b}$=.23; subjective norm toward use of behavioral strategies, $\bar{b}$=.22; and reported use of evaluational strategies, $\bar{b}$=.11. It is interesting that the influence on assessment strategies was more or less the same for attitude, subjective norm, intention, and behavior whereas the influence on the other four categories varied between attitude, subjective norm, and intention with influence on subjective norm much less than on intention and influence much weaker on behavior.

Attitude and Subjective Norm Toward Use of Counseling Strategies

Both attitude and subjective norm had a strong influence on intention for the majority of strategies and a slightly weaker influence on reported use. Attitude significantly affected the intention to use all strategies and over three-fourths were significant at $p < .001$, Table F-4. Subjective norm was less influential, especially for the motivational and behavioral strategies. Peer influence affected intention to use all the assessment, educational,

and evaluation strategies, significant at $p < .001$ or $p < .01$. Two motivational strategies, #9 and #10, and one behavioral strategy, #13, were not significantly influenced by peer pressure.

The influence of attitude and subjective norm on reported use of counseling strategies was less than for intention. Attitude slightly influenced two strategies, #16 and #20; moderately influenced three strategies, #2, #9, and #12, of which two were motivational strategies; and strongly influenced three strategies, #8, #13, and #14, of which two were behavioral strategies, Table F-5. The reported use of 12 strategies was not significantly influenced by attitude. Subjective norm had even less influence. It slightly influenced four strategies, #2, #7, #8, and #14, of which two were educational strategies; moderately influenced #20; and strongly influenced #5. The presence of negative beta weights for attitude and subjective norm toward use of some strategies indicated a more unstable relationship between attitudes or subjective norm and reported use.

According to the mean standardized regression coefficients between dependent variables of the conceptualized model for categories of counseling strategies in Table 14, both attitude and subjective norm had a much stronger influence on intention than on behavior. The grand mean beta weights were .26 for attitude/intention, .17 for subjective norm/intention, .09 for attitude/behavior, and .08 for subjective norm/behavior. Both attitude and subjective norm had the most influence on intention to use the educational

strategies, $\bar{b}$=.32 and $\bar{b}$=.22, and the least influence on the motivational strategies, $\bar{b}$=.22 and $\bar{b}$=.12. Attitude had the greatest influence on reported use of behavioral strategies, $\bar{b}$=.14 and subjective norm had the greatest influence on reported use of educational strategies, $\bar{b}$=.13. The reported use of assessment strategies was influenced the least by attitude, $\bar{b}$=.04; and the reported use of motivational strategies was influenced the least by subjective norm, $\bar{b}$=.04. In summary, the results of the mean standardized regression coefficients for both attitude and subjective norm supported the conceptualized model; however, peer influence was much less than attitude on intention and was about the same as attitude on behavior.

Intention to Use Counseling Strategies

Intention to use had a very strong, positive, and stable affect on reported use of all counseling strategies. All strategies were significant at $p < .001$, Table F-5. According to the mean standardized regression coefficients presented in Table 14, the grand mean regression coefficient for the influence of intention on behavior was .46 which was the highest of any of the relationships between dependent variables. The same trend was true for individual strategies and for the categories. These results supported the conceptualized model in that the strongest determinant of behavior was intention. The relationship of the external variables on the dependent variables were unstable and varied from situation to situation with some exerting a slight to moderate affect but not on every

dependent variable. The instability of the influences of the external variables, however, did not affect the strength of the intention-behavior relationship.

Multiple Coefficient of Determination

The multiple coefficient of determination, R^2, is an expression of the amount of explained variation in the dependent variable. A summary of the multiple coefficients of determination for the regression of preparedness, attitude, subjective norm, intention, and reported use of 20 counseling strategies is presented in Table 15. The amount of variation explained by the independent variables, i.e., external variables, in preparedness to use counseling strategies averaged between 12% to 36%, representing a fairly strong explanation. On the average, 26% of the variation was accounted for in the assessment, educational, and motivational strategies, 24% in the behavioral, and 20% in the evaluation strategies.

The amount of variation accounted for by both the external variables and preparedness in attitude toward use of counseling strategies ranged between 18% to 42%. There was more variation in the R^2 for attitude than preparedness. On the average, 32% of the variation was explained in the attitude toward use of behavioral strategies, 28% for the evaluation, 27% for the educational and motivational, and 22% for the assessment strategies. The variation explained by the external variables and preparedness in the subjective norm was somewhat lower, between 15% to 30%. Approximately 25% of the variation was explained in the subjective norm toward

TABLE 15

MULTIPLE COEFFICIENTS OF DETERMINANTS (R^2) FOR THE REGRESSION OF PREPAREDNESS, ATTITUDE, SUBJECTIVE NORM, INTENTION, AND REPORTED USE OF 20 COUNSELING STRATEGIES ON 24 EXTERNAL VARIABLES

Counseling Strategy	Preparedness	Attitude[a]	Subjective Norm[a]	Intention[b]	Reported Use[c]
	R^2	R^2	R^2	R^2	R^2
ASSESSMENT					
1.	.19	.18	.17	.50	.61
2.	.23	.21	.20	.33	.45
3.	.31	.26	.15	.40	.41
4.	.29	.25	.19	.43	.46
EDUCATIONAL					
5.	.18	.28	.19	.51	.65
6.	.27	.25	.25	.48	.52
7.	.36	.22	.17	.32	.51
8.	.23	.34	.25	.45	.55
MOTIVATIONAL					
9.	.28	.21	.19	.40	.43
10.	.29	.36	.30	.44	.62
11.	.27	.26	.24	.42	.54
12.	.21	.25	.18	.33	.40

TABLE 15 (Continued)

Counseling Strategy	Preparedness	Attitude[a]	Subjective Norm[a]	Intention[b]	Reported Use[c]
	R^2	R^2	R^2	R^2	R^2
BEHAVIORAL					
13.	.27	.32	.17	.43	.45
14.	.19	.27	.23	.38	.54
15.	.21	.27	.26	.37	.46
16.	.28	.42	.28	.43	.54
EVALUATION					
17.	.12	.37	.23	.56	.59
18.	.28	.32	.24	.50	.52
19.	.24	.20	.25	.32	.36
20.	.17	.25	.28	.40	.45

[a]Regression on 24 external variables + preparedness.

[b]Regression on 24 external variables + preparedness + attitude + subjective norm.

[c]Regression on 24 external variables + preparedness + attitude + subjective norm + intention.

use of evaluation strategies, 23%-24% of the behavioral and motivational, 21% of the educational, and 18% of the assessment strategies.

The variation explained by the external variables, preparedness, attitude, and subjective norm in intention to use counseling strategies ranged between 32% to 56% which was somewhat higher than for either preparedness, attitude, or subjective norm. On the average, approximately 25% of variation was explained for both assessment and motivational strategies, 25% for educational, 24% for behavioral, and 20% for the evaluation strategies. There were more high and low R^2 values between strategies in each category for intention; however, the averages seem to be more constant than for preparedness, attitude, and subjective norm.

The external variables, preparedness, attitude, subjective norm, and intention explained between 36% to 65% of the variation in reported use of counseling strategies. On the average, approximately 56% of the variation was accounted for in the educational strategies, 50% in motivational, 49% in behavioral, and 48% in both evaluation and assessment strategies. The higher R^2 for both intention to use and reported use was attributed to the dependent variables treated as independent variables. The amount of variation accounted for by the external variables decreased somewhat from preparedness, to attitude, subjective norm, intention, and reported use as fewer variables had a significant influence. The variation accounted for by preparedness, attitude, subjective norm, and intention increased as each was added to the model since each had a

stronger and more constant influence than any of the external variables. A reason for the high degree of variation explained by attitude, subjective norm, and intention was that these variables are well conceptualized in the psychological and sociological literature whereas the external variables tested in this research are not well conceptualized.

Hypotheses

1. Preparedness in using counseling strategies directly affects the attitude and subjective norm of clinical dietitians toward use of counseling strategies and indirectly affects intention and behavior to use counseling strategies.

Preparedness in using counseling strategies moderately affected attitude, subjective norm, and intention to use counseling strategies. Preparedness significantly influenced attitude, subjective norm, and intention of the majority of counseling strategies at $p < .001$ and all strategies at $p < .05$. Reported use of seven strategies were not significantly influenced by preparedness indicating a weaker influence. However, the reported use of all assessment strategies was significant at $p < .001$.

The mean standardized regression coefficients between dependent variables presented in Table 14, page 135, indicated that preparedness moderately influenced attitude, subjective norm, and intention, and slightly influenced behavior or reported use. The influence on subjective norm and intention was about the same

whereas the influence on attitude was greater than subjective norm. In summary, preparedness had a direct affect on attitude, subjective norm, and intention; an indirect affect on behavior; and had a stronger influence on attitude than subjective norm.

2. Attitude and subjective norm of clinical dietitians toward the use of counseling strategies directly influences intention to use and indirectly influences behavior.

Attitude significantly influenced the intention to use the majority of counseling strategies at $p < .001$ and influenced all strategies at $p < .05$. However, subjective norm significantly influenced intention to use less than half of the strategies at $p < .001$ and three strategies, two motivational and one behavioral, were not significantly influenced at $p < .05$. The reported use of over half of the strategies was not significantly influenced by either attitude or subjective norm at $p < .05$ indicating a weaker and indirect influence.

The mean standardized regression coefficients, Table 14, page 135, indicated more dramatically the direct influence on intention and indirect influence on behavior. Attitude moderately influenced intention, $\bar{b}=.22$ to $\bar{b}=.32$, with a grand mean of .26, and weakly influenced behavior, $\bar{b}=.04$ to $\bar{b}=.14$, with a grand mean of .09. The influence of subjective norm on intention was slightly weaker, $\bar{b}=.12$ to $\bar{b}=.22$, with a grand mean of .17; and influence of subjective norm on reported use was about the same as attitude, $\bar{b}=.05$ to $\bar{b}=.13$, with grand mean of .08. In summary, attitude and subjective

norm had a moderate direct influence on intention and a weak and indirect influence on behavior. Intention to use a counseling strategy was influenced more by attitude than peer pressure.

3. Intention toward use of counseling strategies directly affects the counseling behavior of clinical dietitians and is the strongest determinant of counseling behavior.

Intention toward use significantly influenced all the counseling strategies at $p < .001$ and had strong beta weights, b=.37 to b=.61, Table E-5. The beta weights for preparedness ranged from .07 to .30 with majority above .10 and the beta weights for attitude and subjective norm ranged from .01 to .26 with majority below .1. The mean standardized regression coefficients for the counseling categories presented in Table 14, page 135, show that the influence of intention on behavior was quite strong, $\bar{b}$=.43 to $\bar{b}$=.49 with a grand mean of .46. The influence of preparedness, attitude, and subjective norm on behavior was much weaker; however, preparedness had a stronger influence than attitude or subjective norm as indicated by a grand mean of .17 versus .09 for attitude and .08 for subjective norm.

Other Relationships Investigated

The first group of relationships investigated involved the influence of the external variables on the preparedness felt by clinical dietitians in using counseling strategies. The second group of relationships studied involved the indirect influence of

the external variables on attitude, subjective norm, intention to use, and reported use of counseling strategies used by clinical dietitians.

Relationships Between External Variables and Preparedness

Few external variables significantly influenced preparedness to use counseling strategies. A summary of the significant, $p < .05$, standardized regression coefficients in the regression models for preparedness, attitude, subjective norm, intention, and reported use is presented in Table 16. A review of this table indicated that four demographic characteristics significantly influenced preparedness to use five strategies. The demographic characteristics were age, community emphasis, Master's degree, food systems administration experience, and outpatient experience. Age negatively influenced one evaluation strategy. The community emphasis negatively influenced preparedness to use three strategies and Master's degree negatively influenced preparedness to use one strategy. Food systems administration experience positively influenced two strategies and outpatient experience significantly influenced preparedness to use five strategies, three positively and two negatively.

The situational characteristics significantly influenced preparedness to use 13 strategies. Patient Contact Index influenced two strategies, one negatively and one positively. The Age A and Age B Indices each influenced one strategy. The setting, acute care facility, influenced preparedness to use two strategies, one negatively and one positively; and long term rehabilitation facility

TABLE 16

SUMMARY OF SIGNIFICANT ($p<.05$) STANDARDIZED REGRESSION COEFFICIENTS FOR REGRESSION OF PREPAREDNESS, ATTITUDE, SUBJECTIVE NORM, INTENTION, AND REPORTED USE (BEHAVIOR) OF COUNSELING STRATEGIES ON INDEPENDENT VARIABLES

	Demographic Characteristics									Situational Characteristics								Attitude Toward Targets											
Strategies	Age	B.S. + Intern	Intern + M.S.	Generalist	Community	M.S. Degree	Exper. Index	F.S.A.[a] Exp.	Outpt. Exp.	Patient Contact Index	Age A Index	Age B Index	Acute Care	Long/ Term Rehab.	M.C.[b] Index	Pg/ Lact.	Renal Disorder	Attitude Index	Socio Cultural Index	Psych. Index	Knowledge Index	A.L.[c] Index	C.I.[d] Index	Organ. Index	P*	AT**	SN**	I***
ASSESSMENT																													
1.									U^+	I^-							I^+U^+		P^+		SN^+		P^+U^-	P^+	AT^+SN^+,I^+U^+	I^+	I^+	U^+
2.			U^+	U^+													I^+		AT^+SN^+				P^+		AT^+SN^+,I^+U^+	I^+U^+	I^+U^+	U^+
3.		AT^+	SN^-								P^-,U^-			I^+U^{--}				P^+		P^+,AT^+	P^-		P^+,I^+	AT^+,I^+	SN^+,I^+U^+	I^+	I^+	U^+
4.			SN^-															P^+			AT^+		P^+	P^+	$AT^+SN^+I^+U^+$	I^+	I^+	U^+
EDUCATIONAL																													
5.			SN^-		I^-	SN^+				P^+								P^+	I^-	I^+	AT^+	P^+			$AT^+SN^+I^+U^+$	I^+	I^+U^+	U^+
6.			SN^-						P^+				P^+		P^-				I^-		AT^+		P^+	P^+	$AT^+SN^+I^+U^+$	I^+	I^+	U^+
7.		I^+	SN^-,I^+			P^-,AT^-						AT^-						P^+	AT^+				P^+U^+	P^+	$SN^+I^+U^+$	I^+	I^+U^+	U^+
8.	SN^+U^-	SN^+,I^+	SN^-	SN^-		U^+	U^+		P^-	SN^+				AT^+U^+	I^-			P^+			AT^+,SN^+		P^+	P^+	AT^+,SN^+I^+	I^+U^+	I^+U^+	U^+
MOTIVATIONAL																													
9.			SN^-	AT^+								P^+I^+	U^-			SN^+I^-		P^+		I^+	SN^+		I^+	P^+	$AT^+SN^+I^+$	I^+U^+		U^+
10.			SN^-							P^-	AT^+			$P^-I^+U^-$					SN^+	P^+	I^-	P^+	$P^+AT^+I^+$		$AT^+SN^+I^+U^+$	I^+		U^+
11.		U^-	SN^-	U^+	P^-,SN^+,U^+			U^+					U^-			SN^+	I^+	AT^+		P^+AT^+			I^+	P^+	$AT^+SN^+I^+U^+$	I^+	I^+	U^+
12.			SN^-												U^-	P^-I^-	U^+	P^+SN^+			P^+			P^+	$AT^+SN^+I^+$	I^+U^+	I^+	U^+
BEHAVIORAL																													
13.		AT^+	SN^-						P^+	AT^-										P^+		P^+U^-		P^+I^+	$AT^+SN^+I^+U^+$	I^+U^+		U^+
14.	U^-									SN^+		$P^-SN^-U^-$		I^-		U^+				AT^+	SN^+	P^+	P^+		AT^+I^+	I^+U^+	I^+U^+	U^+
15.			SN^-					P^+		AT^+,SN^+		SN^-		P^+				P^+	AT^+	AT^+		AT^-			$AT^+SN^+I^+U^+$	I^+	I^+	U^+
16.	SN^+				P^-				P^+	AT^-	U^+	U^-		P^+		U^+		P^+	AT^+	P^+	SN^+,I^-		P^+AT^+		$AT^+SN^+I^+U^+$	I^+U^+	I^+	U^+
EVALUATION																													
17.	AT^+SN^+		SN^-				SN^-			U^+	I^-			I^+		AT^-	P^+						AT^+		$AT^+SN^+I^+$	I^+	I^+	U^+
18.	P^-		SN^-		P^-	U^+		P^+		SN^+						AT^-				P^+	P^+	U^+	SN^-		$AT^+SN^+I^+U^+$	I^+	I^+	U^+
19.			SN^-											P^-		I^+			SN^+	SN^+	AT^+	AT^+	P^+AT^-	AT^+	$AT^+SN^+I^+U^+$	I^+	I^+	U^+
20.			SN^-	I^-	I^-				P^-,SN^+		U^-				I^-				AT^+			AT^+	P^+	SN^+	$AT^+SN^+I^+$	I^+U^+	I^+U^+	U^+

P = Preparedness
AT = Attitude
SN = Subjective Norm
I = Intention
U = Reported Use

\- = Negative beta coefficient
\+ = Positive beta coefficient

*Preparedness was included in Attitude, Subjective Norm, Intention, and Behavior (Reported Use) Models.

**Attitude and Subjective Norm were included only in Intention and Behavior (Reported Use) Models.

***Intention was included only in Behavior (Reported Use) Model.

[a]Food Systems Administration Experience

[b]Medical Condition Index

[c]Active Listening Index

[d]Communicate Interest Index

negatively influenced two strategies. The Medical Condition Index positively influenced two strategies and negatively influenced one strategy. The condition, pregnancy and/or lactation, negatively influenced one strategy; and, renal disorders positively influenced one strategy.

The four indices for importance of patient characteristics influenced 14 strategies. The Attitude Index positively influenced preparedness to use nine strategies. The Socio-Cultural Index positively influenced one strategy and the Psychological Index positively influenced six strategies. The Knowledge Index positively influenced two strategies and negatively influenced one strategy. The three indices for capability in using counseling skills influenced 17 strategies. The Active Listening Index positively influenced four strategies. The Communicate Interest Index positively influenced 12 strategies and the Organization Index positively influenced nine strategies. The overall mixed pattern of negative and positive beta weights under .1 indicated a weak, unstable influence of the demographic and situational characteristics on preparedness.

The mean standardized regression coefficients for all strategies indicated four variable indices slightly influenced preparedness, Figure 3, page 112. The indices included importance of patient attitudes toward diet and medical condition, active listening counseling skills, communicate interest counseling skills, and organization counseling skills. Importance of patient attitudes

slightly influenced the preparedness to use assessment, educational, and motivational strategies; capability in using counseling skills to communicate interest influenced all five categories of counseling strategies; capability in using active listening counseling skills influenced educational, motivational, and behavioral strategies; and the capability to use organization counseling skills influenced assessment, educational, motivational, and behavioral strategies. Experience in food systems administration slightly influenced the behavioral and evaluation strategies. Both experience in outpatient care and such medical conditions as allergies, cardiovascular disorders, gastrointestinal disorders, diabetes and/or obesity, and nutritional support included in the Medical Condition Index slightly influenced preparedness in using behavioral strategies.

In summary, the demographic and situational characteristics did not significantly influence preparedness to use counseling strategies. The behavioral strategies were slightly influenced by experience in food systems administration and outpatient care and the Medical Condition Index, $\bar{b}$=.11 to $\bar{b}$=.14 and the evaluation strategies were slightly influenced by experience in food systems administration, $\bar{b}$=.11. The attitude toward targets, for the most part, significantly influenced preparedness. Importance of patient attitudes influenced the assessment, educational, and motivational strategies, and importance of patient psychological characteristics influenced only the motivational strategies. Capability in using counseling skills significantly affected most of the strategies and had a mean regression coefficient between .11 and .17.

Relationships Between External Variables and Attitude, Subjective Norm, Intention to Use, and Reported Use of Counseling Strategies

For the most part, external variables had less influence on reported use than on intention, less influence on intention than on attitude or subjective norm. Few external variables slightly influenced attitude, subjective norm, intention, or reported use. A summary of the significant standardized regression coefficients for regression of preparedness, attitude, subjective norm, intention, and reported use of counseling strategies is presented in Table 16.

There was some variation of influence of the external variables between categories of counseling strategies, Figures 4-8, pages 113-117. Age slightly influence the subjective norm toward use of assessment, behavioral, and evaluation strategies. The Internship + Master's program negatively influenced the subjective norm toward use of assessment, educational, motivational, behavioral, and evaluation strategies. Experience in dietetics slightly influenced subjective norm toward use of evaluation strategies indicating that respondents with more experience in dietetics were influenced in using evaluation strategies by peers. Patient contact, i.e., interaction with patients as well as counseling patients, slightly influenced the subjective norm of the behavioral strategies. Counseling patients that were pregnant and/or lactating slightly influenced the subjective norm toward use of assessment and motivational strategies.

Counseling patients in an acute care facility negatively influenced both the subjective norm and reported use of behavioral and motivational strategies. Importance of patient socio-cultural characteristics slightly influenced the attitude toward use of educational, behavioral, and evaluation strategies; and the subjective norm toward use of motivational strategies. The importance of patient psychological characteristics slightly influenced the attitude toward use of behavioral strategies. The importance of patient knowledge of diet and medical condition slightly influenced attitude toward educational strategies, and slightly influenced the subjective norm toward motivational and behavioral strategies. The capability in using active listening counseling skills slightly influenced attitude toward use of evaluation strategies. The capability in using counseling skills to communicate interest slightly influenced the intention to use motivational strategies. In summary, the motivational and behavioral strategies were influenced by more of the external variables than assessment, educational, or evaluation strategies.

The mean standardized regression coefficients for the 20 counseling strategies, Figure 3, page 112, indicated that age positively influenced the subjective norm and Internship + Master's program negatively influenced the subjective norm.

VII. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

A survey of 283 clinical dietitians from 73 accredited clinical and generalist dietetic internships was conducted to investigate influences on the counseling behavior of clinical dietitians. The objectives were to construct a socio-demographic profile of practicing clinical dietitians and to identify relationships between external variables, preparedness to use counseling strategies, attitude and subjective norm toward use of counseling strategies, intention to use and reported use of counseling strategies using the Ajzen and Fishbein (1980) model.

A comprehensive list of counseling strategies was compiled into five categories using the nominal group technique. The counseling categories were assessment of patient needs, educational, behavioral, motivational, and evaluation of compliance. Twenty strategies, four in each category, were included in the survey instrument based on representatives of the category, importance of each in counseling patients, and frequency of use.

The external variables identified in the conceptual model included three categories; demographic characteristics, situational characteristics, and attitude toward targets. Demographic characteristics included age, sex, ethnic group, route and emphasis of basic dietetic training, highest degree earned, and work experience in dietetics. Situational characteristics included number of patients

interacted with daily, number of patients counseled daily, age and medical condition of patients counseled, and setting in which counseling occurs. The attitude toward targets included importance of patient characteristics and capability in using counseling skills.

Respondents were all female but one, majority were Caucasian, and about half were between 25 and 35 years of age. The major route of dietetic training was Bachelor's degree with Internship and major emphasis was generalist. Approximately one-third had a Master's degree while only 17% had obtained a Master's degree for entry into the dietetic profession. About half of the clinical dietitians surveyed had less than six years work experience in dietetics and over 60% had less than six years experience providing direct patient care services. Fewer than 40% had experience in food systems administration, outpatient care, or teaching.

Approximately 60% had contact with 10 to 30 patients daily and about half counseled between one to four patients daily. On the average, dietitians spent approximately 40 to 45 minutes counseling patients. Counseling occurred most frequently in acute care facilities and involved patients over 30 years of age requiring counseling for nutritional support, cardiovascular disorders, diabetes and obesity, or gastrointestinal disorders.

The patient characteristics most important in selecting use of counseling strategies were attitude toward medical condition, attitude toward diet, and willingness to make changes. The least important patient characteristics were management of resources,

socio-economic status, and variety of foods available in the community. Generally, dietitians felt the most capable using skills requiring active interaction with the patient and least capable using skills of a facilitating nature. They felt the most successful explaining to patients changes needed in the diet and least successful motivating patients to follow the diet and evaluating patient compliance. Dietitians were most prepared using assessment and educational strategies and the least prepared using behavioral strategies.

Motivational counseling strategies were most likely to promote patient compliance and were the most desirable to use. Evaluation strategies were least likely to promote patient compliance. Assessment strategies had the highest peer pressure to use, highest intention to use, and were used most in counseling patients. Behavioral strategies were the least desirable to use, had lowest peer pressure, lower intention to use, and were used least in counseling patients.

Socio-Demographic Profile

Age was associated with more experience in dietetics, rating patient psychological characteristics more important in determining use of counseling strategies, having less ability to use counseling skills to communicate interest, and counseling patients in settings other than acute care facilities. Dietitians entering the profession through a Bachelor's degree + Internship program most likely had a generalist emphasis, had more experience in dietetics, and

were less likely to obtain a Master's degree. Those entering the dietetic profession through an Internship + Master's degree program most likely had a clinical nutrition, public health, or management emphasis, and felt that patient attitudes were important in selecting counseling strategies. Dietitians trained in a program with a community emphasis felt more capable in using counseling skills to communicate interest than those in a clinical nutrition, generalist, or management emphasis. Those who had received a Master's degree were less likely to counsel patients over 30 years of age or counsel patients with allergies, cardiovascular disorders, diabetes or obesity, gastrointestinal disorders, liver disorders or needing nutritional support than those who received a Bachelor's degree.

Experience in dietetics, in general, was associated with importance of psychological patient characteristics and counseling patients in long term care/rehabilitation facilities and negatively associated with counseling patients with allergies, cardiovascular disorders, diabetes or obesity, gastrointestinal disorders or those needing nutritional support. Dietitians with food systems administration experience were more likely to have more patient contact and were more likely to counsel patients in a long term/rehabilitation facility rather than acute care facility and felt less capable using counseling skills to communicate interest. Experience in outpatient care was related more with counseling pregnant and/or lactating patients and less with counseling patients in an acute care facility.

Dietitians counseling children, adolescents, or young adults had less patient contact. Adolescents and young adults counseled were most likely to be pregnant and/or lactating. Adults and older adults and those patients counseled in an acute care facility were associated with such medical conditions as allergies, cardiovascular disorders, diabetes or obesity, gastrointestinal disorders, liver disorders or nutrition support. Dietitians counseling patients with these diseases felt more capable in using counseling skills to communicate interest.

When patient attitudes toward nutrition, diet, and medical condition were rated as important in selecting counseling strategies, dietitians felt more capable in using counseling skills to communicate interest. The more important the patient psychological characteristics, the more capable dietitians felt in using facilitating counseling skills and counseling skills to communicate interest. The more important patient psychological or knowledge characteristics, the more prepared dietitians felt using most counseling skills. Finally, the more prepared dietitians felt in using one counseling skill, the more prepared they felt in using other counseling skills.

Relationships Between Variables

Results of the regression analysis supported the conceptualized model based on the Ajzen and Fishbein theory of attitude-behavior relationships. The strongest determinant of behavior, i.e., reported use of a counseling strategy, was intention toward behavior. The determinants of intention were attitude, subjective norm, and

preparedness. Preparedness was conceptualized as an indirect influence on intention; however, results indicated that preparedness had as much influence on intention as subjective norm. Attitude influenced intention more than did subjective norm. Preparedness had a stronger influence on attitude than subjective norm. The external variables, in general, had a weak and mixed pattern (positive and negative) of influence on preparedness and an indirect influence on attitude, subjective norm, intention, and behavior, but did not influence the stability of the attitude-behavior relationship. Few of the external variables exerted an overall influence on the 20 counseling strategies.

When the standardized regression coefficients were averaged across all counseling strategies, several of the external variables had mean beta weights above .10. Older respondents were more likely to be influenced by peer pressure toward the use of most counseling strategies, especially assessment, behavioral, and evaluation strategies. Respondents who had completed an Internship + Master's program indicated that peer pressure was less likely to influence the use of most strategies, especially the assessment, behavioral, motivational, and evaluation strategies.

Respondents with more patient contact indicated that behavioral strategies were more desirable to use and indicated they were influenced more by peer pressure to use behavioral strategies. Respondents counseling patients with such medical conditions as allergies, cardiovascular disorders, diabetes/obesity, gastrointestinal disorders, liver disorders, or needing nutritional support felt

more prepared using the behavioral strategies. When counseling pregnant and/or lactating patients, respondents felt more peer pressure to use assessment and motivational strategies and intended less to use motivational strategies. Respondents counseling patients in acute care facilities were influenced more by peer pressure to use motivational strategies and reported using behavorial strategies less than respondents counseling patients in other settings.

The more important were the patient attitudes toward medical condition, nutrition, and diet, the more prepared respondents felt in using most strategies, specifically, the assessment, emotional, and motivational strategies. Respondents rating patient socio-cultural characteristics more important felt the use of educational, behavioral, and evaluation strategies was more desirable. The more important were patient knowledge of diet and medical condition, the more desirable was the use of educational strategies and the more peer pressure was felt to use motivational and behavioral strategies.

Of the three indices measuring capability in using counseling skills, the communicate interest index had the most influence. The more capable respondents felt in using counseling skills in the active listening index, the more prepared they felt using most counseling strategies, specifically, the educational, motivational, and behavioral strategies; and the more desirable they felt was the use of educational strategies. There was a moderate relationship between capability in using skills in the communicate interest index

and preparedness of respondents in using the majority of the strategies. The more capable respondents were in using organizational counseling skills the more prepared they were in using most counseling strategies, specifically, the assessment, educational, motivational, and behavioral strategies.

Conclusions

The responses of clinical dietitians surveyed were more varied in relation to preparedness, attitude, and subjective norm toward use of motivational and behavioral strategies than for the assessment, educational, or evaluational strategies. Clinical dietitians felt least prepared using the behavioral strategies, felt behavioral strategies were the least desirable to use, felt the least peer pressure to use behavioral strategies, and reported using behavioral strategies with fewer patients. Motivational strategies were rated as the most desirable to use and the most likely to promote patient compliance but were not used frequently in counseling patients. Clinical dietitians felt less capable using facilitating counseling skills than either active participation or organization counseling skills. Generally, the more capable clinical dietitians felt using counseling skills, the more prepared they felt using counseling strategies. Also, the more capable they felt in using one counseling skill, the more capable they felt using other counseling skills. This has important implications to educators of dietitians and educators providing continuing education for practicing dietitians.

These findings suggest a need to emphasize more patient interaction skills and incorporate more behavioral and motivation theory in basic dietetic training programs and the continuing education of practicing dietitians. Dietetic educators need to implement into training programs an increased awareness of all counseling strategies available as well as the difference between counseling strategies in terms of effectiveness and appropriateness of use, and provide experiences that increases comfort in using the counseling strategies. Often times, much talk is provided concerning the importance of counseling with very little actual training provided in the use of counseling skills.

Few demographic and situational characteristics were significantly related to preparedness, attitude, subjective norm, intention, or reported use of counseling strategies by clinical dietitians. Clinical dietitians who received basic dietetic training in a Master's + Internship program felt less peer pressure to use counseling strategies than those trained in other programs. Further study is needed to identify what is different in the Internship + Master's program from other programs, i.e., Bachelor's + Internship, Bachelor's/Coordinated Dietetic Program, Bachelor's + Traineeship or Work Experience, that influences peer pressure toward the use of counseling strategies. Since only two measures of the variables, basic dietetic program and basic dietetic program emphasis, were included in the regression models, more study is needed to identify the relationships between each dietetic program and program emphasis and the counseling behavior of clinical dietitians.

The attitude-behavior relationships as conceptualized by Ajzen and Fishbein (1980) were supported. The reported use of a counseling strategy was strongly related to the intention of the clinical dietitians to use that strategy. The attitude toward use of a counseling strategy influenced intention to use a counseling strategy more than did the subjective norm. Preparedness in using a counseling strategy had a moderate relationship to attitude, subjective norm, and intention. The external variables--demographic characteristics, situational characteristics, and attitude toward targets--had a weak and unstable influence on preparedness and indirectly influenced attitude, subjective norm, intention, and behavior. The influence of the external variables did not seem to affect the strength of the intention/behavior relationship.

The results implied that such external variables as demographic characteristics of the dietitian, situational characteristics involving the patient, and attitude toward patients and counseling skills are related somewhat to preparedness in using counseling strategies. Therefore, to increase preparedness in using counseling strategies one or all of the following should occur: (a) more emphasis on the use of different counseling strategies with patients of all ages and with different medical conditions and in different situations, (b) more emphasis on what counseling strategy to use in relation to the attitude and knowledge of the patient toward diet, nutrition, and medical condition; and the patient socio-cultural and psychological characteristics, (c) and more emphasis on the

capability in using counseling skills to actively listen, communicate interest, and organize the counseling session. Increased preparedness in using a counseling strategy would increase the attitude toward the use of that counseling strategy, i.e., desirability in using, and would increase the subjective norm toward use of that counseling strategy, i.e., influence of clinical dietitians that one works with. An increase in attitude and/or subjective norm would lead to an increase in intention to use the counseling strategy and strengthen the relationship between intention and behavior. An increase in intention would lead to an increase in use of the counseling strategies.

The increased use of counseling strategies by clinical dietitians would contribute to increased compliance of patients to recommended changes in diet and/or life-style. It was assumed that the use of counseling strategies was an external variable influencing both the attitude and subjective norm of patients. If the use of counseling strategies by the clinical dietitian had a positive or negative influence on the attitude or subjective norm of the patient, then the patient would or would not intend to comply and would or would not make recommended changes in diet and/or life-style.

Recommendations

The study consisted of a large, cross-sectional, non-random sample of clinical dietitians and represented only those clinical

dietitians affiliated with clinical or generalist dietetic internships in the United States and Puerto Rico. A majority of the respondents in the sample were affiliated with acute care facilities and most were involved, to some degree, in teaching dietetic interns. Generalizations to all clinical dietitians should be limited. It is recommended that the survey instrument be used to generalize to all clinical dietitians.

The length of the questionnaire and the repetitive nature of the questions may have biased the results somewhat. Including measures of both intention and behavior in the same instrument incorporated an implicit consistency bias in the responses which may have inflated the standardized beta coefficients in the regression models. It is recommended in future studies that intention and behavior be measured separately. A follow-up study of this research would be to measure attitude, subjective norm, and intention using a written questionnaire and to measure behavior using direct observation of clinical dietitians counseling patients in the actual setting. This would be similar to the procedure used by Glanz (1979b) in evaluating use of counseling strategies and patient compliance.

The relationships identified between external variables and preparedness in using counseling strategies, attitude, and subjective norm toward using counseling strategies, and the intention and reported use of counseling strategies are suggestive only. Due to lack of time-series data a causal relationship could not be inferred. Also, the standardized regression coefficients were averaged

across all counseling strategies as a method to generalize the data and make statements concerning general direction and magnitude of the relationships. The counseling strategies measured did not represent the universe of all counseling strategies nor did they represent a representative sample of all counseling strategies.

The amount of variance accounted for by the categories of external variables was inferred from an analysis of the standardized regression coefficients and multiple coefficient of determinants (R^2) of the full regression model for all counseling strategies. It appeared that attitude toward targets accounted for most variation and the demographic characteristics accounted for the least variation in preparedness in using counseling strategies and that little variation was explained by the external variables in the attitude, subjective norm, intention, and reported use regression models. Further analysis of the R^2 between demographic characteristics; demographic characteristics, and situational characteristics; and demographic characteristics, situational characteristics, and attitude toward targets is recommended to statistically identify which category of external variables accounted for the most variation in preparedness to use counseling strategies. A similar procedure would also be conducted for attitude, subjective norm, intention, and reported use.

It is recommended that another approach for investigating the attitude-behavior relationship would be to focus on identifying behavioral beliefs and normative referents and their affect on

general counseling behavior, rather than on specific counseling strategies. Suggested behavioral beliefs include time required to use different counseling strategies and effectiveness of using a counseling strategy to meet needs of the patient. Suggested normative referents include such professional peer groups as physicians, nurses, pharmacists, and dietetic educators and non-professional peer groups as friends, patients, and patient's family. This remains an important area for further study if relationships among factors influencing the counseling behavior of clinical dietitians are to be understood.

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APPENDIXES

APPENDIX A

GUIDELINES FOR DIET COUNSELING

Prepared by
A Committee of the Diet Therapy Section of The American Dietetic Association

Background knowledge and resources

A. Have an objective. Know what you are expected to do and why.

B. Have certain basic knowledge, including:
   1. Subject matter. Diet counselor should be versed in basic nutrition, diet therapy, medical and scientific terminology, food composition, food habits--especially ethnic--food preparation and management.
   2. People.
      a. Self. Diet counselor should be aware of own strengths and weaknesses in interpersonal relationships and limitations in knowledge and skills.
      b. Client. Diet counselor is expected to know the client--physiologically, psychologically, socially, economically, i.e., what factors make him/her what she/he is.
   3. Methods and techniques. The expert counselor should be conversant with the variety of systems available for collecting and processing food intake information related to individuals.
   4. Resources and aids. Counselor should be knowledgeable about the community, regional, and state services and resources and should be aware of sources of current information. Also of major importance is the knowledge and expert use of reliable, pertinent illustrative tools in collecting accurate data and providing educational sessions.
   5. Instructional methods. The counselor should be familiar with the educational process--how people learn.

C. Have appropriate skills.
   1. Be competent in diet calculations. The counselor is expected to have a working knowledge of food composition--by both nutrients and ingredients.
   2. Be trained and experienced in diet history taking. Skills in interviewing, interpretation, and analysis are essential in obtaining valid, useful information. Adaptation of diet history methods to the needs of the diet counseling situation provides the most satisfactory way to obtain information on food intake.
   3. Be adept at listening actively--an essential skill in interviewing. How you listen may make a difference in what you hear. Be aware of "cues."
   4. Be able to establish rapport with clients and co-workers.

D. Have a plan for accomplishing objectives.

Major components of diet counseling

The procedural steps in diet counseling can be arranged in a variety of ways emphasizing different components, depending on the circumstances. Components are generally thought of in terms of the normal sequence of events.

(a) Gathering information or data.
(b) Evaluating and interpreting data.
(c) Developing a plan of action.
(d Carrying out the plan of action.
(e) Communicating the plan and evaluations (includes record keeping, letter writing, charting notes)
(f) Following up for reinforcement, final evaluation and reassessment.
(g) Planning for future diet care.

Procedural guide for diet counseling

A. Preparation.
1. Read the client's medical record.
2. Obtain information from referring source.
3. Make a tentative plan for the nutritional care program.
4. Set the stage: be prepared, have equipment ("tools") at hand.
5. Plan to avoid interruptions.
6. Designate a flexible time element for the interview.

B. The Interview.
1. Introduce yourself. Be friendly. Talk with the client about the purposes of his and your visit. Include family members whenever possible during initial and follow-up visits.
2. Find out from the client what the physician has discussed with him concerning the prescribed diet.
3. Describe what you are going to do and why.
4. Check with the client about basic statistics--age, height, and weight. Find out the client's occupation and where meals are eaten. Give you an opportunity to get to know the client and to establish rapport.
5. Obtain a typical day's (24-hour) intake. The purpose is to gain an idea of food patterns, amount eaten, and habits. This can also be used as a cross-check with the diet history.
6. Next, ask about specific foods and food groups in terms of frequency of intake and amounts eaten. This may be done using a diet history technique, review of a diet record, or self-administered questionnaire. Be thorough. Information is used to evaluate and interpret the diet, review in follow-up visits, correlate other medical and social

information, and to write meaningful notes in medical records and reports.
7. Give the client something to do while you summarize or calculate and evaluate the information on food intake.
8. Discuss the results of the evaluation with the client. Client should be an active participant in the interview at this time.

C. The plan, i.e., for nutritional care.
1. Re-check, in reference to information on intake:
   a. Medical problem--reason for referral.
   b. Laboratory results.
   c. Morbidity record.
   d. Energy balance (height, weight, activity vs. intake, etc.)
   e. Social history, education, and/or intellectual capabilities.
2. Discuss with the client any relevant conclusions, such as activity patterns and eating times, meal patterns and blood sugar levels, and other obvious problems to intake.
3. Together with client develop a nutritional care program.
4. Reinforce each point with appropriate visual and instructional materials.
5. Prepare an individualized diet plan with the client. Always provide a written plan, record diet plan in the patient's record in keeping with the hospital or clinic procedures, and retain copies of the diet plan as needed for communication and reference.

D. The follow-up.
1. Make plans with the client for reinforcement, additional instructions, revisions, and evaluations.
   a. Establish dates or a time schedule for reaching goals.
   b. Develop alternate ways to remain in contact with the client concerning progress: return appointments, telephone check-in, mail-in review of dietary records, etc.
   c. Establish a "reminder" system.
2. Be certain the plans are clearly stated to the client, are written in the medical record, and are reported on the diet history form.

E. Communication.
1. Make appropriate notes in the client's record, including information about what has been learned, what you have done, and what you hope to learn and do further.
2. Communicate with the referring agent. This is useful in obtaining cooperation and assistance in the reinforcement of the educational program.
3. Make necessary entries in your own record system and appointment calendars.

GUIDELINES FOR DIETARY COUNSELING
Zifferblatt & Wilbur, 1977

There are several guidelines that can be helpful in promoting nutritional change. The guidelines do not have an order of importance but represent points that should be considered in every counseling session. A basic prerequisite for successful nutritional change is a realistic and honest statement to the patient that he/she bears the responsibility for change, not the dietitian. "The need for full cooperation and effort by the patient in attempting change should be explained candidly and agreed to by the patient before the dietitian provides assistance."

GUIDELINES

1. Have the patient systematically observe and record his total eating pattern. The patient should collect daily information on the type and amount of food eaten, as well as times, locations, and events associated with eating. Having the patient observe daily eating patterns has several advantages:
   a. Situational factors associated with eating are often useful targets for change.
   b. The patient is actively involved in recognizing and analyzing his/her dietary problems through completing a diary of daily eating habits. If patient is unwilling to keep a diary, it can be assumed that he/she will do little else that is recommended. This could be viewed as a "commitment" test.

2. Promote accurate collection of information on eating habits. The diary is usually the most immediate source of information on which dietary recommendations can be based and to judge counseling progress.
   a. First, use the dietary records extensively in the counseling sessions. If this information is not used the patients will not continue to record their eating habits.
   b. Explore potential problems that can interfere with keeping an accurate diary. Have patient keep diary in a convenient and conspicuous place, such as the refrigerator door. Discuss how other people in the patient's family may react to the diary and how it may fit conveniently into the daily routine.
   c. Make certain the patient knows how to complete the eating habit diary.
   d. Make arrangements to call the patient within a few days to discuss any unanticipated problems. The patient should be made aware that some problems are expected; however, through mutual effort, most problems can be solved. These initial problem solving efforts should receive close

attention as they form the relationship for more difficult problem-solving efforts when actual changes in eating habits are recommended.

e. In subsequent counseling sessions, avoid asking if patient has had any problems in completing his/her diary or in making the recommended changes in eating habits. Assume that problems exist and do not provide an opportunity for the patient to deny it. Ask patient to report successes first, no matter how small and, then, discuss the problems. Do not overemphasize failures by underemphasizing them.

3. Plan gradual changes in eating habits.
   a. The diary of eating habits will reveal numerous dietary changes that can and eventually be made. Often, patients are eager to change all aspects of the eating pattern immediately. Insist on gradual changes and stress that slow but steady improvement in eating habits are more likely to persist over time.
   b. A gradual change program can never begin with too little, and the steps upward can never be too small.
   c. A graduated approach to dietary change requires that the dietitian not set predesignated or arbitrary goals such as starting a 1,500 kcal. diet. Rather, allow the patient's past performance to set the next goal.

4. Provide realistic expectations of success.
   a. Changing life-long eating habits is one of the most difficult problems that the patient will ever encounter and will require much effort over quite a long time. Make this very clear to the patient and discuss realistic expectations for immediate changes.
   b. Alert the patient to the possibility of some failures and the need to continue his/her efforts in spite of the failures. The patient should expect many problems, but assure him/her that if different approaches/strategies are tried over time, the problems can be solved. Indicate you are willing to support his/her efforts as he/she continues to try recommended changes.

5. Prepare to provide the patient continual support over time.
   a. Unlike counseling sessions, problems with dietary changes do not occur on a regular schedule. It may be impossible to schedule counseling sessions more than once or twice a month, but it is very important to maintain frequent contact by telephone or mail especially in the early stages of counseling. A patient's initial enthusiasm for change often drops very rapidly and to help maintain commitment, support and encouragement are needed. Interest in a patient's problems and progress by the dietitian will provide an invaluable contribution to successful dietary changes.

b. The dietitian should seek the active participation of a patient's family in all aspects of dietary change. The support and encouragement of family and friends is necessary for lasting change, and a successful dietary program clearly requires the full cooperation of all family member(s) who buy and prepare foods in the home. Include family members in the counseling session whenever possible.

6. Gauge counseling progress by observing the patient's behavior.
   a. The most immediate indicator of progress is whether the patient reports change in the desired direction. There is usually a delay between actual behavioral changes and corresponding physiologic changes. Overdependence on physiologic measures may frustrate the patient. Concentrate efforts on the specific dietary changes being attempted and assure the patient that physiologic measures will support these changes over time.
   b. If the physiologic measures do not begin to parallel reported changes over time, then something is wrong. Openly express this to the patient. Either the patient is usual in terms of dietary response or he/she is having difficulty accurately reporting eating habits. Point out that accurate and complete records are to his/her advantage since they provide the only way dietary problems can be solved.

When a problem arises with changing specific dietary habits, the dietitian and patient should assess the implications of alternative techniques. The obtrusiveness, scheduling demands, and assistance required by others to implement the technique should be considered. For example, the problem of eating high-calorie snacks at home may be handled by (a) not purchasing the snacks, (b) placing them in an inconspicuous or inconvenient place, or (c) contracting with family members not to eat them. These options differ in terms of how convenient they can be used by a patient. Effectiveness depends on how well the approach helps the patient to stop eating snacks.

TRADITIONAL AND INNOVATIVE APPROACHES TO COUNSELING STRATEGIES
Glanz, 1979

I. Instructional Strategies
   A. Traditional
      1. Use food models.
      2. Use charts or audiovisual aids to help explain how the dietary regimen works (Exchanges, food groups, and so on).
      3. Have hospitalized patients select foods from a special menu with a variety of choices, or go over the hospital meal(s) with the patient to show how they fit the therapeutic dietary plan.
   B. Midway Between Traditional and Innovative
      1. Have patient plan a menu or a day's menu (without your help) that he/she could fix at home.
      2. Use charts or audiovisual aids to help explain a disease, condition, or physiologic process.
      3. Ask the patient specific questions about areas that might be unclear.
      4. Teach principles of the diet first, then talk about specific foods.

II. Motivational Strategies
   A. Traditional
      1. Talk about generally poor dietary patterns of "most people."
      2. Make clear that you expect the patient to follow the diet.
      3. Refer to yourself as a health care professional in alliance with the doctor, or refer to the "doctor's orders."
   B. Midway Between Traditional and Innovative
      1. Emphasize the consequences or dangers of not following the diet.
      2. Try to link dietary with non-health benefits, e.g., appearance.
   C. Innovative
      1. Describe your own experiences with a restricted diet, or those of a successful patient on a similar plan, to patient.
      2. Show approval for, or otherwise reward patient for following some part of the diet, or for bringing a food record, regardless of present nutritional status as measured by clinical or laboratory tests.
      3. Involve several patients on the same regimen in a small support group.
      4. Try to help patient feel he/she can have some control of his/her own health, life, or eating (Examples: Patient who says, "I can eat whatever is cooked for me," "My friends tempt me," and so on).

III. Behavioral Strategies
  A. Traditional
    1. Suggest that patients get a diet scale to weight some of their foods.
  B. Midway Between Traditional and Innovative
    1. Have patient return a food diary to you when he/she is not coming for a visit (dropping it off, leaving it with doctor or nurse, or mailing it).
    2. Suggest measures to control patient's eating environment, such as eating only in a certain place, at certain times, keeping restricted foods out of the house.
    3. Suggest self-monitoring, through recording food intake, making a graph of weight, or taking blood pressure.
    4. Ask whether patient would be willing to let you talk with another family member or close friend, beyond the person who might routinely come to the doctor with him/her (over the telephone or in person).
  C. Innovative
    1. Call patient between visits, or after discharge to see how he/she is doing.
    2. Ask what part of the diet the patient thinks he/she can realistically follow, and then set short-term goals for that part of the regimen.
    3. Examine patient's physical activity pattern and develop a plan for more exercise.
    4. Ask a particularly successful patient to talk (on the telephone or in person) with other patient's beginning the same type of diet.
    5. Recommend that patient join an outside group (commercial or self-help), as well as continue to work with you (especially after hospital discharge).
    6. Encourage patient to talk freely about problems other than food-related.
    7. Assist patient in making other (non-food) changes in his/her life that might have a direct effect on eating patterns (find out about crafts groups, refer to social or medical services).

IV. Educational Diagnosis
  A. Traditional
    1. Ask if patient has ever followed a modified diet (or the same kind of diet) before: or if family or close friends have.
  B. Midway Between Traditional and Innovative
    1. Ask about patient's formal schooling.
    2. Ask why patient wants to follow this diet (not limited to weight reduction). (Examples: Feel better, avoid getting sick, husband will like it, look better in a bathing suit, and so on.)

3. If patient has followed a modified diet before, ask what happened: was he/she successful? able to stick it out? were there problems? Or, how successful was a family member or friend with a similar diet?

C. Innovative
1. Ask how concerned or worried patient is about health in general.
2. Ask how much patient thinks the diet can do to improve his/her health.
3. Ask how serious patient thinks his/her condition is for health, or how serious he/she thinks the sequelae of the condition are. (Examples: thinks high blood pressure could cause a bad stroke; thinks obesity for a young adult doesn't make much difference in present health.)
4. Ask what patient thinks will happen if he/she doesn't follow diet.
5. Ask how hard patient thinks diet will be.
6. Ask patient to estimate how much of the diet he/she will be able to follow.

V. Assessing Patient Compliance
A. Traditional
B. Midway Between Traditional and Innovative
1. Ask for more explanation about what happens when patient "goes off" diet.
2. Have patient keep a food diary for you to look at, and then review it with him/her to identify possible examples of non-compliance.
3. Ask if patient has eaten certain foods in the past few days, e.g., food he/she should not have or should restrict.
4. Ask if patient has eaten certain foods in the past few days, e.g., food he/she should have some of, or may need to add.
5. Ask a doctor or other health professional who cares for patient about health status indicators of compliance and whether patient has talked about diet problems.

C. Innovative
1. Ask how much of the diet patient is able to follow.
2. Ask others to what extent patient has been following his/her diet.

APPENDIX B

AGENDA FOR NOMINAL GROUP MEETINGS

First Meeting:

1. Introduction and purpose of research
   - purpose of research is to identify attitudes toward the use of different strategies/approaches/techniques used by dietitians in counseling/instructing patients.
   - purpose in meeting today is to identify what each of you do when counseling a patient. This will help me to develop a comprehensive list of strategies/approaches/techniques used in counseling patients on dietary modifications, etc.
   - clarify what is meant by the term strategy. Strategy can be referred to as an approach, method, or technique and in any given counseling session several strategies are usually implemented.

     Some examples:
     - use food models.
     - have patients plan a menu.
     - involve several patients on the same diet in a small support group.
     - try to help patient feel he/she can have some control over his/her own health, life, or eating.
     - suggest that patient get a diet scale to weigh foods.
     - call patient between visits or after discharge.
     - ask if patient has ever followed a modified diet or why patient wants to follow diet.

       etc.

2. Ask each person to list strategies used in counseling patients on the form titled "Identification of Counseling Strategies."
   a. After list strategies then indicate in the columns on the left hand margin the most effective and the most frequently used strategies. (Note: indicate strategy or strategies most effective for you and the strategy(ies) you used most frequently not what are effective for others, etc.)

3. Have each person report verbally the counseling strategies most effective and most frequently used. Discuss with group.

4. Ask group to discuss how feel about the counseling process.
   a. importance of counseling process?
   b. what problems are encountered?
   c. what limitations are encountered?
   d. was training adequate prior to first job?

Second Meeting:

1. Present results of first meeting and discuss.

2. Have group identify major classifications of counseling strategies.
   a. Ask each person to write major classifications.
   b. Have each person report classifications and discuss.

3. Present the classifications and list of strategies as identified by Glanz. Discuss.

4. Have each person review strategies on the list constructed from the first meeting and rate as to classification, effectiveness, and frequency of use.

Thank everyone for their contributions and cooperation.

NAME:_____ Form 1

EMPLOYER:_____

INITIAL IDENTIFICATION OF COUNSELING STRATEGIES

Please list in the area provided the strategies/approaches/methods/techniques you use in counseling and/or instructing patients. You may find it helpful to mentally think through the process you go through in the patient work-up, assessment, education, and follow-up.

After listing the approaches you use in the counseling process, please indicate with a check (✓) in the designated left hand columns the approaches you prefer to use and the approaches you must frequently use.

Prefer to Use	Most Frequently Used	Counseling Strategies

Form 2

GUIDELINES FOR SECOND NOMINAL GROUP MEETING

M E M O R A N D U M

TO:

FROM: Audrey L. Hay

DATE: July 6, 1982

RE: Identification of Counseling Strategies

Attached is the list of counseling strategies that I have compiled based on discussion with Knoxville Area dietitians and a literature review. If possible, please take a few minutes and review prior to our meeting on _____, July ___, at _____.

I have categorized the strategies into five categories: educational diagnosis, instructional, behavioral, motivational, and assessing patient compliance. As you review the list, please consider the following:

a. Are the five categories appropriate? If not, indicate changes you would make, etc.
b. Do you agree with items listed under each category? If not, indicate changes. If you feel an item should be omitted, then cross out. If you feel a change in wording is needed, then indicate the changes for that item. If you feel an item should be in another category, then indicate next to the letter on left what category the item should be in. If you have additional items that should be included, please list under the COMMENT section at end of each category.
c. Then, in the columns on the left side of the page, please indicate for each item if you (1) don't use, or (2) feel item is most effective for you in your practice, and/or (3) use the item most frequently.

As you review the listing of counseling strategies, please note any questions you may have and we will discuss during our meeting. The purpose of the meeting is to discuss the listing of strategies and identify any deletions and/or additions and/or changes in wording and to obtain a group consensus. If you do not have time to complete (a), (b), and/or (c) above, I will schedule approximately 15-20 minutes during our meeting for you to do so.

Thank you. I am looking forward to our next meeting. See you then.

Second Conference NAME_____

Form 3

COMPOSITE OF COUNSELING STRATEGIES USED IN SECOND NOMINAL GROUP MEETING

Don't Use	Used Most Frequently	Most Effective	Counseling Strategy
			I. EDUCATIONAL DIAGNOSIS
			a. ask if patient has ever followed a modified diet (or the same kind of diet) before, or if family or close friends have.
			b. ask about patient's formal schooling, occupation.
			c. ask why patient wants to follow this diet (not limited to weight reduction). Examples: Feel better, avoid getting sick, husband will like it, look better in a bathing suit, etc.
			d. if patient has followed a modified diet before, ask what happened? Was he/she successful? able to stick it out? were there problems? Or, how successful was a family member or friend with a similar diet?
			e. ask how concerned or worried patient is about health in general? determine what patient considers to be "healthy."
			f. ask how much patient thinks the diet can do to improve his/her health.

Don't Use	Used Most Frequently	Most Effective	Counseling Strategy
			g. ask how serious patient thinks his/her condition is for health, or how serious he/she thinks the outcomes of the condition are. Examples: thinks high blood pressure could cause a bad stroke, thinks obesity for a young adult doesn't make much difference in present health, etc.
			h. ask what patient thinks will happen if he/she doesn't follow diet.
			i. ask how hard patient thinks diet will be.
			j. ask patient to estimate how much of the diet he/she will be able to follow.
			k. ask how family members (significant others) feel about certain problems or being on a diet.
			l. identify environmental factors and cues affecting outcome.
			m. check medical record for medical history, age, ethnic group, religion, marital status, occupation, etc.
			n. obtain typical food intake or 24-hr. recall and/or food frequency and determine food availability and availability of resources.
			o. obtain input from other health professionals to gain insight into dietary habits, lifestyle, home situation, education, etc.

Don't Use	Used Most Frequently	Most Effective	Counseling Strategy
			p. ask patient about past and present problems, e.g., medical, social, financial, etc. Comments: II. INSTRUCTIONAL a. use food models, food pictures, and/or nutrient comparison cards. b. use charts, pamphlets, diet sheets, audiovisual aids (educational TV, films, slide/tape) or computer assisted instruction to help explain how dietary regimen works. c. use charts, pamphlets, audiovisual aids (educational TV, films, slide/tape) or computer assisted instruction to help explain disease, condition, or physiologic process and relationship to nutrition. d. ask the patient specific questions periodically about areas that may be unclear. e. teach principles of the diet first, then discuss specific foods. f. have the patient select foods from a special menu (i.e., hospital menu or menus from frequently visited restaurants) with a variety of choices or go over hospital menus to show how they fit the therapeutic dietary plan.

Don't Use	Used Most Frequently	Most Effective	Counseling Strategy
			g. have patient plan a menu or a day's meals (with and without your help) that he/she could prepare at home.
			h. use charts, pamphlets, or audiovisual aids to help present food buying tips and how to read food labels.
			i. provide educational literature, recipes, and sources of additional information, e.g., cookbooks, special foods, etc.
			j. have patient verbalize rationale for diet and major changes required by the therapeutic diet plan.
			k. develop rapport with patient to make more comfortable and develop trust. Examples: talk about other things than diet, ask questions about family, occupation, etc.
			l. on calorie restricted regimens, show the patient how calorie level was determined.
			m. have patient review diet information prior to time scheduled to discuss diet with dietitian.
			n. use simple terms understood by patient but don't talk down to the patient.
			o. continually assess fatigue and interest, if patient is extremely tired and shows lack of interest, discontinue session and reschedule.

Don't Use	Used Most Frequently	Most Effective	Counseling Strategy
			p. BE FLEXIBLE in requiring specific diet modifications and changes in lifestyle.
			q. teach and re-teach and re-teach. Don't expect patients to absorb all that is presented the first time. Stress minimum number, perhaps one, points at each session.
			r. arrange for referrals if follow-up is needed from the hospital.
			Comments:
			III. MOTIVATIONAL
			a. be positive in encouraging patient to follow recommended diet changes.
			b. make as few changes as possible in patient's diet, emphasize those aspects of the patient's diet that meet the therapeutic diet plan.
			c. ask patient about incentives and use those to motivate.
			d. discuss with patient how therapeutic diet plan can be worked into lifestyle, considering food preferences, food restrictions, food availability, etc.

Don't Use	Used Most Frequently	Most Effective	Counseling Strategy
			e. discuss positive factors to be gained by following the diet or making recommended changes in behavior.
			f. talk about generally poor dietary patterns of "most people."
			g. make clear that you expect the patient to follow the diet.
			h. refer to yourself as a health care professional in alliance with the doctor, or refer to the "doctor's orders."
			i. emphasize the consequences or dangers of not following the diet.
			j. try to link dietary with non-health benefits, e.g., appearance.
			k. describe your own experiences with a restricted diet, or those of a successful patient on a similar diet, to patient.
			l. show approval for, or otherwise reward (praise, compliment) patient for following some part of the diet, or for bringing a food record regardless of present nutritional status as measured by clinical or laboratory tests.
			m. involve several patients on the same regimen in a small support group.
			n. try to help patient feel he/she can have some control of his/her own health, life or eating. Examples: patient who says, "I eat whatever is cooked for me," "My friends tempt me," etc.

Don't Use	Used Most Frequently	Most Effective	Counseling Strategy
			o. refer to local support groups, e.g., Diabetes Association, etc. and/or recommend formal classes when available, e.g., diabetes classes at the Health Department.
			p. identify priority problems jointly with the patient.
			q. ask patient how much he/she thinks he/she can do, establish reasonable and achievable goals, identify a time frame, measures of achievement, and ways to achieve.
			r. establish a written or verbal contract with patient for dietary modifications and/or changes in priority problems.
			s. if patient does not see problems as problems, educate as to why behavior change is needed and why important for patient.
			t. use results of laboratory tests, growth charts, etc. to show progress and/or need for change.
			u. involve significant other in education regarding diet, encouraging behavioral changes, and providing positive support.
			v. provide alternatives for required food items when omitted from diet due to food preference, allergies, cultural and/or religious restrictions, etc.
			w. use examples of everyday activities and/or objectives to help patients gain a better perspective of how to change behavior, of protion sizes, exchange lists, etc.

Don't Use	Used Most Frequently	Most Effective	Counseling Strategy
			Comments:
			IV. BEHAVIORAL
			a. suggest that patients get a diet scale to weight some of their foods.
			b. jointly with patient suggest alternative foods and methods of preparation.
			c. have patient return a food diary to you when he/she is not coming for a visit (dropping it off, leaving it with doctor or nurse, or mailing it).
			d. suggest measures to control patient's eating environment, such as eating only in a certain place, at certain times, keeping restricted foods out of the house, eating slower, etc.
			e. suggest self-monitoring, through recording food intake, making a graph of weight or taking blood pressure.
			f. ask whether patient would be willing to let you talk with another family member or close friend, beyond the person who might routinely come to the doctor with him/her (over the telephone or in person).
			g. call patient between visits, or after discharge to see how he/she is doing.

Don't Use	Used Most Frequently	Most Effective	Counseling Strategy
			h. ask what part of the diet the patient thinks he/she can realistically follow and then set a short-term goal for that part of the regimen.
			i. examine patient's physical activity pattern and develop a plan for more exercise.
			j. ask a particularly successful patient to talk (on the telephone or in person) with other patients beginning the same type of diet.
			k. recommend that patient join an outside group (commercial or self-help), as well as continue to work with you (especially after hospital discharge).
			l. encourage patient to talk freely about problems other than food-related.
			m. assist patient in making other (non-food) changes in his/her life that might have a direct effect on eating patterns (find out about crafts groups, refer to social or medical services).
			Comments:

Don't Use	Used Most Frequently	Most Effective	Counseling Strategy
			V. ASSESSING PATIENT COMPLIANCE a. ask for more explanation about what happens when patient "goes off" the diet. b. have patient keep a food diary for you to look at, and then review it with him/her to identify possible examples of non-compliance. c. ask if patient has eaten certain foods in the past few days, e.g., foods he/she should not have or should restrict. d. ask if patient has eaten certain foods in the past few days, e.g., foods he/she should have some of or may need to add. e. ask a doctor or other professional who cares for patient about health status indicators of compliance and whether patient has talked about diet problems. f. ask how much of the diet patient is able to follow. g. ask others to what extent patient has been following his/her diet. Comments:

APPENDIX C

A SURVEY OF CLINICAL DIETITIANS REGARDING USE OF COUNSELING STRATEGIES

The purpose of this survey is to identify the feelings of clinical dietitians toward what they do in the counseling of patients on dietary modifications. The information obtained will be helpful in identifying competencies that need to be incorporated into dietetic training programs to improve the counseling skills of dietitians and, subsequently, improve dietary compliance of patients.

Please answer all the questions. If you wish to comment on any questions or to qualify your answers, please feel free to use the space in the margins.

Thank you for your help.



Department of Nutrition and Food Sciences
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Knoxville, Tennessee

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Q-1 There are many factors that influence what strategies you may use in counseling patients and the outcome of counseling sessions. Please indicate the importance of each of the listed patient characteristics in determining what you do in the counseling process.

	(Please circle your response) NOT IMPORTANT						EXTREMELY IMPORTANT
Attitude toward medical condition	1	2	3	4	5	6	7
Attitude toward nutrition	1	2	3	4	5	6	7
Attitude toward diet	1	2	3	4	5	6	7
Control of food purchasing and preparation	1	2	3	4	5	6	7
Cultural food habits	1	2	3	4	5	6	7
Educational level	1	2	3	4	5	6	7
Emotional problems	1	2	3	4	5	6	7
Interest in food purchasing and preparation	1	2	3	4	5	6	7
Knowledge of diet	1	2	3	4	5	6	7
Knowledge of medical condition	1	2	3	4	5	6	7
Living conditions	1	2	3	4	5	6	7
Management of resources	1	2	3	4	5	6	7
Socio-economic status	1	2	3	4	5	6	7
Support of family and friends	1	2	3	4	5	6	7
Use of misinformation	1	2	3	4	5	6	7
Variety of food available in the community	1	2	3	4	5	6	7
Willingness to make changes	1	2	3	4	5	6	7

Q-2 For each of the following counseling activities, please indicate how successful you feel in completing that activity. Please circle your response.

	Extremely Unsuccessful	*Quite Unsuccessful*	*Slightly Unsuccessful*	*Neither*	*Slightly Successful*	*Quite Successful*	*Extremely Successful*
Assess what is needed to help the patient	EU	QU	SU	N	SS	QS	ES
Explain to the patient changes needed in the diet regimen	EU	QU	SU	N	SS	QS	ES
Explain to the patient information about the disease condition	EU	QU	SU	N	SS	QS	ES
Motivate and encourage the patient to follow the diet regimen	EU	QU	SU	N	SS	QS	ES
Evaluate how well the patient is following the recommended diet regimen	EU	QU	SU	N	SS	QS	ES

Q-3 Now, we would like to determine how often you use certain counseling skills. Please indicate with approximately how many patients you use the counseling skills listed.

	(Please circle your response)				
1. Develop rapport with patient to make more comfortable and develop trust, e.g. talk about things other than diet, ask questions about family and occupation.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
2. Communicate interest to the patient by:					
---maintaining eye contact.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
---showing emphathy.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
---speaking slowly and clearly.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
---being relaxed.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
---sitting or leaning forward slightly.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
---expressing willingness to help.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
3. Actively listen to the patient, encourage the patient, and facilitate the counseling process by:					
---using open-ended questions.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
---using minimal encouragers, e.g. "MmHm".....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
---using paraphrasing or restatement, e.g. repeating what the person has just said.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
---using reflection of feelings or affective responses, e.g. responding to feelings rather than words.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
---silence.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
4. Use simple terms understood by the patient and in the vernacular to the patient.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
5. Stress minimum number of essential points in the available time.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
6. Present information in a concise, logical, and organized manner.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL

Q-4 Next, we would like you to indicate how prepared (capable) you feel you are in using certain counseling skills. We understand that to some extent your counseling skills are evaluated by patient reaction.

	(Please circle your response) NOT CAPABLE						EXTREMELY CAPABLE
1. Develop rapport with patient to make more comfortable and develop trust, e.g. talk about things other than diet, ask questions about family and occupation.....	1	2	3	4	5	6	7
2. Communicate interest to the patient by:							
---maintaining eye contact.....	1	2	3	4	5	6	7
---showing empathy.....	1	2	3	4	5	6	7
---speaking slowly and clearly.....	1	2	3	4	5	6	7
---having a relaxed body.....	1	2	3	4	5	6	7
---sitting or leaning forward slightly.....	1	2	3	4	5	6	7
---expressing willingness to help.....	1	2	3	4	5	6	7
3. Actively listen to the patient, encourage the patient, and faciliate the counseling process by:							
---using open-ended questions.....	1	2	3	4	5	6	7
---using minimal encouragers, e.g. "MmHm".....	1	2	3	4	5	6	7
---using paraphrasing or restatement, e.g. repeating what the person has just said.....	1	2	3	4	5	6	7
---using reflection of feelings or affective responses, e.g. responding to feelings rather than words.....	1	2	3	4	5	6	7
---silence.....	1	2	3	4	5	6	7
4. Use simple terms understood by the patient and in the vernacular to the patient.....	1	2	3	4	5	6	7
5. Stress minimum number of essential points in the available time.....	1	2	3	4	5	6	7
6. Present information in a concise, logical, and organized manner.....	1	2	3	4	5	6	7

Next, we would like to obtain your opinions regarding the use of various counseling strategies in your current practice (what you do when counseling patients). We are interested in several types of information concerning the strategies. You will be asked to respond to eight different questions regarding each strategy.

Q-5 First, for each of the following counseling strategies, please indicate how desirable your use of that strategy is when counseling patients. Please circle your response.

	Extremely Undesirable	Quite Undesirable	Slightly Undesirable	Neither	Slightly Desirable	Quite Desirable	Extremely Desirable
Obtain an in-depth dietary history.....	EU	QU	SU	N	SD	QD	ED
Identify environmental factors and cues affecting compliance.....	EU	QU	SU	N	SD	QD	ED
Determine willingness or resistance of patient to follow the diet regimen.....	EU	QU	SU	N	SD	QD	ED
Identify patient understanding of the relationship of diet and disease to the feeling of wellness.....	EU	QU	SU	N	SD	QD	ED
Use charts, pamphlets, audiovisual aids (educational TV, films, slide/tape) or computer assisted instruction to help explain the disease condition, physiologic process or medication as well as relationship to nutrition.....	EU	QU	SU	N	SD	QD	ED
Teach principles of the diet first, then discuss specific foods or restrictions.....	EU	QU	SU	N	SD	QD	ED
Use questions periodically to determine areas that may be unclear.....	EU	QU	SU	N	SD	QD	ED
Have patient plan a menu or a day's meals (without your help) that could be prepared at home.....	EU	QU	SU	N	SD	QD	ED
Discuss ways in which the diet regimen can be worked into the life-style of the patient.....	EU	QU	SU	N	SD	QD	ED
Show approval for or reward patient for following some part of the diet regardless of present nutritional status.....	EU	QU	SU	N	SD	QD	ED
Help patient feel he/she can have some control over his/her own health, life, or eating.....	EU	QU	SU	N	SD	QD	ED
Involve patient and significant other, e.g. family member or friend, in identifying priority problems and changes needed to deal with those problems.....	EU	QU	SU	N	SD	QD	ED
Determine what part of the diet the patient can realistically follow and set goals with the patient for that part of the diet regimen.....	EU	QU	SU	N	SD	QD	ED
Identify self-monitoring measures, e.g. recording food intake, making a graph of weight or taking blood pressure.....	EU	QU	SU	N	SD	QD	ED

Indicate how desirable your use of each strategy is when counseling patients.

	Extremely Undesirable	Quite Undesirable	Slightly Undesirable	Neither	Slightly Desirable	Quite Desirable	Extremely Desirable
Identify measures to control the patient's eating environment, e.g. eating only in a certain place, at certain times, eating slower, or keeping restricted foods out of the home	EU	QU	SU	N	SD	QD	ED
Assist patient in making other (non-food) changes in his/her life that might have a direct effect on eating behavior	EU	QU	SU	N	SD	QD	ED
Monitor laboratory values, e.g. blood and urine, and clinical findings	EU	QU	SU	N	SD	QD	ED
Ask significant others, e.g. family member or friend, to what extent patient has been following the diet regimen and whether patient has talked about diet problems	EU	QU	SU	N	SD	QD	ED
Determine from patient any problems following the diet, e.g. Has the patient eaten certain foods that should be restricted or that may cause health-related problems? Has the patient eaten certain foods that should be included or should be added to the diet?	EU	QU	SU	N	SD	QD	ED
Have patient keep a food record and/or obtain a 24-hour recall during visit and review with patient to identify examples of compliance and non-compliance	EU	QU	SU	N	SD	QD	ED

Q-6 Second, for the counseling strategies listed please indicate how likely your use of each strategy will promote patient compliance with the diet regimen. Please circle your response.

	Extremely Unlikely	Quite Unlikely	Slightly Unlikely	Neither	Slightly Likely	Quite Likely	Extremely Likely
Obtain an in-depth dietary history	EU	QU	SU	N	SL	QL	EL
Identify environmental factors and cues affecting compliance	EU	QU	SU	N	SL	QL	EL
Determine willingness or resistance of patient to follow the diet regimen	EU	QU	SU	N	SL	QL	EL
Identify patient understanding of the relationship of diet and disease to the feeling of wellness	EU	QU	SU	N	SL	QL	EL
Use charts, pamphlets, audiovisual aids (educational TV, films, slide/tape) or computer assisted instruction to help explain the disease condition, physiologic process or medication as well as relationship to nutriton	EU	QU	SU	N	SL	QL	EL
Teach principles of the diet first, then discuss specific foods or restrictions	EU	QU	SU	N	SL	QL	EL

Indicate how likely your use of each strategy will promote patient compliance with the diet regimen.

	Extremely Unlikely	Quite Unlikely	Slightly Unlikely	Neither	Slightly Likely	Quite Likely	Extremely Likely
Use questions periodically to determine areas that may be unclear.....	EU	QU	SU	N	SL	QL	EL
Have patient plan a menu or a day's meals (without your help) that could be prepared at home.....	EU	QU	SU	N	SL	QL	EL
Discuss ways in which the diet regimen can be worked into the life-style of the patient.....	EU	QU	SU	N	SL	QL	EL
Show approval for or reward patient for following some part of the diet regardless of present nutritional status.....	EU	QU	SU	N	SL	QL	EL
Help patient feel he/she can have some control over his/her own health, life, or eating.....	EU	QU	SU	N	SL	QL	EL
Involve patient and significant other, e.g. family member or friend, in identifying priority problems and changes needed to deal with those problems.....	EU	QU	SU	N	SL	QL	EL
Determine what part of the diet the patient can realistically follow and set goals with the patient for that part of the diet regimen.....	EU	QU	SU	N	SL	QL	EL
Identify self-monitoring measures, e.g. recording food intake, making a graph of weight or taking blood pressure.....	EU	QU	SU	N	SL	QL	EL
Identify measures to control the patient's eating environment, e.g. eating only in a certain place, at certain times, eating slower, or keeping restricted foods out of the home.....	EU	QU	SU	N	SL	QL	EL
Assist patient in making other (non-food) changes in his/her life that might have a direct effect on eating behavior.....	EU	QU	SU	N	SL	QL	EL
Monitor laboratory values, e.g. blood and urine, and clinical findings.....	EU	QU	SU	N	SL	QL	EL
Ask significant others, e.g. family member or friend, to what extent patient has been following the diet regimen and whether patient has talked about diet problems.....	EU	QU	SU	N	SL	QL	EL
Determine from patient any problems following the diet, e.g. Has the patient eaten certain foods that should be restricted or that may cause health-related problems? Has the patient eaten certain foods that should be included or should be added to the diet?.....	EU	QU	SU	N	SL	QL	EL
Have patient keep a food record and/or obtain a 24-hour recall during visit and review with patient to identify examples of compliance and non-compliance.....	EU	QU	SU	N	SL	QL	EL

Q-7 Third, for the counseling strategies listed please indicate how certain you feel the use of each strategy will promote patient compliance with the diet regimen.

	(Please circle your response)			
Obtain an in-depth dietary history.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN
Identify environmental factors and cues affecting compliance.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN
Determine willingness or resistance of patient to follow the diet regimen.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN
Identify patient understanding of the relationship of diet and disease to the feeling of wellness.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN
Use charts, pamphlets, audiovisual aids (educational TV, films, slide/tape) or computer assisted instruction to help explain the disease condition, physiologic process or medication as well as relationship to nutrition.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN
Teach principles of the diet first, then discuss specific foods or restrictions.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN
Use questions periodically to determine areas that may be unclear.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN
Have patient plan a menu or a day's meals (without your help) that could be prepared at home.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN
Discuss ways in which the diet regimen can be worked into the life-style of the patient.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN
Show approval for or reward patient for following some part of the diet regardless of present nutritional status.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN
Help patient feel he/she can have some control over his/her own health, life, or eating.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN
Involve patient and significant other, e.g. family member or friend, in identifying priority problems and changes needed to deal with those problems.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN
Determine what part of the diet the patient can realistically follow and set goals with the patient for that part of the diet regimen.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN
Identify self-monitoring measures, e.g. recording food intake, making a graph of weight or taking blood pressure.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN

Indicate how certain you feel the use of each strategy will promote patient compliance with the diet regimen.

	(Please circle your response)			
Identify measures to control the patient's eating environment, e.g. eating only in a certain place, at certain times, eating slower, or keeping restricted foods out of the home.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN
Assist patient in making other (non-food) changes in his/her life that might have a direct effect on eating behavior.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN
Monitor laboratory values, e.g. blood and urine, and clinical findings.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN
Ask significant others, e.g. family member or friend, to what extent patient has been following the diet regimen and whether patient has talked about diet problems?.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN
Determine from patient any problems following the diet, e.g. Has the patient eaten certain foods that should be restricted or that may cause health-related problems? Has the patient eaten certain foods that should be included or should be added to the diet?.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN
Have patient keep a food record and/or obtain a 24-hour recall during visit and review with patient to identify examples of compliance and non-compliance.....	NOT AT ALL CERTAIN	SLIGHTLY CERTAIN	QUITE CERTAIN	EXTREMELY CERTAIN

Q-8 Fourth, for the counseling strategies listed please indicate how prepared (comfortable) you are in using each strategy. Please circle your response.

	Extremely Unprepared	*Quite Unprepared*	*Slightly Unprepared*	*Neither*	*Slightly Prepared*	*Quite Prepared*	*Extremely Prepared*
Obtain an in-depth dietary history.....	EU	QU	SU	N	SP	QP	EP
Identify environmental factors and cues affecting compliance.....	EU	QU	SU	N	SP	QP	EP
Determine willingness or resistance of patient to follow the diet regimen.....	EU	QU	SU	N	SP	QP	EP
Identify patient understanding of the relationship of diet and disease to the feeling of wellness.....	EU	QU	SU	N	SP	QP	EP
Use charts, pamphlets, audiovisual aids (educational TV, films, slide/tape) or computer assisted instruction to help explain the disease condition, physiologic process or medication as well as relationship to nutrition.....	EU	QU	SU	N	SP	QP	EP
Teach principles of the diet first, then discuss specific foods or restrictions.....	EU	QU	SU	N	SP	QP	EP

Indicate how prepared (comfortable) you are in using each strategy.

	Extremely Unprepared	Quite Unprepared	Slightly Unprepared	Neither	Slightly Prepared	Quite Prepared	Extremely Prepared
Use questions periodically to determine areas that may be unclear.....	EU	QU	SU	N	SP	QP	EP
Have patient plan a menu or a day's meals (without your help) that could be prepared at home.....	EU	QU	SU	N	SP	QP	EP
Discuss ways in which the diet regimen can be worked into the life-style of the patient.....	EU	QU	SU	N	SP	QP	EP
Show approval for or reward patient for following some part of the diet regardless of present nutritional status.....	EU	QU	SU	N	SP	QP	EP
Help patient feel he/she can have some control over his/her own health, life, or eating.....	EU	QU	SU	N	SP	QP	EP
Involve patient and significant other, e.g. family member or friend, in identifying priority problems and changes needed to deal with those problems.....	EU	QU	SU	N	SP	QP	EP
Determine what part of the diet the patient can realistically follow and set goals with the patient for that part of the diet regimen.....	EU	QU	SU	N	SP	QP	EP
Identify self-monitoring measures, e.g. recording food intake, making a graph of weight or taking blood pressure.....	EU	QU	SU	N	SP	QP	EP
Identify measures to control the patient's eating environment, e.g. eating only in a certain place, at certain times, eating slower, or keeping restricted foods out of the home.....	EU	QU	SU	N	SP	QP	EP
Assist patient in making other (non-food) changes in his/her life that might have a direct effect on eating behavior.....	EU	QU	SU	N	SP	QP	EP
Monitor laboratory values, e.g. blood and urine, and clinical findings.....	EU	QU	SU	N	SP	QP	EP
Ask significant others, e.g. family member or friend, to what extent patient has been following the diet regimen and whether patient has talked about diet problems.....	EU	QU	SU	N	SP	QP	EP
Determine from patient any problems following the diet, e.g. Has the patient eaten certain foods that should be restricted or that may cause health-related problems? Has the patient eaten certain foods that should be included or should be added to the diet?.....	EU	QU	SU	N	SP	QP	EP
Have patient keep a food record and/or obtain a 24-hour recall during visit and review with patient to identify examples of compliance and non-compliance.....	EU	QU	SU	N	SP	QP	EP

Q-9 Fifth, for the counseling strategies listed please indicate how likely the Registered Dietitians you work with think you should use each strategy. Please circle your response.

	Extremely Unlikely	Quite Unlikely	Slightly Unlikely	Neither	Slightly Likely	Quite Likely	Extremely Likely
Obtain an in-depth dietary history	EU	QU	SU	N	SL	QL	EL
Identify environmental factors and cues affecting compliance	EU	QU	SU	N	SL	QL	EL
Determine willingness or resistance of patient to follow the diet regimen	EU	QU	SU	N	SL	QL	EL
Identify patient understanding of the relationship of diet and disease to the feeling of wellness	EU	QU	SU	N	SL	QL	EL
Use charts, pamphlets, audiovisual aids (educational TV, films, slide/tape) or computer assisted instruction to help explain the disease condition, physiologic process or medication as well as relationship to nutrition	EU	QU	SU	N	SL	QL	EL
Teach principles of the diet first, then discuss specific foods or restrictions	EU	QU	SU	N	SL	QL	EL
Use questions periodically to determine areas that may be unclear	EU	QU	SU	N	SL	QL	EL
Have patient plan a menu or a day's meals (without your help) that could be prepared at home	EU	QU	SU	N	SL	QL	EL
Discuss ways in which the diet regimen can be worked into the life-style of the patient	EU	QU	SU	N	SL	QL	EL
Show approval for or reward patient for following some part of the diet regardless of present nutritional status	EU	QU	SU	N	SL	QL	EL
Help patient feel he/she can have some control over his/her own health, life, or eating	EU	QU	SU	N	SL	QL	EL
Involve patient and significant other, e.g. family member or friend, in identifying priority problems and changes needed to deal with those problems	EU	QU	SU	N	SL	QL	EL
Determine what part of the diet the patient can realistically follow and set goals with the patient for that part of the diet regimen	EU	QU	SU	N	SL	QL	EL
Identify self-monitoring measures, e.g. recording food intake, making a graph of weight or taking blood pressure	EU	QU	SU	N	SL	QL	EL

Indicate how likely the Registered Dietitians you work with think you should use each strategy.

	Extremely Unlikely	Quite Unlikely	Slightly Unlikely	Neither	Slightly Likely	Quite Likely	Extremely Likely
Identify measures to control the patient's eating environment, e.g. eating only in a certain place, at certain times, eating slower, or keeping restricted foods out of the home	EU	QU	SU	N	SL	QL	EL
Assist patient in making other (non-food) changes in his/her life that might have a direct effect on eating behavior	EU	QU	SU	N	SL	QL	EL
Monitor laboratory values, e.g. blood and urine, and clinical findings	EU	QU	SU	N	SL	QL	EL
Ask significant others, e.g. family member or friend, to what extent patient has been following the diet regimen and whether patient has talked about diet problems?	EU	QU	SU	N	SL	QL	EL
Determine from patient any problems following the diet, e.g. Has the patient eaten certain foods that should be restricted or that may cause health-related problems? Has the patient eaten certain foods that should be included or should be added to the diet?	EU	QU	SU	N	SL	QL	EL
Have patient keep a food record and/or obtain a 24-hour recall during visit and review with patient to identify examples of compliance and non-compliance	EU	QU	SU	N	SL	QL	EL

Q-10 Sixth, for the counseling strategies listed please indicate how likely, generally speaking, you want to do what the Registered Dietitians you work with think you should do. Please circle your response.

	Extremely Unlikely	Quite Unlikely	Slightly Unlikely	Neither	Slightly Likely	Quite Likely	Extremely Likely
Obtain an in-depth dietary history	EU	QU	SU	N	SL	QL	EL
Identify environmental factors and cues affecting compliance	EU	QU	SU	N	SL	QL	EL
Determine willingness or resistance of patient to follow the diet regimen	EU	QU	SU	N	SL	QL	EL
Identify patient understanding of the relationship of diet and disease to the feeling of wellness	EU	QU	SU	N	SL	QL	EL
Use charts, pamphlets, audiovisual aids (educational TV, films, slide/tape) or computer assisted instruction to help explain the disease condition, physiologic process or medication as well as relationship to nutrition	EU	QU	SU	N	SL	QL	EL
Teach principles of the diet first, then discuss specific foods or restrictions	EU	QU	SU	N	SL	QL	EL

Indicate how likely, generally speaking, you want to do what the Registered Dietitians you work with think you should do.

	Extremely Unlikely	Quite Unlikely	Slightly Unlikely	Neither	Slightly Likely	Quite Likely	Extremely Likely
Use questions periodically to determine areas that may be unclear.....	EU	QU	SU	N	SL	QL	EL
Have patient plan a menu or a day's meals (without your help) that could be prepared at home.....	EU	QU	SU	N	SL	QL	EL
Discuss ways in which the diet regimen can be worked into the life-style of the patient.....	EU	QU	SU	N	SL	QL	EL
Show approval for or reward patient for following some part of the diet regardless of present nutritional status.....	EU	QU	SU	N	SL	QL	EL
Help patient feel he/she can have some control over his/her own health, life, or eating.....	EU	QU	SU	N	SL	QL	EL
Involve patient and significant other, e.g. family member or friend, in identifying priority problems and changes needed to deal with those problems.....	EU	QU	SU	N	SL	QL	EL
Determine what part of the diet the patient can realistically follow and set goals with the patient for that part of the diet regimen.....	EU	QU	SU	N	SL	QL	EL
Identify self-monitoring measures, e.g. recording food intake, making a graph of weight or taking blood pressure.....	EU	QU	SU	N	SL	QL	EL
Identify measures to control the patient's eating environment, e.g. eating only in a certain place, at certain times, eating slower, or keeping restricted foods out of the home.....	EU	QU	SU	N	SL	QL	EL
Assist patient in making other (non-food) changes in his/her life that might have a direct effect on eating behavior.....	EU	QU	SU	N	SL	QL	EL
Monitor laboratory values, e.g. blood and urine, and clinical findings.....	EU	QU	SU	N	SL	QL	EL
Ask significant others, e.g. family member or friend, to what extent patient has been following the diet regimen and whether patient has talked about diet problems.....	EU	QU	SU	N	SL	QL	EL
Determine from patient any problems following the diet, e.g. Has the patient eaten certain foods that should be restricted or that may cause health-related problems? Has the patient eaten certain foods that should be included or should be added to the diet?.....	EU	QU	SU	N	SL	QL	EL
Have patient keep a food record and/or obtain a 24-hour recall during visit and review with patient to identify examples of compliance and non-compliance.....	EU	QU	SU	N	SL	QL	EL

Q-11 Seventh, for the counseling strategies listed please indicate with approximately how many patients you use each strategy.

	(Please circle your response)				
Obtain an in-depth dietary history.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
Identify environmental factors and cues affecting compliance.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
Determine willingness or resistance of patient to follow the diet regimen.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
Identify patient understanding of the relationship of diet and disease to the feeling of wellness.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
Use charts, pamphlets, audiovisual aids (educational TV, films, slide/tape) or computer assisted instruction to help explain the disease condition, physiologic process or medication as well as relationship to nutrition.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
Teach principles of the diet first, then discuss specific foods or restrictions.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
Use questions periodically to determine areas that may be unclear.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
Have patient plan a menu or a day's meals (without your help) that could be prepared at home.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
Discuss ways in which the diet regimen can be worked into the life-style of the patient.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
Show approval for or reward patient for following some part of the diet regardless of present nutritional status.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
Help patient feel he/she can have some control over his/her own health, life, or eating.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
Involve patient and significant other, e.g. family member or friend, in identifying priority problems and changes needed to deal with those problems.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
Determine what part of the diet the patient can realistically follow and set goals with the patient for that part of the diet regimen.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
Identify self-monitoring measures, e.g. recording food intake, making a graph of weight or taking blood pressure.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL

Indicate with approximately how many patients you use each strategy.

	(Please circle your response)				
Identify measures to control the patient's eating environment, e.g. eating only in a certain place, at certain times, eating slower, or keeping restricted foods out of the home.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
Assist patient in making other (non-food) changes in his/her life that might have a direct effect on eating behavior.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
Monitor laboratory values, e.g. blood and urine, and clinical findings.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
Ask significant others, e.g. family member or friend, to what extent patient has been following the diet regimen and whether patient has talked about diet problems?.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
Determine from patient any problems following the diet, e.g. Has the patient eaten certain foods that should be restricted or that may cause health-related problems? Has the patient eaten certain foods that should be included or should be added to the diet?.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL
Have patient keep a food record and/or obtain a 24-hour recall during visit and review with patient to identify examples of compliance and non-compliance.....	NONE	LESS THAN HALF	ABOUT HALF	MORE THAN HALF	ALL

0-12 Eighth, for the counseling strategies listed please indicate how likely it is you intend to use each strategy in counseling patients. Please circle your response.

	Extremely Unlikely	*Quite Unlikely*	*Slightly Unlikely*	*Neither*	*Slightly Likely*	*Quite Likely*	*Extremely Likely*
Obtain an in-depth dietary history.....	EU	QU	SU	N	SL	QL	EL
Identify environmental factors and cues affecting compliance.....	EU	QU	SU	N	SL	QL	EL
Determine willingness or resistance of patient to follow the diet regimen.....	EU	QU	SU	N	SL	QL	EL
Identify patient understanding of the relationship of diet and disease to the feeling of wellness.....	EU	QU	SU	N	SL	QL	EL
Use charts, pamphlets, audiovisual aids (educational TV, films, slide/tape) or computer assisted instruction to help explain the disease condition, physiologic process or medication as well as relationship to nutrition.....	EU	QU	SU	N	SL	QL	EL
Teach principles of the diet first, then discuss specific foods or restrictions.....	EU	QU	SU	N	SL	QL	EL

Indicate how likely it is you intend to use each strategy in counseling patients.

	Extremely Unlikely	Quite Unlikely	Slightly Unlikely	Neither	Slightly Likely	Quite Likely	Extremely Likely
Use questions periodically to determine areas that may be unclear.....	EU	QU	SU	N	SL	QL	EL
Have patient plan a menu or a day's meals (without your help) that could be prepared at home.....	EU	QU	SU	N	SL	QL	EL
Discuss ways in which the diet regimen can be worked into the life-style of the patient.....	EU	QU	SU	N	SL	QL	EL
Show approval for or reward patient for following some part of the diet regardless of present nutritional status.....	EU	QU	SU	N	SL	QL	EL
Help patient feel he/she can have some control over his/her own health, life, or eating.....	EU	QU	SU	N	SL	QL	EL
Involve patient and significant other, e.g. family member or friend, in identifying priority problems and changes needed to deal with those problems.....	EU	QU	SU	N	SL	QL	EL
Determine what part of the diet the patient can realistically follow and set goals with the patient for that part of the diet regimen.....	EU	QU	SU	N	SL	QL	EL
Identify self-monitoring measures, e.g. recording food intake, making a graph of weight or taking blood pressure.....	EU	QU	SU	N	SL	QL	EL
Identify measures to control the patient's eating environment, e.g. eating only in a certain place, at certain times, eating slower, or keeping restricted foods out of the home.....	EU	QU	SU	N	SL	QL	EL
Assist patient in making other (non-food) changes in his/her life that might have a direct effect on eating behavior.....	EU	QU	SU	N	SL	QL	EL
Monitor laboratory values, e.g. blood and urine, and clinical findings.....	EU	QU	SU	N	SL	QL	EL
Ask significant others, e.g. family member or friend, to what extent patient has been following the diet regimen and whether patient has talked about diet problems.....	EU	QU	SU	N	SL	QL	EL
Determine from patient any problems following the diet, e.g. Has the patient eaten certain foods that should be restricted or that may cause health-related problems? Has the patient eaten certain foods that should be included or should be added to the diet?.....	EU	QU	SU	N	SL	QL	EL
Have patient keep a food record and/or obtain a 24-hour recall during visit and review with patient to identify examples of compliance and non-compliance.....	EU	QU	SU	N	SL	QL	EL

Q-13 Now, we would like to get your opinions on several issues regarding patient counseling. For each of the following statements, please indicate the extent to which you agree or disagree?

	To what extent do you agree or disagree? (Please circle your response)			
The average patient does not have enough nutritional knowledge to take an active role in planning the diet.....	STRONGLY DISAGREE	MILDLY DISAGREE	MILDLY AGREE	STRONGLY AGREE
If comprehensive diet instruction is given initially, a patient will be able to successfully make multiple modifications in the diet.....	STRONGLY DISAGREE	MILDLY DISAGREE	MILDLY AGREE	STRONGLY AGREE
An in-depth probe of a patient's dietary habits is seldom worth the time and effort involved.....	STRONGLY DISAGREE	MILDLY DISAGREE	MILDLY AGREE	STRONGLY AGREE
The 24-hour recall is a dependable method of dietary assessment.....	STRONGLY DISAGREE	MILDLY DISAGREE	MILDLY AGREE	STRONGLY AGREE
It is important for the patient to feel that the dietitian is listening to what he/she is saying.....	STRONGLY DISAGREE	MILDLY DISAGREE	MILDLY AGREE	STRONGLY AGREE
Dealing with a patient's emotions is beyond the role of the dietitian.....	STRONGLY DISAGREE	MILDLY DISAGREE	MILDLY AGREE	STRONGLY AGREE
Most individuals have good intentions, but they are incapable of following a diet regimen.....	STRONGLY DISAGREE	MILDLY DISAGREE	MILDLY AGREE	STRONGLY AGREE
Most members of the health care team in my facility are supportive of my role as a counselor.....	STRONGLY DISAGREE	MILDLY DISAGREE	MILDLY AGREE	STRONGLY AGREE
Most members of the health care team in my facility usually make adequate use of the dietitian's expertise.....	STRONGLY DISAGREE	MILDLY DISAGREE	MILDLY AGREE	STRONGLY AGREE
A dietitian should only teach the facts, and not try to "persuade" a patient to follow the diet.....	STRONGLY DISAGREE	MILDLY DISAGREE	MILDLY AGREE	STRONGLY AGREE
It is too time-consuming to individually tailor the diet to fit the life-style of the patient.....	STRONGLY DISAGREE	MILDLY DISAGREE	MILDLY AGREE	STRONGLY AGREE
I cannot motivate my patients to follow the diet regimen.....	STRONGLY DISAGREE	MILDLY DISAGREE	MILDLY AGREE	STRONGLY AGREE
Feelings of the patient toward the dietitian and/or other members of the health care team affect the level of compliance to the diet.....	STRONGLY DISAGREE	MILDLY DISAGREE	MILDLY AGREE	STRONGLY AGREE

Q-14 What individuals other than the patients themselves have had the most influence on the strategies you now use in counseling patients?

Q-15 What factors most influence the strategies you now use in counseling patients?

Next, we would like to obtain some demographic information about you.

Q-16 Your gender. (Circle number of your response)

1 MALE
2 FEMALE

Q-17 Your present age. (Circle number of your response)

1 20 to 25
2 26 to 30
3 31 to 35
4 36 to 40
5 41 to 45
6 46 to 50
7 51 to 55
8 56 to 60
9 OVER 61

Q-18 Your ethnic backbround. (Circle number of your response)

1 AMERICAN INDIAN
2 BLACK
3 CAUCASIAN
4 HISPANIC
5 ORIENTAL
6 OTHER, PLEASE SPECIFY: _____

Q-19 Your basic dietetic education program had which of the following emphasis? (Circle number of your response)

1 BACHELOR'S---COORDINATED DIETETICS PROGRAM
2 BACHELOR'S + INTERNSHIP
3 BACHELOR'S + TRAINEESHIP
4 BACHELOR'S + PREPLANNED WORK EXPERIENCE
5 COMBINED INTERNSHIP/MASTER'S
6 MASTER'S + WORK EXPERIENCE
7 OTHER, PLEASE SPECIFY: _____

Q-20 Your basic dietetic education program had which of the following emphasis? (Circle number of your response)

1 CLINICAL DIETETICS
2 COMMUNITY DIETETICS
3 FOOD SYSTEMS MANAGEMENT
4 GENERALIST
5 PUBLIC HEALTH NUTRITION
6 OTHER, PLEASE SPECIFY: _____

Q-21 What is the highest degree you have obtained? (Circle number of your response)

1 BACHELOR'S
2 MASTER'S
3 DOCTORATE
4 OTHER, PLEASE SPECIFY: _____

Q-22 How many years have you been employed in the dietetics profession? ____YEARS

Q-23 How many years in the last 10 years have you been employed as a clinical dietitian? ____YEARS

Q-24 How many years have you worked in the facility where you are now employed? ____YEARS

Q-25 How many years experience have you had in each of the following activities? (Activity was your major responsibility)

1 ADMINISTRATION/MANAGEMENT _____YEARS
2 PATIENT CARE, HOSPITAL _____YEARS
3 OUTPATIENT CLINIC _____YEARS
4 RESEARCH _____YEARS
5 TEACHING STUDENTS _____YEARS

Q-26 Please indicate the settings in which you counsel patients in your present position. (Circle number or numbers)

1 ACUTE CARE FACILITY
2 AMBULATORY CARE - OUTPATIENT CLINIC
3 AMBULATORY CARE - PUBLIC HEALTH CLINIC
4 DAY CARE CENTER/NURSERY SCHOOL
5 HOME OF PATIENT
6 RESIDENTIAL INSTITUTION FOR CHILDREN
7 LONG-TERM CARE/REHABILITATION FACILITY
8 PUBLIC/PRIVATE SCHOOL
9 OTHER, PLEASE SPECIFY: _____

Q-27 In which setting do you most frequently counsel patients? Indicate number from items listed in Q-26. _____

Q-28 Please indicate the age groups of patients that you counsel in your present position. (Circle number or numbers)

1 CHILDREN (1 year-10 years)
2 ADOLESCENTS (11 years-18 years)
3 YOUNG ADULTS (19 years-29 years)
4 ADULTS (30 years-59 years)
5 OLDER ADULTS (60 years and older)

Q-29 What age group of patients do you counsel most frequently? Indicate number from items listed in Q-28. _____

Q-30 Circle the number(s) for the major conditions that you counsel patients in your present position.

1 ALLERGIES
2 CARDIOVASCULAR DISORDERS
3 DIABETES/OBESITY
4 GASTROINTESTINAL DISORDERS
5 LIVER DISORDERS
6 NUTRITIONAL SUPPORT
7 PREGNANCY AND/OR LACTATION
8 RENAL DISORDERS
9 OTHER, PLEASE SPECIFY: _____

Q-31 How much of your time is spent in providing direct patient care services? _____% OF TIME

Q-32 On the average, how many patients do you interact with in a day? _____PATIENTS

Q-33 On the average, how many patients do you counsel in a day? _____PATIENTS

Q-34 On the average, how much time do you usually spend with a patient being counseled for the first time? _____MINUTES

Q-35 On the average, how much time do you usually spend with a patient being counseled for the second or third time? _____MINUTES

Please take a few minutes and check that you have answered all the questions on every page. It is very easy to turn two pages at once and miss some questions. Once you have completed the questionnaire, please fold it in half and place in the enclosed self-addressed postage paid manilla envelope.

Thank you for taking the time to complete this questionnaire. Your contribution is greatly appreciated.

If you would like a summary of the results, please print your name and address on the back of the return envelope (DO NOT PUT YOUR NAME AND ADDRESS ON THE QUESTIONNAIRE). We will see that you get a copy.

APPENDIX D

TABLE D-1

COUNSELING CATEGORIES AND STRATEGIES IDENTIFIED
IN NOMINAL GROUP PROCESS

Category	Counseling Strategy
ASSESSMENT	
	a. Ask if patient has ever followed a diet before, or if family or close friends have.
	b. Check medical record for medical history, age, ethnic group, religion, marital status, occupation, laboratory and clinical reports.
	c. Determine willingness or resistance of patient to follow the diet.
	d. If patient has followed a modified diet before, ask what happened? Was he/she successful? Able to stick it out? Were there problems? Or, how successful was a family member or friend with a similar diet?
	e. Determine what patient considers to be "healthy".
	f. Determine if patient understands the relationship of the disease condition to possible outcomes and quality of life.
	g. Determine emotional reaction to disease condition, e.g. stage of acceptance.
	h. Ask if patient anticipates any problem(s) with the diet? Determine how much of the diet the patient will be able to follow.
	i. Identify environmental factors and cues affecting outcomes.
	j. Obtain typical food intake or 24-hour recall and/or food frequency.
	k. Determine food availability and availability of resources.
	l. Determine how much patient thinks diet can do to improve his/her health.
	m. Obtain input from other health professionals to gain insight into dietary habits, lifestyle, home situation, education, etc.
EDUCATIONAL (INSTRUCTIONAL)	
	a. Use food models, food pictures, and/or nutrient composition cards
	b. Use charts, pamphlets, diet sheets, audiovisual aids (educational TV, films, slide/tape) or computer assisted instruction to help explain how the dietary regimen works.

TABLE D-1 (Continued)

Category	Counseling Strategy
	c. Use charts, pamphlets, audiovisual aids (educational TV, films, slide/tape) or computer assisted instruction to help explain disease, condition, physiologic process, or medication and relationship to nutrition. d. Ask patient specific questions periodically about areas that may be unclear. e. Teach principles of the diet first, then discuss specific foods/restrictions. f. Have patient select foods from a special menu (e.g. hospital menu or menus from frequently visited restaurants) with a variety of choices and/or go over menus to show how they fit the diet plan. g. Have patient plan a menu or a day's meals (with and without your help) that could be prepared at home. h. Provide educational literature, recipes, and sources of additional information, e.g. cookbooks, special foods, etc.
MOTIVATIONAL	a. Be positive in encouraging patient to follow recommended changes and convey confidence that patient is able to follow the diet. b. Discuss with patient how diet plan can be worked into life-style considering food preferences, food restrictions, food availability, etc. Make as few changes as possible in diet, emphasize aspects of patient's diet that meet the diet plan. c. Refer to yourself as a member of the health care team and/or refer to the doctor's orders. d. Emphasize the consequences or dangers of not following the diet. Identify symptoms that patient may experience if diet is not followed. e. Describe your own experiences with a restricted diet, or those of a successful patient on a similar diet to the patient.

TABLE D-1 (Continued)

Category	Counseling Strategy
	f. Show approval for or reward (praise, complement) patient for following some part of the diet or for bringing a food record regardless of present nutritional status as measured by clinical or laboratory tests.
	g. Involve several patients on the same regimen in a small support group.
	h. Try to help patient feel he/she can have some control of his/her own health, life, or eating. Examples: patient who says, "I eat whatever is cooked for me", "My friends tempt me".
	i. Use results of laboratory tests, growth charts, blood pressure, or weight changes to show progress and/or need for change.
	j. Involve significant other, e.g. family member, friend, in education regarding diet, encouraging behavioral changes, and providing positive support.
	k. Identify priority problems and dietary and/or behavioral changes needed to deal with the problems jointly with the patient.
	l. Call patient between visits, or after discharge to see how he/she is doing and/or give your phone number for patient to call if have any questions.
	m. Communicate in the vernacular appropriate to the patient.
BEHAVIORAL	
	a. Suggest that patient obtain a diet scale to weigh foods.
	b. Ask what part of the diet the patient thinks he/she can realistically follow and then set a short-term goal for that part of the regimen, e.g. jointly identify alternative foods and methods of preparation.
	c. Have patient return a food diary to you when he/she is not coming for a visit.
	d. Suggest measures to control patient's eating environment, e.g. eating only in a certain place, at certain times, keeping restricted foods out of the house, eating slower, etc.
	e. Suggest self-monitoring through recording food intake, e.g. making a graph of weight or taking blood pressure.

TABLE D-1 (Continued)

Category	Counseling Strategy
	f. Examine physical activity pattern and develop plan for more exercise. g. Ask a particularly successful patient to talk (on the telephone or in person) with other patients beginning the same type of diet. h. Recommend that patient join an outside group (commercial or self-help) as well as continue to work with you. Example: refer to local support groups, recommend formal classes when available, or recommend maintenance classes on a scheduled basis. i. Assist patient in making other (non-food) changes in his/her life that might have a direct effect on eating patterns. j. Encourage patient to talk freely about problems other than food-related.
EVALUATION OF PATIENT COMPLIANCE	
	a. Ask patient for more explanation about what happens when he/she "goes off" the diet, e.g. what symptoms experienced? etc. b. Have patient keep a food diary for you to review and/or obtain a 24-hour recall during visit and review with patient to identify possible examples of compliance and non-compliance. c. Ask if patient has eaten certain foods in the past few days that he/she should not have or should restrict and foods that may cause health-related problems. d. Ask if patient has eaten certain foods in the past few days that he/she should have some of or may need to add to the diet. e. Ask a doctor or other health team member who cares for the patient about health status indicators of compliance and whether patient has talked about diet problems. f. Ask how much of the diet patient is able to follow, e.g. determine what problems patient is having following the diet. g. Ask others to what extent patient has been following his/her diet. h. Monitor laboratory values, e.g. blood and urine, and clinical findings.

TABLE D-2

FREQUENCIES, PERCENTAGE DISTRIBUTIONS, AND MEANS FOR PREPAREDNESS[a] OF CLINICAL DIETITIANS IN USING 20 COUNSELING STRATEGIES

Counseling Strategy	Slightly Prepared N	Slightly Prepared %	Quite Prepared N	Quite Prepared %	Extremely Prepared N	Extremely Prepared %	Mean	S.D.	N
I. Assessment									
1.	9	3.2	115	40.9	152	54.1	2.46	0.70	281
2.	52	18.5	148	52.7	69	24.6	1.96	0.83	281
3.	36	12.9	170	60.7	70	25.0	2.08	0.74	280
4.	39	13.9	163	58.2	73	26.1	2.07	0.74	280
II. Educational									
5.	64	22.8	131	46.6	54	19.2	1.65	1.13	281
6.	12	4.3	127	45.2	140	49.8	2.44	0.61	281
7.	23	8.2	153	54.5	97	34.5	2.18	0.80	281
8.	34	12.1	127	45.4	110	39.3	2.19	0.83	280
III. Motivational									
9.	20	7.1	157	55.8	103	36.7	2.29	0.62	281
10.	54	19.2	129	45.9	76	27.0	1.89	0.98	281
11.	56	19.9	143	50.9	70	24.9	1.93	0.90	281
12.	48	17.1	154	54.8	62	22.1	1.88	0.94	281

TABLE D-2 (Continued)

Counseling Strategy	Slightly Prepared N	Slightly Prepared %	Quite Prepared N	Quite Prepared %	Extremely Prepared N	Extremely Prepared %	Mean	S.D.	N
IV. Behavioral									
13.	36	12.8	152	54.1	88	31.3	2.14	0.76	281
14.	58	20.6	139	49.5	51	18.2	1.67	1.08	281
15.	68	24.2	150	53.4	49	17.4	1.80	.88	281
16.	101	36.1	94	33.5	34	12.7	1.23	1.24	280
V. Evaluation									
17.	40	14.3	124	44.4	101	36.2	2.10	0.90	279
18.	57	20.4	132	47.1	50	17.9	1.59	1.15	280
19.	26	9.3	161	57.3	86	30.6	2.12	0.82	281
20.	23	8.2	145	51.6	106	37.7	2.22	0.84	281

N = Number of Respondents, Total N = 283.

[a]Preparedness Scale ranged from -3 (Extremely Unprepared) to +3 (Extremely Prepared).

TABLE D-3

FREQUENCIES, PERCENTAGE DISTRIBUTIONS, AND MEANS OF BEHAVIORAL BELIEFS OF CLINICAL DIETITIANS TOWARD THE USE OF 20 COUNSELING STRATEGIES

Counseling Strategy	Likelihood[a] use will promote patient compliance: Slightly Likely N	%	Quite Likely N	%	Extremely Likely N	%	N	Certainty[b] use will promote patient compliance: Slightly Certain N	%	Quite Certain N	%	Extremely Certain N	%	N	Behavioral Belief Mean	S.D.
I. Assessment																
1.	76	27.0	88	31.2	46	16.3	282	86	30.6	82	29.2	34	12.1	281	3.48	4.05
2.	61	21.6	145	51.4	63	22.3	282	76	27.2	138	49.5	52	18.6	279	5.68	3.48
3.	40	14.3	99	35.4	112	40.0	280	45	16.1	109	39.1	98	35.1	279	6.60	4.25
4.	45	16.1	146	52.1	74	26.4	280	73	26.0	136	48.4	63	22.4	281	6.06	3.40
II. Educational																
5.	94	33.6	111	39.6	45	16.1	280	106	37.7	107	38.1	39	13.9	281	4.43	3.73
6.	34	12.1	137	48.8	87	31.0	281	66	23.5	132	47.0	56	19.9	281	6.09	3.57
7.	49	17.4	160	57.0	52	18.5	281	66	23.5	144	51.2	56	19.9	281	5.64	3.43
8.	70	24.9	123	43.8	66	23.5	281	60	21.4	141	50.2	63	22.4	281	5.66	3.70
III. Motivational																
9.	21	7.5	135	47.9	124	44.0	282	27	9.6	149	53.0	101	35.9	281	7.83	3.05
10.	66	23.6	144	51.4	54	19.3	280	99	35.4	111	39.6	48	17.1	280	5.29	3.26
11.	45	16.0	138	48.9	95	33.7	282	55	19.6	136	48.6	77	27.5	280	6.70	3.43
12.	56	19.9	151	53.5	61	21.6	282	76	27.0	141	50.2	45	16.0	281	5.52	3.19
IV. Behavioral																
13.	35	12.5	128	45.6	111	39.5	281	45	16.1	134	47.9	96	34.3	280	7.21	3.45
14.	105	37.2	110	39.0	26	9.2	282	104	37.0	110	39.2	24	8.5	281	3.72	3.32
15.	118	41.8	121	42.9	20	7.1	282	114	40.6	121	43.1	14	5.0	281	3.79	2.87
16.	100	35.6	112	39.9	31	11.0	281	112	39.9	105	37.4	26	9.3	281	3.89	3.45
V. Evaluation																
17.	81	29.2	84	30.3	44	15.9	277	92	32.7	84	29.9	26	9.3	281	3.46	4.02
18.	106	37.7	76	27.1	20	7.1	281	102	36.4	81	28.9	13	4.6	280	2.59	3.38
19.	81	28.8	138	49.1	39	13.9	281	90	32.0	137	48.8	32	11.4	281	4.74	3.29
20.	81	28.8	123	43.8	47	16.7	281	86	31.0	122	44.0	36	13.0	277	4.54	3.60

N = Number of Respondents, Total N = 283.

[a]Likelihood Scale ranged from -3 (Extremely Unlikely) to +3 (Extremely Likely).

[b]Certainty Scale ranged from +1 (Not at All Certain) to +4 (Extremely Certain).

TABLE D-4

FREQUENCIES, PERCENTAGE DISTRIBUTIONS, AND MEANS OF ATTITUDE[a] OF CLINICAL DIETITIANS TOWARD THE USE OF 20 COUNSELING STRATEGIES

Counseling Strategy	Slightly Desirable N	%	Quite Desirable N	%	Extremely Desirable N	%	Attitude Mean	S.D.	N
I. Assessment									
1.	40	14.2	136	48.2	92	32.6	2.04	0.96	282
2.	31	11.0	151	53.7	97	34.5	2.22	0.68	281
3.	15	5.4	111	39.9	150	54.0	2.47	0.65	278
4.	34	12.1	145	51.6	97	34.5	2.18	0.76	281
II. Educational									
5.	62	22.0	130	46.1	55	19.5	1.68	1.03	282
6.	19	6.7	134	47.5	121	42.9	2.29	0.77	282
7.	20	7.1	130	46.1	131	46.5	2.39	0.63	282
8.	48	17.0	120	42.6	98	34.8	2.05	0.90	282
III. Motivational									
9.	8	2.8	105	37.2	169	60.0	2.57	0.55	282
10.	55	19.5	114	40.4	93	33.0	1.97	0.97	282
11.	21	7.4	111	39.4	148	52.5	2.43	0.68	282
12.	34	12.1	146	51.8	98	34.8	2.20	0.70	282

TABLE D-4 (Continued)

Counseling Strategy	Slightly Desirable N	%	Quite Desirable N	%	Extremely Desirable N	%	Attitude Mean	S.D.	N
IV. Behavioral									
13.	28	9.9	115	40.8	131	46.5	2.29	0.81	282
14.	87	31.0	117	41.6	45	16.0	1.56	1.05	281
15.	72	25.7	152	54.3	40	14.3	1.73	0.90	280
16.	99	35.1	117	41.5	29	10.3	1.43	0.99	282
V. Evaluation									
17.	55	19.5	111	39.4	104	36.9	2.08	0.88	282
18.	94	33.5	96	34.2	35	12.5	1.26	1.19	281
19.	35	12.5	148	52.7	93	33.1	2.17	0.72	281
20.	41	14.6	131	46.8	83	29.6	1.93	1.02	280

N = Number of Respondents. Total N = 283.

[a]Attitude Scale ranged from -3 (Extremely Undesirable) +3 (Extremely Desirable).

TABLE D-5

FREQUENCIES, PERCENTAGE DISTRIBUTIONS, AND MEANS FOR SUBJECTIVE NORM OF CLINICAL DIETITIANS TOWARD THE USE OF 20 COUNSELING STRATEGIES

Counseling Strategy	How likely[a] peers think should use? Slightly Likely N	%	Quite Likely N	%	Extremely Likely N	%	N	How likely[a] want to do what peers think should do? Slightly Likely N	%	Quite Likely N	%	Extremely Likely N	%	N	Subjective Norm Mean	S.D.
I. Assessment																
1.	45	16.2	104	37.5	106	38.3	277	34	12.4	107	39.1	96	35.0	274	4.41	3.78
2.	39	14.1	131	47.3	90	32.5	277	28	10.3	134	49.1	85	31.1	273	4.27	3.55
3.	22	8.0	125	45.3	123	44.6	276	15	5.5	121	44.2	114	41.6	274	5.03	3.80
4.	39	14.1	131	47.3	98	35.4	277	16	5.8	131	47.8	103	37.6	274	4.64	3.51
II. Educational																
5.	62	22.4	104	37.5	75	27.1	277	60	21.9	105	38.3	64	23.4	274	3.38	3.52
6.	40	14.4	134	48.4	86	31.0	277	20	7.3	117	42.7	104	38.0	274	4.39	3.54
7.	31	11.3	140	50.9	92	34.5	275	15	5.5	132	48.4	98	35.9	273	4.58	3.54
8.	67	24.2	114	41.2	73	26.4	277	59	21.5	103	37.6	76	27.7	274	3.78	3.40
III. Motivational																
9.	29	10.5	139	50.2	100	36.1	277	15	5.5	136	49.6	100	36.5	274	4.74	3.52
10.	81	29.2	111	40.1	47	17.0	277	51	18.6	127	46.4	56	20.4	274	2.99	3.34
11.	68	24.6	119	43.1	74	26.8	276	35	12.8	135	49.3	79	28.8	274	3.78	3.56
12.	52	18.8	132	47.7	74	26.7	277	41	15.1	128	47.1	72	26.5	272	3.72	3.50
IV. Behavioral																
13.	39	14.1	145	52.3	80	28.9	277	24	8.8	130	47.4	92	33.6	274	4.31	3.50
14.	90	32.5	97	35.0	36	13.0	277	72	26.4	99	36.3	43	15.8	273	2.47	3.01
15.	83	30.0	124	44.7	40	14.4	277	61	22.3	128	46.9	44	16.1	273	2.86	3.21
16.	95	34.4	87	31.5	33	12.0	276	80	29.3	96	35.2	43	15.8	273	2.29	3.11
V. Evaluation																
17.	50	18.1	114	41.2	90	32.5	277	44	16.1	110	40.3	87	31.9	273	4.14	3.56
18.	99	35.7	103	37.2	35	12.6	277	71	26.1	100	36.8	41	15.1	272	2.50	3.05
19.	43	15.5	152	54.9	73	26.4	277	36	13.2	133	48.7	76	27.8	273	3.96	3.54
20.	62	22.5	119	43.1	59	21.4	276	53	19.6	106	39.1	70	25.8	271	3.44	3.46

N = Number of Respondents. Total N = 283.

[a]Likely Scale ranges from -3 (Extremely Unlikely) to +3 (Extremely Likely).

TABLE D-6

FREQUENCIES, PERCENTAGE DISTRIBUTIONS, AND MEANS FOR INTENTION OF CLINICAL DIETITIANS TO USE 20 COUNSELING STRATEGIES

Counseling Strategy	Slightly Likely N	%	Quite Likely N	%	Extremely Likely N	%	Intention Mean	S.D.	N
I. Assessment									
1.	37	13.2	101	36.1	113	40.4	1.89	1.43	280
2.	32	11.4	135	48.2	106	37.9	2.18	0.87	280
3.	7	2.5	98	35.0	172	61.4	2.56	0.64	280
4.	19	6.8	134	48.0	123	44.1	2.34	0.71	279
II. Educational									
5.	69	24.7	91	32.6	74	26.5	1.46	1.50	279
6.	17	6.1	118	42.4	137	49.3	2.38	0.75	278
7.	18	6.5	136	48.8	118	42.3	2.29	0.79	279
8.	87	31.1	108	38.6	48	17.1	1.43	1.29	280
III. Motivational									
9.	20	7.1	137	48.9	121	43.2	2.33	0.71	280
10.	55	19.7	120	43.0	83	29.7	1.89	1.07	279
11.	37	13.2	132	47.1	103	36.8	2.16	0.84	280
12.	46	16.6	142	51.3	67	24.2	1.87	0.98	277

TABLE D-6 (Continued)

Counseling Strategy	Slightly Likely N	%	Quite Likely N	%	Extremely Likely N	%	Intention Mean	S.D.	N
IV. Behavioral									
13.	33	11.8	128	45.7	111	39.6	2.20	0.83	280
14.	103	36.9	95	34.1	27	9.7	1.10	1.36	279
15.	85	30.4	115	41.1	42	15.0	1.46	1.17	280
16.	91	32.5	88	31.4	41	14.6	1.15	1.45	280
V. Evaluation									
17.	36	12.9	97	34.6	123	43.9	2.06	1.16	280
18.	90	32.3	95	34.1	33	11.8	1.05	1.51	279
19.	36	12.9	153	54.6	85	30.4	2.12	0.75	280
20.	78	28.0	102	36.6	52	18.6	1.38	1.38	279

N = Number of Respondents. Total N = 283.

[a]Likely Scale ranges from -3 (Extremely Unlikely) to +3 (Extremely Likely).

TABLE D-7

FREQUENCIES, PERCENTAGE DISTRIBUTIONS, AND MEANS OF REPORTED USE[a] BY CLINICAL DIETITIANS OF 20 COUNSELING STRATEGIES

Counseling Strategy	About Half N	About Half %	More Than Half N	More Than Half %	All Patients N	All Patients %	Reported Use Mean	S.D.	N
I. Assessment									
1,	46	16.4	116	41.4	59	21.1	3.61	1.07	280
2.	53	18.9	139	49.6	65	23.2	3.88	0.86	280
3.	16	5.8	118	42.4	141	50.7	4.42	0.67	278
4.	28	10.0	144	51.2	100	35.6	4.19	0.74	281
II. Educational									
5.	67	23.8	69	24.6	56	19.9	3.28	1.19	281
6.	23	8.2	122	43.7	125	44.8	4.30	0.76	279
7.	32	11.4	138	49.3	102	36.4	4.19	0.75	280
8.	74	26.3	83	29.5	24	8.5	3.07	1.05	281
III. Motivational									
9.	46	16.4	123	43.8	106	37.7	4.17	0.79	281
10.	61	21.8	101	36.1	65	23.2	3.62	1.07	280
11.	50	17.8	140	49.8	76	27.1	3.98	0.83	281
12.	79	28.2	115	41.1	34	12.1	3.47	0.93	280

TABLE D-7 (Continued)

Counseling Strategy	About Half N	About Half %	More Than Half N	More Than Half %	All Patients N	All Patients %	Reported Use Mean	S.D.	N
IV. Behavioral									
13.	59	21.0	133	47.3	72	25.6	3.92	0.85	281
14.	71	25.4	55	19.6	14	5.0	2.74	1.01	280
15.	100	35.6	75	26.7	15	5.3	3.04	0.91	281
16.	73	26.1	51	18.2	17	6.1	2.75	1.01	280
V. Evaluation									
17.	42	15.0	98	34.9	96	34.2	3.85	1.10	281
18.	69	24.6	69	24.6	10	3.6	2.79	1.00	280
19.	56	20.0	151	53.9	47	16.8	3.78	0.83	280
20.	58	20.8	75	26.9	28	10.0	2.99	1.12	279

N = Number of Respondents. Total N = 283.

[a]Reported Use Scale ranged from +1 (none) to +5 (all patients).

APPENDIX E

TABLE E-1

BIVARIATE CORRELATIONS BETWEEN 24 EXTERNAL VARIABLES AND PREPAREDNESS IN USING 20 COUNSELING STRATEGIES

	Demographic Characteristics									Situational Characteristics								Attitude Toward Targets						
Strategies	Age	B.S. + Intern	Intern + M.S.	Generalist	Community	M.S. Degree	Exper. Index	F.S.A.[a] Exp.	Outpt. Exp.	Patient Contact Index	Age A Index	Age B Index	Acute Care	Long/ Term Rehab.	M.C.[b] Index	Pg/ Lact.	Renal Disorder	Attitude Index	Socio-Cultural Index	Psych. Index	Knowledge Index	A.L.[c] Index	C.I.[d] Index	Organ. Index
ASSESSMENT																								
1.	-.04	-.07	.06	-.05	.07	-.04	-.06	-.05	.05	-.14*	.05	-.02	.04	-.09	-.00	.08	-.02	.15**	.15**	.08	.07	.25***	.30***	.28***
2.	.11	.01	.00	-.00	.09	-.05	.08	.05	.16**	-.01	.00	.08	-.04	-.05	.12	.08	.03	.18**	.14**	.24***	.08	.32***	.36***	.29***
3.	.01	.00	.00	.06	-.02	-.02	.01	-.05	.06	.04	-.12*	.03	.04	-.07	.12*	.01	-.05	.25***	.06	.23***	.01	.34***	.41***	.35***
4.	.03	-.00	.00	-.07	.01	-.03	.03	-.02	.11	.08	-.11	-.02	.04	-.06	.04	-.04	-.00	.25***	.12*	.26***	.15*	.36***	.40***	.39***
EDUCATIONAL																								
5.	.09	.00	.03	.06	-.00	-.02	.07	.11	.13*	.10	.02	-.02	-.05	.02	.01	.04	.02	.20***	.07	.14*	.10	.31***	.25***	.24***
6.	-.04	.00	-.00	.00	-.02	-.08	-.00	-.04	.11	-.08	.05	.01	.07	-.05	-.09	.01	.03	.21***	.18**	.25***	.17**	.34***	.37***	.33***
7.	.02	-.04	.01	.01	.04	-.08	.01	.03	.07	-.05	.07	-.02	.02	-.05	.32	.08	.03	.24***	.12*	.25***	.10	.41***	.50***	.44***
8.	-.05	.07	-.04	-.05	.04	-.11	.01	-.03	-.09	-.07	-.05	-.02	.03	-.05	-.00	.02	.00	.27***	.13*	.20***	.14*	.28***	.33***	.30***
MOTIVATIONAL																								
9.	.07	.00	-.00	.05	.06	-.05	.07	.05	.01	-.13*	-.01	.06	.01	-.06	-.00	.08	-.02	.30***	.13*	.25***	.09	.32***	.32***	.37***
10.	.00	.02	.04	.01	.04	.04	-.00	.01	.14*	-.15*	.00	-.06	-.03	-.13*	.07	.02	.01	.17**	.20**	.33***	.14*	.40***	.41***	.34***
11.	.19*	-.05	.05	.03	-.08	.02	.13*	.15*	.11	.05	.02	-.07	-.08	-.05	.06	.07	.03	.20***	.13*	.27***	.12*	.32***	.28***	.36***
12.	.05	-.02	-.03	.05	-.05	-.01	.05	.07	.07	.10	-.06	-.06	.01	-.04	.11	-.13*	.04	.17**	.08	.19**	-.02	.27***	.23***	.28***
BEHAVIORAL																								
13.	.07	.04	.06	.01	.03	.05	.07	.08	.14*	-.01	-.02	-.05	.00	-.03	.11	-.03	.03	.14*	.10	.27***	.09	.36***	.35***	.38***
14.	.08	-.00	.03	-.01	-.03	-.00	.09	.12*	.12*	.05	.01	-.07	-.16**	-.06	.02	.05	-.01	.16**	.09	.18**	.05	.31***	.28***	.23***
15.	.07	.02	.09	.00	.03	.02	.05	.13*	.11	-.01	.04	.04	-.07	-.07	.18**	.01	-.04	.21***	.11	.12*	.09	.26***	.25***	.25***
16.	.13*	.10	-.07	.02	-.08	.02	.12*	.12*	.22***	.08	-.02	-.06	-.18**	-.05	.12*	.06	.04	.20***	.16**	.28***	.10	.34***	.30***	.24***
EVALUATION																								
17.	.04	-.08	.12*	.02	.01	.06	-.00	.05	.13*	.08	-.04	.01	-.10	.00	.02	-.02	.18**	.08	.08	.12*	.09	.14*	.12*	.10
18.	-.02	.04	-.05	-.03	-.11	-.03	.04	.11	-.02	.11	-.01	-.09	.03	-.05	.03	-.13*	.08	.20**	.21***	.32***	.03	.28***	.24***	.24***
19.	.05	.03	-.03	.04	.05	.01	.08	.07	.08	-.06	-.01	.02	-.04	-.09	.10	-.04	.11	.21***	.16**	.25***	.18**	.35***	.37***	.33***
20.	-.00	.11	-.08	.04	-.02	-.04	.02	.05	-.06	-.06	.08	.06	-.03	-.09	.02	.08	.03	.17**	.17**	.15*	.14*	.26**	.25***	.20***

*Significant at .05.

**Significant at .01.

***Significant at .001.

[a]Food Systems Administration Experience.

[b]Medical Condition Index.

[c]Active Listening Index.

[d]Communicate Interest Index.

TABLE E-2

BIVARIATE CORRELATIONS BETWEEN 24 EXTERNAL VARIABLES AND ATTITUDE TOWARD USING 20 COUNSELING STRATEGIES

	Demographic Characteristics									Situational Characteristics								Attitude Toward Targets						
Strategies	Age	B.S. + Intern	Intern + M.S.	Generalist	Community	M.S. Degree	Exper. Index	F.S.A.[a] Index	Outpt. Index	Patient Contact Index	Age A Index	Age B Index	Acute Care	Long/ Term Rehab.	M.C.[b] Index	Pg/ Lact.	Renal Disorder	Attitude Index	Socio-Cultural Index	Psych. Index	Knowledge Index	A.L.[c] Index	C.L.[d] Index	Organ. Index
ASSESSMENT																								
1	.14*	.03	.03	.02	.04	.00	.13*	.10	.07	-.01	-.03	-.13*	-.02	.02	-.12*	-.10	.04*	.18**	.22***	.16***	.13*	.07	.08	.12*
2	.10	.06	.01	-.05	.11	.06	.06	.03	.13	-.00	.03	-.04	-.07	-.09	.03	.01	.03	.18**	.24***	.27***	.11	.19**	.25***	.17**
3	-.11	.15*	-.01	.09	-.03	-.10	-.14*	-.08	-.02	-.12*	.04	-.04	-.00	-.08	.15*	.07	-.02	.23***	.13*	.23***	.18**	.25***	.27***	.28***
4	.10	.06	-.07	-.04	.02	-.11	.07	.02	.01	.03	.03	-.09	.04	.02	.06	-.06	.07	.27***	.23***	.28***	.27***	.15**	.12*	.17**
EDUCATIONAL																								
5	.05	-.05	-.01	-.04	.07	-.07	.05	.08	.01	.05	-.04	-.01	-.03	.03	.04	-.00	.02	.17**	.16**	.14**	.21***	.18**	.06	.10
6	.05	.10	-.09	.00	-.04	-.15**	.06	-.00	.06	.01	.02	-.06	.09	-.02	-.00	-.06	.02	.18**	.28***	.26***	.30***	.24***	.13*	.12*
7	.04	-.07	.01	-.03	.06	-.10	.03	.02	-.00	-.09	-.02	-.12*	.01	.04	.00	.01	.10	.17**	.28***	.24***	.23***	.29***	.23***	.17**
8	.01	.07	-.07	-.02	.04	-.08	.02	-.04	-.08	-.02	.06	-.07	.02	.08	.02	.03	.04	.13*	.22***	.13*	.21***	.18**	.12*	.10
MOTIVATIONAL																								
9	.10	.06	-.01	.15*	.06	.04	.07	.07	.03	-.06	.07	-.01	-.02	-.02	.07	.10	-.02	.20***	.23***	.25***	.11	.28***	.21***	.23***
10	.04	.04	-.03	.02	.01	.04	.04	.02	.13*	-.14*	.14*	.04	-.06	-.09	.09	.12	-.01	.11	.20***	.28***	.18**	.25***	.33***	.20***
11	.12*	.06	-.03	.05	.02	-.04	.06	.02	.12*	-.07	.09	.06	-.07	-.02	.11	.07	.03	.26***	.20***	.31***	.11	.21***	.22***	.22***
12	.13*	.05	-.11	.04	-.02	-.02	.09	.05	.04	-.01	-.03	.01	-.08	.06	.11	-.08	.01	.17**	.16**	.21***	.02	.16**	.09	.15**
BEHAVIORAL																								
13	.12*	.17**	.04	.07	.04	.04	.10	.04	.14*	-.19**	-.00	.04	-.04	-.02	.02	-.03	-.05	.15**	.14*	.25***	.07	.17***	.14*	.15*
14	.17**	.04	.06	-.04	-.03	.06	.18*	.07	.08	-.07	.05	-.09	-.07	-.03	-.07	-.04	-.04	.22***	.23***	.32***	.20***	.21***	.17**	.12*
15	.13*	.08	-.00	-.06	.05	-.09	.10	.06	.09	-.11	.02	.04	-.06	-.00	.07	-.03	.02	.13*	.30***	.30***	.17**	.09	.11	.06
16	.25***	.13	.00	-.01	-.01	.04	.24***	.15	.23***	-.09	.11	-.06	-.19**	.03	.02	.03	.04	.18**	.33***	.38***	.14*	.25***	.28***	.16**
EVALUATION																								
17	.19***	.02	.01	-.03	.03	-.02	.11	.08	.15*	.08	.01	-.03	.00	.01	.02	-.11	.12	.14	.21***	.20***	.22**	.19**	.17**	.06
18	-.04	.02	-.07	-.06	.02	-.07	.02	.06	-.16**	.15**	-.12*	-.04	.11	.03	.04	-.22***	.09	.23***	.23***	.25***	.12	.19***	.06	.10
19	.09	.03	-.00	.02	-.01	-.02	.05	.09	.02	.08	-.04	-.11	-.01	.05	-.00	-.02	.05	.16**	.20***	.32***	.17**	.28***	.10	.28***
20	.12*	.08	-.02	-.05	.05	-.05	.11	.08	.02	-.05	-.01	-.08	-.04	-.02	-.05	.03	-.02	.15*	.31***	.25***	.17**	.24***	.09	.09

*Significant at .05.

**Significant at .01.

***Significant at .001.

[a]Food Systems Administration Experience

[b]Medical Condition Index

[c]Active Listening Index

[d]Communicate Interest Index

TABLE E-3

BIVARIATE CORRELATIONS BETWEEN 24 EXTERNAL VARIABLES AND SUBJECTIVE NORM TOWARD USING 20 COUNSELING STRATEGIES

	Demographic Characteristics									Situational Characteristics								Attitude Toward Targets						
Strategies	Age	B.S. + Intern	Intern + M.S.	General-list	Community	M.S. Degree	Exper. Index	F.S.A.[a] Exp.	Outpt. Exp.	Patient Contact Index	Age A Index	Age B Index	Acute Care	Long/ Term Rehab.	M.C.[b] Index	Pg/ Lact	Renal Dis-order	Atti-tude Index	Socio-Cultural Index	Psych. Index	Knowledge Index	A.L.[c] Index	C.I.[d] Index	Organ. Index
ASSESSMENT																								
1	.18**	.11	-.11	-.05	.02	-.06	.13*	.10	-.14	-.06	-.01	-.05	-.11	-.04	-.02	.12	.04	.08	.09	.05	.14*	.09	.08	.11
2	.16**	.12*	-.12*	.01	.10	-.06	.10	.08	.06	.01	.02	.02	-.05	-.04	.08	.10	.09	.15**	.25***	.19**	.18**	.16**	.11	.14*
3	.06	.07	-.17**	-.00	.06	-.07	.02	.02	.03	.00	-.03	.02	-.01	-.04	.13*	.09	.07	.18**	.15*	.17**	.13*	.21**	.13*	.19**
4	.09	.14*	-.19**	.03	.07	-.05	.07	.05	-.02	.04	.05	-.02	.02	-.05	.07	.09	.08	.17**	.19***	.17**	.18**	.18**	.13*	.14*
EDUCATIONAL																								
5	.13*	.06	-.11	-.03	.00	.06	.10	.10	.08	.09	-.05	-.09	-.04	-.01	-.08	.06	.02	.09	.11	.12*	.11	.15**	.07	.14*
6	.19**	.13*	-.15**	-.04	.03	-.07	.16**	.13*	.20***	.02	.02	-.09	-.10	.00	-.05	.04	-.03	.21***	.18**	.15**	.17**	.23***	.17**	.21***
7	.15*	.06	-.19***	-.01	.06	-.09	.09	.03	.10	-.01	-.03	-.08	-.04	-.02	.00	.07	.00	.19**	.20***	.12*	.16**	.23***	.16**	.18**
8	.14*	.16**	-.17**	-.08	.05	-.03	.09	.04	.01	.11	-.02	-.04	-.06	-.01	-.03	.02	-.03	.18**	.13*	.13*	.20***	.20***	.15**	.20***
MOTIVATIONAL																								
9	.16**	.10	-.16**	-.02	.12	-.03	.11	.10	.02	.02	.03	.01	-.04	-.04	.00	.13*	-.01	.19**	.22***	.17**	.22***	.18**	.07	.13*
10	.15*	.11	-.16**	-.03	.05	.01	.12*	.09	.10	.00	-.08	-.10	-.05	-.05	-.02	.03	.04	.14*	.33***	.25***	.24***	.23***	.13*	.19**
11	.24***	.12	-.14*	.01	.09	-.02	.20**	.16**	.03	.07	.01	-.02	-.02	.00	-.01	.09	.08	.21***	.26**	.21***	.22***	.18**	.07	.16**
12	.12*	.11	-.16**	.01	-.04	-.03	.10	.03	.03	.01	-.05	-.05	.03	-.04	.03	.06	.04	.22***	.25***	.15*	.18**	.17**	.02	.10
BEHAVIORAL																								
13	.14*	.14*	-.15*	-.03	.09	-.02	.10	.07	.07	.03	.03	-.02	-.06	.00	-.04	.06	.01	.17**	.19**	.20***	.17**	.17**	.10	.16**
14	.21***	.11	-.12*	-.03	-.00	-.00	.16**	.09	.18**	.17**	.01	-.08	-.22***	-.02	-.07	-.03	-.05	.17**	.19***	.20***	.21***	.21***	.16**	.21***
15	.13*	.14*	-.16**	-.07	.10	-.03	.08	.08	.05	.12*	-.09	-.06	-.13*	-.03	.03	-.05	-.01	.20***	.23***	.22***	.18**	.20***	.11	.18**
16	.25***	.17**	-.14*	.02	.04	.05	.18**	.10	.14*	.11	-.04	-.13	-.16**	-.05	.03	.03	.05	.13*	.28***	.28***	.22***	.19**	.11	.12*
EVALUATION																								
17	.11	.02	-.09	-.01	.01	.04	.02	.01	.12*	.01	-.00	-.07	-.02	-.05	.01	-.03	.10	.10	.05	.09	.14*	.21***	.14*	.20***
18	.15*	.10	-.17**	.01	-.05	-.02	.13*	.01	.04	.15**	-.11	-.10	.04	-.00	-.00	-.06	.06	.14*	.18**	.19**	.12*	.15**	-.00	.08
19	.15*	.11	-.17**	-.03	.06	-.02	.10	.03	.07	.04	-.06	-.06	-.06	-.06	.00	.04	.05	.28***	.32***	.25***	.21***	.24***	.12*	.15*
20	.19***	.17**	-.21***	-.03	.03	-.04	.13*	.06	.19**	.07	-.08	-.09	-.13*	-.05	.03	-.01	.01	.18**	.17**	.12*	.20***	.21***	.13*	.24***

*Significant at .05

**Significant at .01.

***Significant at .001.

[a]Food Systems Administration Experience

[b]Medical Condition Index

[c]Active Listening Index

[d]Communicate Interest Index

TABLE E-4

BIVARIATE CORRELATIONS BETWEEN 24 EXTERNAL VARIABLES AND INTENTION TO USE 20 COUNSELING STRATEGIES

	Demographic Characteristics									Situational Characteristics								Attitude Toward Targets						
Strategies	Age	B.S. + Intern	Intern + M.S.	Generalist	Community	M.S. Degree	Exper. Index	F.S.A.[a] Exp.	Outpt. Exp.	Patient Contact Index	Age A Index	Age B Index	Acute Care	Long/ Term Rehab.	M.C.[b] Index	Pg/ Lact.	Renal Disorder	Attitude Index	Socio-Cultural Index	Psych. Index	Knowledge Index	A.L.[c] Index	C.I.[d] Index	Organ. Index
ASSESSMENT																								
1.	.14*	.06	.07	-.05	-.02	.05	.13*	.08	.15*	-.12*	.02	-.16**	-.12*	.04	-.17**	.04	.10	.14*	.15*	.13*	.05	.01	.06	.04
2.	.13*	.11	-.02	.03	.04	-.09	.13*	.16**	.08	.01	.07	-.02	-.12	.04	.06	-.01	.15*	.06	.21***	.25***	.08	.20***	.21***	.18**
3.	.00	.02	-.02	.13*	.02	-.08	.01	.05	.01	-.07	-.01	.04	.04	.09	.11	-.00	-.01	.17**	.07	.20***	.02	.28***	.36***	.38***
4.	-.01	.01	.03	.02	.04	-.08	.00	.09	-.01	.07	.00	-.03	.02	.08	.04	-.00	.09	.14*	.06	.24***	.09	.21***	.22***	.29***
EDUCATIONAL																								
5.	.07	.00	.04	.02	-.15	.05	.05	.13*	-.01	.15**	-.10	-.06	-.07	.08	-.05	-.08	-.00	.11	.03	.15*	.05	.09	.05	.04
6.	.03	.09	-.02	.01	-.06	-.17**	.07	.07	.11	-.01	.01	-.01	.00	.08	.02	-.06	.03	.16**	.07	.17**	.11	.21***	.18**	.26***
7.	-.02	.06	.03	-.01	-.01	-.20*	-.01	.02	.03	-.07	.04	.01	-.05	.05	-.00	-.02	.06	.13*	.02	.12*	.03	.26***	.30***	.26***
8.	.05	.19**	-.14*	-.03	-.04	-.07	.04	.05	-.06	-.01	-.02	-.11	-.03	.05	-.09	-.05	.07	.13*	.17**	.14*	.17**	.21***	.13*	.10
MOTIVATIONAL																								
9.	.09	.16**	-.02	.14*	-.02	-.09	.08	.10	.03	-.12*	.02	.16**	-.04	.00	.13*	-.05	.05	.21***	.12*	.28***	.05	.24***	.27***	.27***
10.	.06	.08	-.00	.07	-.00	.02	.07	-.03	.10	-.09	.02	.01	-.04	.03	-.01	-.03	-.02	.20***	.18**	.28***	.07	.28***	.38***	.23***
11.	.18**	.11	.00	.11	-.06	-.04	.16**	.16**	.08	.07	.04	-.03	-.07	.03	-.00	-.02	.13*	.20***	.15*	.30***	.09	.29***	.29***	.28***
12.	.05	.10	-.07	.09	-.11	-.05	.10	.10	-.02	.08	-.08	-.09	.05	.05	.01	-.20***	.05	.12*	.08	.20***	.03	.23***	.13*	.25***
BEHAVIORAL																								
13.	.09	.12	.03	.03	-.02	-.05	.09	.10	.14*	-.06	.01	.02	-.06	.03	.02	-.07	-.02	.09	.07	.25***	.03	.29***	.30***	.34***
14.	.18**	-.01	.03	-.11	-.05	-.01	.14*	.01	.20***	-.00	.02	-.07	-.18**	-.00	-.16**	-.00	-.08	.14*	.17**	.17**	.09	.19**	.15*	.09
15.	.05	.03	.03	-.04	-.01	-.02	.01	.07	.06	.04	.00	.15**	-.14*	.05	.09	-.07	-.03	.10	.21***	.21***	.10	.18**	.20***	.12
16.	.20***	.07	.04	.05	-.06	.04	.15	.15*	.17**	.13*	.06	.00	-.19**	.06	.01	-.00	.01	.19**	.19**	.26***	.01	.19**	.20***	.10
EVALUATION																								
17.	.02	-.08	.10	-.02	.03	-.02	.01	-.05	.09	-.01	-.10	-.02	.06	.10	-.02	-.07	.17**	.13*	.17**	.22***	.16**	.18**	.21***	.12*
18.	.04	-.01	-.04	-.01	-.01	-.02	.09	.10	-.06	.20***	-.07	-.08	.07	.09	-.01	-.22***	.05	.17**	.15*	.21***	.01	.15**	.07	.14*
19.	.08	-.01	.03	.02	.03	-.04	.08	.06	.12	.04	-.06	.02	-.06	.03	-.02	-.13*	.05	.23***	.21***	.24***	.12*	.23***	.21***	.25***
20.	.11	.06	.03	-.10	-.07	.03	.10	.07	.09	-.03	.06	-.03	-.14*	.03	-.13*	-.03	.01	.23***	.23***	.19***	.19**	.18**	.09	.17**

*Significant at .05.

**Significant at .01.

***Significant at .001.

[a]Food Systems Administration Experience

[b]Medical Condition Index

[c]Active Listening Index

[d]Communicate Interest Index

TABLE E-5

BIVARIATE CORRELATIONS BETWEEN 24 EXTERNAL VARIABLES AND REPORTED USE OF 20 COUNSELING STRATEGIES

	Demographic Characteristics									Situational Characteristics								Attitude Toward Targets						
Strategies	Age	B.S. + Intern	Intern + M.S.	Generalist	Community	M.S. Degree	Exper. Index	F.S.A.[a] Exp.	Outpt. Exp.	Patient Contact Index	Age A Index	Age B Index	Acute Care	Long/ Term Rehab.	M.C.[b] Index	Pg/ Lact.	Renal Disorder	Attitude Index	Socio-Cultural Index	Psych. Index	Knowledge Index	A.L.[c] Index	C.I.[d] Index	Organ. Index
ASSESSMENT																								
1.	.16**	.02	.08	-.08	.02	.10	.11	.08	.26**	-.14*	-.00	-.20***	-.21***	-.01	-.21***	.08	.08	.10	.05	.06	.02	.02	.02	.11
2.	.17**	.05	.09	.08	-.00	.01	.13*	.13*	.08	.03	.03	-.02	-.07	-.05	.01	.07	.13*	.08	.14*	.18**	.03	.14*	.13*	.11
3.	-.02	.04	.01	.10	-.01	-.10	.04	-.00	.00	-.04	-.13*	.05	-.02	-.05	.08	-.02	-.04	.10	-.04	.13*	-.05	.23***	.28***	.29***
4.	.09	.01	-.03	.06	-.04	-.04	.09	.05	.10	.06	-.04	-.01	-.03	.06	-.02	-.03	.12	.16	.08	.24***	.13*	.19**	.16**	.26***
EDUCATIONAL																								
5.	.12*	.06	.01	.10	-.17**	.05	.10	.12*	.07	.12*	-.05	-.07	-.11	.05	-.09	.04	.01	.10	.04	.11	.09	.13*	.07	.13*
6.	.02	-.01	.01	-.06	-.00	-.03	.03	.02	.14*	.01	-.01	-.02	-.03	-.04	-.07	-.05	-.01	.14*	.12*	.13*	.11	.21***	.17**	.23***
7.	-.02	.02	-.01	.02	-.04	-.08	-.01	-.03	.04	.05	-.00	-.05	-.07	.09	.01	.09	.03	.12	.06	.14*	.05	.31***	.39***	.27***
8.	.07	.11	-.08	-.06	-.05	.05	.15*	.03	-.07	-.01	-.00	-.11	-.06	.01	-.14*	-.05	.05	.06	.14*	.11	.18**	.16**	.11	.09
MOTIVATIONAL																								
9.	.11	.09	-.04	.13*	.05	.01	.12	.16**	.05	-.09	.05	.06	-.16**	.03	.00	-.00	.03	.07	.05	.17**	-.00	.23***	.16**	.26***
10.	.11	.05	.03	.04	-.04	.08	.09	.10	.18**	-.03	-.04	-.04	-.15*	-.09	-.07	.02	-.04	.12*	.18**	.28***	.08	.31***	.28***	.26***
11.	.22***	.00	.01	.13*	.06	-.01	.18**	.21***	.16**	.09	.03	-.00	-.20***	.01	-.04	.07	.12*	.17**	.13*	.24***	.11	.31***	.23***	.32***
12.	.01	.02	.03	.05	-.13	.00	.06	.07	-.01	.09	-.09	-.12*	-.03	.02	-.11	-.13*	.08	.08	.01	.08	-.06	.14*	.04	.19**
BEHAVIORAL																								
13.	.08	-.01	.07	.04	-.06	.11	.07	.11	.11	.00	-.00	-.07	-.09	-.02	-.03	-.05	.01	.06	.02	.21***	-.05	.13*	.18**	.24***
14.	.09	-.04	.07	-.03	-.10	.07	.11	-.01	.22***	.05	.05	-.11	-.25***	-.06	-.16**	.04	.05	.09	.09	.16**	.06	.16**	.15*	.16**
15.	.16**	.08	.05	.01	-.08	-.01	.11	.12*	.10	.10	-.00	.08	-.19**	.02	.02	-.06	-.10	.13*	.07	.15*	.06	.16**	.10	.07
16.	.22***	.07	.08	.08	-.04	.11	.18**	.14*	.26***	.06	.09	.04	-.28***	-.04	-.01	.09	.07	.13*	.11	.23***	-.00	.14*	.21***	.14*
EVALUATION																								
17.	-.00	-.03	.08	-.01	-.04	.01	.01	-.05	.14*	.08	-.04	-.03	-.01	.06	-.03	-.03	.16**	.01	.05	.11	.07	.09	.10	.03
18.	.06	.01	-.01	.03	-.07	.08	.08	.15*	.00	.15*	-.10	-.13*	-.05	.08	-.07	-.08	.07	.15*	.14*	.19**	.02	.22	.07	.12*
19.	.14*	.06	.01	.04	-.01	-.02	.12	.16*	.14*	.09	-.07	-.05	-.17**	.06	-.07	-.02	.08	.19**	.10	.23***	.05	.16**	.14*	.16**
20.	.08	.02	.08	-.06	-.08	.11	.17	.11	.15*	-.02	-.05	-.05	-.23***	.02	-.15*	.05	.00	.13*	.09	.10	.14*	.08	.05	.13*

*Significant at .05.

**Significant at .01.

***Significant at .001.

[a]Food Systems Administration Experience

[b]Medical Condition Index

[c]Active Listening Index

[d]Communicate Interest Index

APPENDIX F

TABLE F-1

STANDARDIZED REGRESSION COEFFICIENTS AND MULTIPLE COEFFICIENTS OF DETERMINANTS (R^2) FOR THE REGRESSION OF PREPAREDNESS IN USING 20 COUNSELING STRATEGIES ON 24 EXTERNAL VARIABLES

	Demographic Characteristics									Situational Characteristics							Attitude Toward Targets								
Strategies	Age	B.S. + Intern	Intern + M.S.	Generalist	Community	M.S. Degree	Exper. Index	F.S.A.[a] Exp.	Outpt. Exp.	Patient Contact Index	Age A Index	Age B Index	Acute Care	Long/ Term Rehab.	M.C.[b] Index	Pg/ Lact.	Renal Disorder	Attitude Index	Socio-Cultural Index	Psych. Index	Knowledge Index	A.L.[c] Index	C.I.[d] Index	Organ. Index	R^2	Adj. R^2
ASSESSMENT																									
1.	.08	-.02	.10	-.06	.01	-.10	-.12	.03	.04	-.11	.06	.01	-.08	-.05	-.07	.03	-.03	.06	.21**	-.14	-.10	.07	.20**	.16*	.19	.12
2.	.07	-.02	.03	-.01	.03	-.05	.01	.06	.13	.02	-.04	.09	.05	-.04	.06	.07	.02	.09	.01	.09	-.08	.09	.22**	.10	.23	.16
3.	.03	-.07	-.01	.08	-.07	-.02	.02	-.04	.04	.06	-.12*	.06	.04	-.07	.10	.04	-.07	.20***	-.11	.16*	-.18**	.11	.25***	.13	.31	.25
4.	.00	-.01	-.00	.06	-.04	-.02	.03	.02	.10	.10	-.09	.04	.08	-.05	-.00	-.00	-.01	.14*	-.07	.12	-.01	.09	.21**	.20**	.29	.22
EDUCATIONAL																									
5.	.03	-.03	.05	.09	-.00	-.02	-.04	.12	.14	.14*	.01	.02	.05	.02	-.03	.05	.03	.16*	-.05	-.04	.01	.22**	.10	.05	.18	.11
6.	-.09	-.03	.01	-.04	-.07	-.10	.01	.06	.15*	-.04	.08	.09	.14*	-.03	-.19**	-.02	.00	.07	.09	.06	-.02	.11	.21**	.14*	.27	.20
7.	.11	-.06	.03	-.02	-.06	-.12*	-.09	.08	-.00	-.03	.06	.03	.05	-.05	-.06	.05	.02	.13*	-.02	.07	-.10	.07	.36***	.22***	.36	.30
8.	-.07	.08	.01	-.10	-.01	-.11	.09	.02	-.18*	-.07	-.05	.01	-.08	-.07	-.07	.04	.01	.19**	.01	.05	-.03	.00	.23**	.16*	.23	.16
MOTIVATIONAL																									
9.	-.01	-.07	-.01	.05	.00	-.06	.03	.09	.06	-.11	-.05	.12*	.04	-.08	-.07	.08	-.01	.22***	-.03	.12	-.11	.07	.12	.23***	.28	.21
10.	-.06	.01	.06	-.01	-.04	.00	-.00	.09	.10	-.13*	.00	-.02	.01	-.13*	.05	-.04	-.04	-.00	.04	.19**	-.07	.17*	.21**	.08	.29	.23
11.	.18	-.11	.03	.04	-.16**	-.01	-.04	.11	-.01	.05	-.01	-.01	-.04	-.09	.06	.06	.03	.08	-.07	.15*	-.02	.07	.13	.24***	.27	.21
12.	-.03	-.09	-.05	.08	-.09	-.01	.03	.08	.09	.09	-.02	-.04	.03	-.07	.12	-.14*	-.00	.13*	-.01	.11	-.19**	.13	.07	.15*	.21	.13
BEHAVIORAL																									
13.	-.01	.07	.09	-.01	-.03	.06	.01	.10	.14*	.01	-.01	-.02	.09	-.04	.11	-.04	.01	.00	-.05	.15*	-.07	.15*	.13	.22**	.27	.20
14.	-.13	-.04	.04	-.00	-.07	-.03	.14	.13	.04	.04	-.03	-.03	-.14*	-.11	.04	.03	-.01	.10	-.01	.06	-.08	.16*	.16*	.05	.19	.11
15.	-.09	.04	.10	-.03	-.09	.02	.05	.19**	.09	.00	.06	.06	-.05	-.10	.18**	-.04	-.07	.14*	.08	-.08	-.05	.10	.12	.13	.21	.14
16.	-.10	.04	-.09	-.03	-.14*	.08	.11	.13	.16*	.09	-.05	-.03	-.11	-.07	.15**	.04	.03	.12*	-.03	.14*	-.07	.14	.15*	.04	.28	.21
EVALUATION																									
17.	.03	-.06	.12	.11	.02	.02	-.06	.04	.12	.10	-.08	.05	-.07	.00	-.01	.00	.19**	.01	.01	.02	.06	.07	.05	.02	.12	.04
18.	-.26*	-.01	-.09	-.11	-.19**	-.01	.14	.20**	.00	.08	.07	-.04	.02	-.11	.02	-.14	.03	.11	.10	.23**	-.21**	.11	.09	.09	.28	.21
19.	-.10	-.02	-.03	.03	-.01	.03	.14	.11	.02	-.05	-.03	.06	-.08	-.12*	.05	-.06	.08	.08	.01	.07	.02	.08	.22**	.14	.24	.17
20.	-.04	.10	-.04	-.05	-.07	.01	.02	.10	-.16*	-.04	.08	.10	-.11	-.11	-.05	.04	.02	.09	.10	-.03	.01	.06	.16*	.11	.17	.09

*Significant at .05.

**Significant at .01.

***Significant at .001.

[a]Food Systems Administration Experience

[b]Medical Condition Index

[c]Active Listening Index

[d]Communicate Interest Index

TABLE F-2

STANDARDIZED REGRESSION COEFFICIENTS AND MULTIPLE COEFFICIENTS OF DETERMINANTS (R^2) FOR THE REGRESSION OF ATTITUDE TOWARD USE OF 20 COUNSELING STRATEGIES ON 24 EXTERNAL VARIABLES AND PREPAREDNESS

	Demographic Characteristics									Situational Characteristics								Attitude Toward Targets									
Strategies	Age	B.S. + Intern	Intern + M.S.	Generalist	Community	M.S. Degree	Exper. Index	F.S.A.[a] Exp.	Outpt. Exp.	Patient Contact Index	Age A Index	Age B Index	Acute Care	Long/ Term Rehab.	M.C.[b] Index	Pg/ Lact.	Renal Disorder	Attitude Index	Socio-Cultural Index	Psych. Index	Knowledge Index	A.L.[c] Index	C.I.[d] Index	Organ. Index	Preparedness	R^2	Adj. R^2
ASSESSMENT																											
1.	.07	.01	.02	.04	.05	-.04	.03	.06	.01	.01	-.03	-.08	-.02	.02	-.12	-.12	.07	.06	.15	.01	.04	-.10	.04	.02	.26***	.18	.10
2.	.06	.11	.02	-.07	.06	.06	-.05	.01	.02	.01	.04	-.03	-.04	-.06	-.00	-.05	.02	.03	.18*	.06	-.05	-.05	.14	.02	.24***	.21	.13
3.	.05	.16*	.07	.02	-.05	-.10	-.18	-.04	-.11	-.10	.06	.00	-.11	-.08	.09	.01	-.06	.11	-.08	.17*	.06	.00	.09	.16*	.07	.26	.18
4.	.14	.01	-.05	-.03	.02	-.10	-.08	-.03	-.08	.01	.10	-.10	-.02	.05	.03	-.07	.03	.09	.04	.12	.15*	-.09	-.02	.01	.33***	.25	.18
EDUCATIONAL																											
5.	-.11	-.10	-.03	-.03	.09	-.07	.13	.01	-.06	.00	-.04	.00	-.07	.02	.02	-.01	-.03	.02	.07	.03	.16*	.06	-.11	-.05	.45***	.28	.21
6.	-.01	.03	-.02	-.02	.01	-.12	.01	.01	.06	.05	.05	-.07	.07	.00	-.00	-.09	-.05	-.01	.12	.05	.17*	.13	-.06	-.08	.29***	.25	.17
7.	.07	-.10	.07	.02	.07	-.16*	-.01	.00	-.06	-.08	-.05	-.12*	-.04	.07	-.05	-.02	.06	-.00	.19*	.00	.09	.14	.10	-.07	.13	.22	.14
8.	.11	.03	-.00	.01	.07	-.01	-.06	-.09	-.03	.04	.10	-.10	-.00	.14*	.01	-.01	.01	-.07	.16	-.09	.14*	.09	-.08	-.08	.53***	.34	.27
MOTIVATIONAL																											
9.	.07	.02	.03	.14*	.05	.06	-.04	.02	-.04	.00	.04	-.01	-.03	-.01	.06	.05	-.04	.05	.12	.05	-.04	.13	.00	.05	.21**	.21	.13
10.	-.04	-.02	-.08	-.05	-.08	.06	.05	.04	.03	-.07	.11*	.10	-.03	-.02	.05	.05	-.05	-.04	.05	.09	.07	-.07	.17*	-.03	.44***	.36	.29
11.	.07	.02	-.04	.03	.01	-.02	-.06	-.06	.03	-.06	.07	.08	-.06	.01	.07	.00	-.01	.15*	.05	.16*	-.07	-.05	.05	.05	.31***	.26	.19
12.	.14	-.01	-.11	.00	-.03	.03	-.05	-.07	-.08	-.07	-.00	.04	-.13	.06	.09	.05	-.02	.07	.08	.10	-.06	-.03	-.04	.05	.38***	.25	.18
BEHAVIORAL																											
13.	.08	.16*	.07	.03	.05	.01	-.05	-.03	.02	-.18***	-.01	.07	-.04	-.01	-.03	-.05	-.06	.04	.04	.12	-.03	-.02	-.02	-.04	.45***	.32	.25
14.	.07	.03	.05	-.06	-.04	.02	.08	-.02	-.06	-.10	.07	-.02	-.03	-.02	-.06	-.10	-.06	.02	.06	.18*	.10	.01	.06	-.06	.33***	.27	.20
15.	.07	.04	.02	-.09	.04	-.11	.01	-.03	-.03	-.13*	-.01	.04	-.09	.01	-.01	-.08	.00	-.10	.21**	.20**	.04	-.15*	.08	-.05	.33***	.27	.20
16.	.07	.10	.07	-.10	-.00	-.01	.09	.04	.03	-.14**	.10	-.01	-.08	.04	-.03	-.07	.01	-.05	.24***	.11	-.04	-.07	.21**	-.04	.38***	.42	.37
EVALUATION																											
17.	.29**	.04	.02	-.05	.03	-.06	-.14	.02	.08	.06	.06	-.03	.12	.03	-.04	-.13*	.01	-.01	.11	-.03	.12	.05	.16*	-.12	.45***	.37	.30
18.	-.10	-.02	-.04	-.03	.09	-.06	.07	.01	-.09	.10	-.05	-.04	.02	.03	.00	-.13*	.03	.11	.07	.05	.02	.11	-.11	-.05	.37***	.32	.25
19.	.12	.00	.03	.03	.01	-.03	-.13	.02	-.02	.09	-.00	.08	.03	.04	-.02	.00	.02	-.01	.00	.20**	.03	.17*	-.17*	.17*	.13*	.20	.12
20.	.03	.04	.08	-.07	.09	-.08	.04	.02	-.00	-.03	-.04	-.08	-.00	.01	-.06	-.02	-.04	-.04	.24**	.03	-.01	.18*	-.06	-.09	.32***	.25	.18

*Significant at .05.

**Significant at .01.

***Significant at .001.

[a]Food Systems Administration Experience

[b]Medical Condition Index

[c]Active Listening Index

[d]Communicate Interest Index

TABLE F-3

STANDARDIZED REGRESSION COEFFICIENTS AND MULTIPLE COEFFICIENTS OF DETERMINANTS (R^2) FOR THE REGRESSION OF SUBJECTIVE NORM TOWARD USE OF 20 COUNSELING STRATEGIES ON 24 EXTERNAL VARIABLES AND PREPAREDNESS

	Demographic Characteristics									Situational Characteristics								Attitude Toward Targets									
Strategies	Age	B.S. + Intern	Intern + M.S.	Generalist	Community	M.S. Degree	Exper. Index	F.S.A.[a] Exp.	Outpt. Exp.	Patient Contact Index	Age A Index	Age B Index	Acute Care	Long/Term Rehab.	M.C.[b] Index	Pg/Lact.	Renal Disorder	Attitude Index	Socio-Cultural Index	Psych. Index	Knowledge Index	A.L.[c] Index	C.I.[d] Index	Organ. Index	Preparedness	R^2	Adj. R^2
ASSESSMENT																											
1.	.18	.10	-.11	-.11	-.02	.01	-.04	.08	.02	-.04	-.08	-.03	-.05	-.01	-.02	.11	.10	.02	-.03	-.05	.14*	-.08	.06	.04	.25***	.17	.09
2.	.15	.10	-.07	-.02	.09	.00	-.07	.01	-.06	.03	-.01	-.00	-.06	-.01	.01	.07	.10	.03	.17*	-.05	.08	-.03	-.03	.07	.26***	.20	.12
3.	.09	.02	-.18*	-.04	.04	.03	-.07	.02	-.04	.02	-.04	.01	-.02	-.01	.07	.12	.08	.11	.00	.04	.05	.04	-.06	.10	.17*	.15	.07
4.	.07	.10	-.16*	-.02	.08	.05	-.04	.04	-.08	.06	.06	-.03	.00	-.02	.02	.10	.08	.07	.07	-.02	.09	.02	-.04	.02	.28***	.19	.11
EDUCATIONAL																											
5.	.07	.06	-.17*	-.09	-.01	.13*	-.03	.07	.02	.05	-.06	-.05	.06	.00	-.08	.09	.06	.00	.02	.01	.05	.00	-.04	.07	.31***	.19	.11
6.	.07	.09	-.14*	-.10	.02	.01	.00	.12	.13	.05	.01	-.08	.00	.02	-.01	.03	-.01	.12	.07	-.10	.05	.06	.03	.04	.27***	.25	.17
7.	.17	-.01	-.18*	-.03	.04	-.03	-.07	-.01	.05	.01	-.05	-.07	.01	.03	-.03	.05	.01	.11	.13	-.11	.04	.08	.02	.03	.14*	.17	.09
8.	.27*	.17*	-.14*	-.13*	.03	.08	-.16	-.03	-.06	.14*	.03	-.02	-.02	.03	-.04	.03	.01	.05	-.02	-.07	.16*	.03	.02	.09	.28***	.25	.17
MOTIVATIONAL																											
9.	.14	.08	-.14*	-.07	.11	.06	-.06	.04	-.07	.08	.01	.01	-.02	-.01	-.04	.13*	.01	.07	.09	-.04	.16*	.06	-.07	.04	.18**	.19	.11
10.	.05	.06	-.18**	-.09	.04	.07	.01	.07	.02	.05	-.09	-.04	-.01	.02	-.06	.05	.06	-.02	.23**	-.06	.12	-.02	-.05	.06	.37***	.30	.23
11.	.13	.10	-.13*	-.05	.13*	.06	.01	.07	-.03	.08	-.03	.02	.05	.03	-.08	.13*	.11	.10	.12	-.05	.13	.02	-.05	.07	.20**	.24	.16
12.	.06	.06	-.17*	-.07	-.02	.06	-.01	.01	.01	.01	-.05	-.02	.05	.00	-.02	.12	.05	.14*	.15	-.08	.07	.08	-.12	.02	.21***	.18	.10
BEHAVIORAL																											
13.	.12	.12	-.15*	-.08	.09	.04	-.06	.01	-.03	.04	-.04	.02	-.03	.03	-.10	.09	.05	.09	.06	.01	.10	-.01	-.03	.07	.22**	.17	.09
14.	.15	.06	-.11	-.03	-.00	.02	-.02	-.03	.02	.18**	.04	-.03	-.17*	-.03	-.04	-.07	-.02	.04	.07	-.01	.15*	.01	.06	.12	.11	.23	.16
15.	.09	.10	-.17**	-.08	.12*	.02	-.04	-.04	-.08	.12*	-.08	-.06	-.15*	-.02	-.02	-.04	.02	.06	.09	.06	.08	.01	-.05	.06	.30***	.26	.19
16.	.23*	.13	-.09	.00	.09	.08	-.07	-.05	-.05	.10	-.05	-.11	-.12	-.03	.02	.01	.07	-.05	.11	.06	.13*	-.00	-.01	.02	.25***	.28	.21
EVALUATION																											
17.	.30	.03	-.16*	-.02	-.03	.08	-.23*	-.01	.05	.01	.02	-.06	.10	-.01	-.02	-.02	.06	.05	-.11	-.02	.08	.09	.01	.11	.33***	.23	.15
18.	.21	.02	-.14*	.03	.05	.05	-.06	-.12	.04	.14*	-.10	-.08	.07	.05	-.00	.04	.06	.05	-.02	.01	.08	.10	-.15*	-.02	.34***	.24	.16
19.	.13	.05	-.17*	-.07	.06	.03	-.06	-.04	-.01	.07	-.06	-.05	-.04	-.01	-.04	.07	.05	.18**	.17*	-.01	.02	.09	-.05	-.00	.20**	.25	.17
20.	.19	.10	-.18**	-.07	.03	.05	-.09	-.01	.15*	.10	-.09	-.09	-.03	-.00	.05	-.02	.04	.08	.04	-.09	.10	.01	-.02	.14*	.27***	.28	.21

*Significant at .05.

**Significant at .01.

***Significant at .001.

[a]Food Systems Administration Experience

[b]Medical Condition Index

[c]Active Listening Index

[d]Communicate Interest Index

TABLE F-4

STANDARDIZED REGRESSION COEFFICIENTS AND MULTIPLE COEFFICIENTS OF DETERMINANTS (R^2) FOR THE REGRESSION OF INTENTION TO USE THE 20 COUNSELING STRATEGIES ON 24 EXTERNAL VARIABLES, PREPAREDNESS, ATTITUDE, AND SUBJECTIVE NORM

	Demographic Characteristics									Situational Characteristics								Attitude Toward Targets											
Strategies	Age	B.S. + Intern	Intern + M.S.	Generalist	Community	M.S. Degree	Exper. Index	F.S.A.[a] Exp.	Outpt. Exp.	Patient Contact Index	Age A Index	Age B Index	Acute Care	Long/ Term Rehab.	M.C.[b] Index	Pg/ Lact.	Renal Disorder	Attitude Index	Socio-Cultural Index	Psych. Index	Knowledge Index	A.L.[c] Index	C.I.[d] Index	Organ. Index	Preparedness	Attitude	Subj Norm[e]	R^2	Adj. R^2
ASSESSMENT																													
1.	-.05	.07	.05	-.09	-.06	.03	.06	.02	.03	-11*	-.01	-.07	-.05	.07	-.09	.04	.12*	.04	.03	.04	-.08	-.07	.06	-.09	.14**	.42***	.26***	.50	.45
2.	-.03	.07	.08	-.02	-.03	-.11	.06	.09	-.06	-.02	.06	-.05	-.12	.01	.01	-.10	.11*	-.11	.10	.06	-.03	-.03	.09	.03	.24***	.17**	.20***	.33	.26
3.	.06	-.09	.00	.08	-.03	-.04	-.03	.08	.02	-.06	-.00	-.00	.08	.11*	.01	-.04	-.01	.01	-.02	.03	-.11	-.04	.16*	.13*	.19**	.32***	.17**	.40	.34
4.	-.07	-.02	.10	.06	.02	-.07	-.02	.08	-.02	.01	.02	.00	.00	.06	-.02	.02	.06	-.05	-.11	.12	-.04	-.02	-.02	.01	.36***	.26***	.20***	.43	.37
EDUCATIONAL																													
5.	.02	-.02	.01	.02	-.19***	.05	-.04	.04	-.10	.01	-.06	-.01	-.08	.02	.01	-.09	-.01	-.00	-.12*	.17**	-.03	-.09	.04	-.08	.31***	.29***	.29***	.51	.46
6.	-.09	.02	.06	-.00	-.05	-.07	.06	.05	.03	-.02	-.00	.01	-.04	.05	.08	-.04	.02	.04	-.13*	.05	-.07	-.05	-.04	.12	.29***	.40***	.21***	.48	.42
7.	-.00	.13*	.13*	-.06	-.07	-.08	-.04	.01	-.05	-.05	.06	.04	-.07	.03	-.03	-.07	.04	.01	-.11	.02	-.07	.01	.10	.05	.27***	.22***	.20***	.32	.25
8.	.08	.14*	-.05	-.08	-.07	.02	-.10	.08	-.05	-.04	-.00	-.08	-.02	.03	-.10*	-.08	.08	-.02	.01	-.01	.02	.07	.03	-.07	.22***	.36***	.16**	.45	.39
MOTIVATIONAL																													
9.	.10	.12	.06	.03	-.10	-.06	-.06	.04	-.10	-.10	.02	.13*	-.12	-.04	.08	-.13*	.04	.01	-.04	.17*	-.09	-.08	.13*	.08	.34***	.16**	.05	.40	.33
10.	.08	.04	.03	.06	-.01	-.01	.00	-.10	-.02	-.01	-.02	.03	-.02	.11*	-.07	-.07	-.00	.09	.04	.03	-.11*	-.02	.19**	-.04	.32***	.30***	.06	.44	.38
11.	.11	.09	.09	.05	-.06	-.07	-.04	.05	-.04	.05	.02	-.01	-.02	-.00	-.08	-.08	.12*	-.00	-.04	.08	-.06	.05	.15*	.02	.25***	.27***	.14*	.42	.35
12.	-.13	.05	.01	.04	-.08	-.02	.09	.07	-.01	.04	.02	-.06	.03	.00	-.02	-.16**	.02	-.02	-.07	.12	-.06	.08	-.03	.11	.22***	.14*	.21***	.33	.25
BEHAVIORAL																													
13.	-.01	.04	.05	-.03	-.08	-.08	.01	.06	.02	-.02	.04	.05	-.03	-.00	-.03	-.08	-.01	-.06	-.01	.07	-.07	.00	.11	.16*	.28***	.31***	.04	.43	.37
14.	.13	-.04	.04	-.08	-.04	-.08	-.05	-.09	.06	-.04	.01	.03	-.02	.05	-.13*	-.03	-.04	-.01	.13	-.07	-.05	.04	.06	-.07	.27***	.27***	.19***	.38	.31
15.	.10	-.01	.04	-.04	-.08	-.04	-.10	-.01	-.04	.02	.03	.09	-.09	.06	.01	-.09	-.04	-.06	.03	.07	-.00	.02	.12	-.04	.27***	.25***	.17**	.37	.30
16.	.10	-.03	.10	.05	-.05	-.05	-.07	.01	.01	.07	.07	.06	-.02	.06	-.05	-.06	-.01	.08	.06	.02	-.13*	-.01	.10	-.08	.40***	.13*	.22***	.43	.37
EVALUATION																													
17.	-.06	-.07	.07	.00	.03	-.08	.07	-.09	.02	-.08	-.10*	-.01	.08	.14**	-.07	.01	.04	.00	.03	.08	-.01	-.02	.10	-.06	.41***	.30***	.13**	.56	.51
18.	.02	-.06	.02	.05	.06	-.01	.02	-.01	.02	.08	.02	-.03	.04	.09	-.00	-.08	-.02	.02	-.00	-.02	-.04	.01	-.04	.01	.41***	.28***	.16**	.50	.45
19.	-.03	-.07	.08	.06	.01	-.09	.02	.00	.10	.03	-.01	.07	-.03	.04	-.07	.14*	.00	.06	.12	.00	-.07	-.02	.06	.05	.30***	.15*	.16**	.32	.24
20.	-.04	.02	.05	-.13*	-.12*	.02	.03	.02	.02	-.04	.10	.04	-.07	.07	-.11*	-.07	.02	.08	.05	-.00	.03	-.02	-.04	.07	.26***	.26***	.22***	.40	.34

*Significant at .05.

**Significant at .01.

***Significant at .001.

[a]Food Systems Administration Experience

[b]Medical Condition Index

[c]Active Listening Index

[d]Communicate Interest Index

[e]Subjective Norm

TABLE F-5

STANDARDIZED REGRESSION COEFFICIENTS AND MULTIPLE COEFFICIENTS OF DETERMINANTS (R^2) FOR THE REGRESSION OF REPORTED USE OF 20 COUNSELING STRATEGIES ON 24 EXTERNAL VARIABLES, PREPAREDNESS, ATTITUDE, SUBJECTIVE NORM, AND INTENTION

	Demographic Characteristics									Situational Characteristics								Attitude Toward Targets										
Strategies	Age	B.S. + Intern	Intern + M.S.	Generalist	Community	M.S. Degree	Exper. Index	F.S.A.[a] Exp.	Outpt. Exp.	Patient Contact Index	Age A Index	Age B Index	Acute Care	Long/ Term Rehab.	-M.C.[b] Index	Pg/ Lact.	Renal Disorder	Attitude Index	Socio-Cultural Index	Psych. Index	Knowledge Index	A.L.[c] Index	C.I.[d] Index	Organ. Index	Preparedness	Attitude	Sub. Norm[e]	Intention
ASSESSMENT																												
1.	.03	.03	-.01	-.01	.03	.08	-.03	.01	.11*	-.04	-.07	-.05	-.07	-.01	-.06	.06	.09*	.02	-.07	-.03	.01	-.03	-.11*	.08	.21***	.01	-.01	.61***
2.	.12	-.00	.14*	.13*	-.02	.01	-.05	-.00	-.06	.03	-.04	-.01	-.01	-.06	-.06	.05	.09	-.02	-.03	-.00	-.03	.02	-.04	-.03	.24***	.15**	.14*	.37***
3.	-.12	-.00	.07	.06	-.01	-.09	.16	-.01	-.04	-.03	-.11*	.04	-.07	-.12*	.01	-.01	-.02	-.03	-.09	.07	-.07	.02	.01	.04	.25***	-.01	.04	.40***
4.	.04	-.09	-.06	.09	-.06	.02	.03	-.04	.05	.00	-.04	.04	-.05	.03	-.05	-.01	.10	.01	-.05	.07	.04	-.04	-.06	.05	.27***	.03	.07	.40***
EDUCATIONAL																												
5.	.04	.02	.02	.08	-.06	.03	.00	-.02	-.13	.01	-.02	.01	-.07	-.01	-.03	.07	.03	-.02	-.03	-.02	.05	-.03	-.02	.08	.15**	.03	.22***	.54***
6.	-.03	-.03	.00	-.02	.03	.08	-.00	.00	.06	.03	-.02	.04	-.02	-.06	-.06	-.02	-.02	-.02	.10	-.09	-.02	.03	-.02	.04	.12*	.10	.07	.55***
7.	-.02	-.03	-.00	.03	-.03	.01	.04	-.08	-.02	.09	-.06	-.05	-.07	.10*	.01	.08	.02	-.03	.02	-.02	.00	.04	.13*	-.06	.30***	-.07	.10*	.45***
8.	-.19*	-.00	-.03	-.06	-.06	.12*	.29***	.00	-.08	-.04	-.01	-.00	-.10	-.05	-.06	-.03	.03	-.08	-.00	-.00	.07	-.01	.01	.01	.08	.19***	.12*	.45***
MOTIVATIONAL																												
9.	-.11	-.00	-.03	.05	.04	.06	.10	.05	-.03	-.02	.01	-.01	-.14*	-.01	-.04	-.02	.03	-.07	-.04	-.00	-.00	.06	-.10	.11	.09	.16***	.00	.47***
10.	-.03	-.01	.01	.03	-.05	.05	.02	.10*	.03	.05	-.07	.04	-.08	-.09*	-.07	.02	.00	-.05	.02	.01	-.01	.05	-.10	.07	.35***	.10	.04	.43***
11.	-.04	-.11*	.02	.16**	.11*	-.02	.06	.05	.05	.07	-.05	.06	-.13*	-.03	-.07	.06	.08	.01	-.01	-.04	.04	.09	-.07	.08	.16**	.06	.10	.43***
12.	-.11	.00	.09	.04	-.05	-.02	.07	.02	-.03	.04	-.05	-.03	-.07	-.05	-.13*	.00	.11*	.01	-.01	-.06	-.07	.03	-.07	.09	.07	.19**	.04	.42***
BEHAVIORAL																												
13.	-.04	-.11	-.06	.04	-.10	.09	.01	.07	-.02	.04	-.01	-.03	-.07	-.05	-.02	.00	.05	.00	-.05	.09	-.07	-.14*	.02	.08	.20**	.25***	-.04	.33***
14.	-.20*	-.06	.02	.08	-.07	.05	.14	-.05	.05	.05	.01	.01	-.15**	-.07	-.04	.04	.13**	-.03	-.03	-.02	-.04	-.04	-.05	.10	.10	.18***	.12*	.47***
15.	.08	.01	.06	.08	-.05	-.01	-.00	-.01	-.02	.07	-.00	.05	-.09	-.04	-.02	-.04	-.06	.05	-.10	.04	.00	.08	-.04	-.07	.15*	-.02	.05	.53***
16.	.03	-.01	.07	.08	-.02	.05	.03	-.02	.03	.01	-.00	.10*	-.11*	-.07	-.03	.07	.09*	.01	-.09	.04	-.03	-.10	.05	.06	.19**	.13*	.07	.41***
EVALUATION																												
17.	-.13	.05	.00	-.01	-.03	.04	.08	-.01	.10	.09*	.03	-.01	-.00	-.01	.01	.02	.04	-.05	-.05	.01	-.02	.01	-.05	-.04	.07	-.01	.09	.70***
18.	-.01	.00	.00	.05	-.03	.11*	-.02	.08	.04	.00	-.09	-.06	-.04	.04	-.05	.09	.06	.03	-.04	-.04	-.01	.13*	-.03	.06	.16**	.10	.09	.46***
19.	.00	.02	.01	.05	-.02	-.01	-.01	.08	.03	.05	-.08	-.03	-.10	.03	-.05	.06	.09	.08	-.11	.10	-.04	-.03	.02	-.03	.14*	.05	.11	.37***
20.	-.13	-.03	.03	.02	-.05	.11	.05	.09	.06	-.03	-.11*	-.[illegible]	-.11	.01	-.06	.09	.05	-.01	-.10	.01	.07	-.08	-.01	.03	.07	.13*	.16**	.43***

*Significant at .05.

**Significant at .01.

***Significant at .001.

[a]Food Systems Administration Experience

[b]Medical Listening Index

[c]Active Listening Index

[d]Communicate Interest Index

[e]Subjective Norm

VITA

Audrey L. Hay is the daughter of H. Eugene Hay and N. Ione Windsor. She grew up on the family farm in eastern Colorado. She graduated from Strasburg High School in Colorado and completed an Associate of Arts degree in Animal Husbandry at Sierra Junior College, a Bachelor of Science degree at California State University, Fresno, and a generalist dietetic internship and Master's degree in Dietetic Education from the University of Kansas Medical Center.

Audrey became a registered dietitian in 1972 and completed her Master's degree in 1973. She has worked as a dietitian at Diabetic summer camps in both Kansas and Tennessee. She was employed for eight years as a Clinical Instructor in the Coordinated Dietetics Program at The University of Tennessee, Knoxville--a position in which she assisted the program director for three years and provided leadership in developing off-campus dietetic experiences and developing a computerized mastery exam.

Audrey is a member of the American Dietetic Association, the Society for Nutrition Education, the Nutrition Today Society, the American Hospital Association, Phi Beta Kappa, and Omicron Nu. She has accepted a position as Assistant Professor in the Department of Human Nutrition and Food Service Management at the University of Nebraska. The position involves teaching food systems administration courses and being the Internship Director for the University of Nebraska Internship Program.