THE DEVELOPMENT OF AN INSTRUMENT TO MEASURE CLIENT STATUS AND PROGRESS IN THERAPY BASED ON A PSYCHOEDUCATIONAL APPROACH

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ABSTRACT

THE DEVELOPMENT OF AN INSTRUMENT TO MEASURE CLIENT STATUS AND PROGRESS IN THERAPY BASED ON A PSYCHOEDUCATIONAL APPROACH

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Application of quality assurance concepts in the area of mental health has faced ongoing difficulty due to lack of instruments to measure client staus and progress in therapy. Third party payers as well as therapists and patients have not had available to them instruments which are based on sound theoretical and experimental principles and which have been shown to have reliability and validity.

The Personal Change Questionnaire was developed to measure client status and progress in therapy. The purpose of this study was to evaluate the Personal Change Questionnaire for internal consistency and to make preliminary investigation into its construct validity. A 38-item Client Form was developed as was a 44-item Therapist Form. Each form was based on an item by item analysis of the Personal Paradigm Shift. The items on each form were evaluated by a panel of experts as to content validity and appropriateness. The Therapist Form included an additional section relating to motivational dimensions of clients as viewed by therapists.

A sample of 115 clients in different stages of therapy were given the Personal Change Questionnaire. Demographic data was gathered on each of the participants as well as the seventeen therapists who participated in the study.

The result of correlational analyses indicate that both forms of the Personal Change Questionnaire are highly reliable, demonstrating coeffecient alpha values of .95 for the Client Form and .97 for the Therapist Form.

Evidence for construct validity was generated through the observation of a low but significant correlation between therapist total scores and client total scores (Pearson = .40). There was a strong correlation between therapist total scores and therapist rating of client status (Spearman = .79). Therapist rating was also positively correlated with client total scores (Spearman = .32).

No significant correlations were found between total scores and educational level or length of time in therapy.

A preliminary factor analysis revealed the presence of two factors on both forms of the Personal Change Questionnaire.

Comparison of answers between diagnostic groups of Dysthymia and Cocaine Dependency showed significant differences in the pattern of answers between the two groups.

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CHAPTER I

STATEMENT OF THE PROBLEM

Introduction

Quality assurance refers to any activity implemented within the service delivery system to improve the outcome of physical or mental health care. Shuman and Troy (1988) indicate that the most pressing problem in the area of quality assurance is the lack of specificity evidenced by providers of mental health services. An essential step in overcoming this problem would be the delineation of what is being attempted in treatment, with the goals stated in clear, observable terms. The most significant advances in quality assurance need to be made in the procedures which would document assessment and treatment. This requires an explicit approach for conceptualizing and expressing what is being attempted in the therapeutic process.

The quality assurance process can be broken down into two general areas of consideration. The first area deals with standards of care. The second is those additional activities which are designed to eliminate any deficiencies which are identified during the quality assurance process. Quality assurance in mental health care is extremely difficult due to the nature of the services offered and the different theoretical orientations employed. This complexity requires

special attention to the types of assessment and the diversity of treatment approaches which may be used. While treatment of a medical condition such as acute appendicitis has a very limited number of treatments, emotional or psychological conditions have a diversity of modalities for assessment and treatment.

While a universally accepted definition of quality assurance is not available, an optimal definition would be oriented toward assuring the highest level of care for all patients. Care would be available, appropriate, and efficacious for all clients, and it would be provided regardless of cost (Rodriguez, 1988). Such idealistic concepts are tempered by factors such as economics, resource availability, and consumer (patient/client) attitudes. Quality assurance methodology includes consideration of providers who want a professional-scientific basis of care and insurance carriers, i.e., payers, who have an economic view. Finally, there are patients/clients who seek a legal and protectionistic position and who ultimately seek high quality, safe and effective treatment.

The Personal Change Questionnaire used in this study was developed to measure clients' personal change status in therapy. The questionnaire is based on a programmed model of change known as the Personal Paradigm Shift which was developed by Dr. William Hinds at Michigan State University based on his experience with clients as a health psychologist.

The Personal Paradigm Shift, referred to as the PPS, was designed according to psychoeducational models of health care management as an organized and planned method of teaching individuals about, and how to, undergo change.

The Personal Change Questionnaire, the PCQ, was designed specifically to evaluate the twenty-four steps of the PPS and is designed to measure clients' readiness for treatment with the PPS program. It is expected to be an accurate measure of progress in the treatment as well.

The purpose of this study was to evaluate the reliability and the validity of the Personal Change Questionnaire as an instrument which attempts to measure treatment efficacy under the general rubric of quality assurance.

Need for the Study

Quality assurance can be described from three different perspectives: theoretical, practical and professional.

From a theoretical perspective, according to Donabedian (1980), quality assurance is concerned with three aspects of the health care system: structure, process and outcome. Structure refers to the resources which are available; that is, the relatively stable characteristics of the health care system which influence the quality of care provided. Process refers to the activities which are performed in the patient management process. This includes demographic and diagnostic information, therapeutic procedures, and follow-up monitoring

of the patient. Outcome refers to assessments which examine the effects of care on patients. This generally includes measures of health status and patient satisfaction.

The questions regarding structure are generally covered by governmental regulations and professional associations which are charged with licensing, certifying, and accrediting of health care facilities or personnel. Questions about process and outcome are addressed in treatment decisions and implementation.

Success of the therapeutic process in mental health has been a critical issue since before the landmark article of Eysenck (1953). It has become increasingly important to third party providers in the emerging health care network in the nineteen eighties. Increased demands and costs have raised the issue to a position of critical importance.

In terms of the practicality of treatment, the traditional psychoanalytic approach to therapy is clearly inadequate when applied to large numbers of people. While behavioral approaches are more cost effective, they still are expensive and require considerable amounts of therapist time. Innovative techniques are often not accompanied by valid or reliable evaluation instruments, and therefore it is difficult to measure outcome effectively. Questions of effectiveness and appropriateness of therapies remain unanswerable until evaluation methods are developed, verified and implemented.

Guidelines set by the American Psychological Association

in the Standards for Providers of Psychological Services (APA, 1981) state that "there shall be a written service delivery plan for every consumer for whom psychological services are provided ...which will analyze the problems, state priorities among established goals, and outline systematic procedures for the implementation of the plan" (p .17). This statement of standards makes it imperative that treatment programs be structured to provide a diagnosis, establish treatment priorities, and delineate procedures for implementation. Methods for the assessment of progress and the evaluation of outcomes must be provided.

Because professional standards are expressed as broad statements of policy, they may be implemented in a variety of ways by different providers. Any method chosen must employ established and scientifically verified tools for evaluation of treatment effectiveness. Evaluation of treatment progress or outcome in such a manner is essential to the financial, legal and ethical justification of treatment choice and implementation.

Gibson (1988) enumerated five essential components of quality assurance in applied programs: Problem identification, assessment, correction, resolution, and follow-up monitoring. The Personal Paradigm Shift incorporates these into its basic structure. As a measure of the PPS, the Personal Change Questionnaire constructed for this study assesses these components. While there appears to be a certain "face

validity" to the PCQ, there has been no formal research to determine the reliability or validity of the instrument.

This study is the first formal attempt to evaluate the PCQ for reliability and validity in order that the PPS will meet the three types of standards discussed above.

Theory

The Personal Paradigm Shift and its associated measurement form, the Personal Change Questionnaire, are based on the ideas of psychoeducational models of therapy. Such models make three essential assumptions:

1) The counselor is viewed as a teacher, rather than physician or healer.
2) The client's problems are conceptualized as learning deficits rather than symptoms of illness.
3) The client is seen as an active and self-responsible agent, capable of directing their own learning, rather than as a passive recipient of treatment. (Larson, 1984)

While some models assume a treatment program based on patient illness, the psychoeducational model begins with client dissatisfaction or a need for change. As contrasted by Authier, et.al.,(1975) and noted by others including Habeck and Fuller (1986), the medical model proceeds from illness to prescription to therapy, hopefully resulting in a cure. The psychoeducational model begins with a dissatisfaction and

proceeds to goal setting followed by teaching of skills. This results in satisfaction or goal attainment.

The counselor's role is clearly defined as that of teacher, one who helps with problem identification, goal setting, skills acquisition and practice, and self evaluation procedures for the client. The client, an active participant as a student, learns functional skills which will help overcome deficiencies which may be causing a problem or dissatisfaction in their life. The programs are highly structured with learning based on sound educational principles such as feedback, mastery and maintenance of specific behaviors.

Larson (1984) has summarized common themes in psycho-educational programs. They strive to elicit active participation from clients in the learning process, hence they minimize mystification of psychological knowledge. These designs are based on established learning principles such as observation, discrimination, reinforcement and generalization. They consist of both didactic and experiential components. The programs are highly structured with identified and specified goals. Progress is evaluated and reported to clients as part of an ongoing process in the program. Clients are taught new methods of dealing with problem situations and learn to internalize these methods.

Alschuler and Ivey (1973) have identified five principles that serve to maximize long term internalization in

psychoeducational programs. They are: 1) gaining clients interest and attention, 2) providing practical experience of the skill, 3) developing a clear conceptualization of the problem and the skill, 4) relating the learning to other areas of experience, and 5) providing the client with the opportunity to meaningfully practice the skill.

The Personal Paradigm Shift (Hinds, 1983) is designed as a psychoeducational model of personal health care management. It is based on the treatment of psychosomatic problems, particularly those concerning stress related disorders. Its development was based on observing the dynamics involved when people learn about the process of making personal change.

This systematic approach to self-health-care is designed to assist clients in achieving their own goals. In contrast to many health care intervention programs that are based on client compliance, this program promotes internalization as the means of altering and maintaining behavior change. Internalization as described by Suedfeld (1982) is the change in attitudes and associated behaviors that result from the realization that a change to a new pattern will be beneficial, rational and worthy of acceptance. This usually involves a change in personal values that then results in behavior change.

Benfari, Eaken, and Stole (1981) indicate that effective lifestyle intervention strategies meet six general conditions:

1) The client knows what change is desirable and acquires

the knowledge required for the change.

2) The client has the skill or is learning the skill to implement the knowledge for change.

3) The change is in the client's best interest.

4) The change is in the best interest of primary related groups such as family, friends, peers, etc.

5) Both internal and external environmental systems require change.

6) Internal and external change agents give their support to the change and provide feedback through the process.

The PPS addresses the sixth condition only with regard to internal supports and support within the therapeutic setting. The fourth condition is addressed only in that emphasis is on awareness and development of personal controls rather than environmental controls (Jeney, 1985; Parker, 1987). The PPS provides a highly organized and systematic method of assisting a client to recognize significant psychological, social and environmental lifestyle variables that affect their problems. The primary focus of the program is to engage the client in observing, experiencing and determining their own behavior. Treatment consists of an educational process that assists the client in learning to make a personal change.

Like other problem solving interventions, the PPS assumes that behavioral change proceeds through a logical sequence of

phases. The PPS change process involves experiencing (a) personal awareness of the problem, (b) decision making processes, (c) oppositional alternatives to present behaviors, and (d) planning for and implementing actions. The PPS is composed of twenty-four steps which focus on various aspects of the change process such as goals, thoughts, feelings, images, rewards and punishments.

The Personal Change Questionnaire consists of thirty-seven items which correspond to components of the PPS. Each statement on the client form requires a self report of the client's self understanding of such things as their thoughts, feelings, goals and plans. The forced choice format requires the client to determine how they perceive their present understanding of the problem situation they experience.

The therapist form of the PCQ requires the therapist to give their own perceptions of the clients' self understanding. This form also asks the therapist to evaluate motivational factors of defensiveness, introspection, self disclosure, commitment, and emotional readiness to learn a program.

Since the PCQ is based on the PPS which incorporates both process and outcome, the PCQ has the potential to evaluate two of the three parameters listed earlier by Donabedian (1980) which are regarded as essential components of quality assurance, i.e., process and outcome.

Quality assurance programs depend on effective evaluation of treatment planning, implementation and outcome. Those

conversant with quality assurance emphasize the importance of effective measurement and evaluation tools in determining how well these aspects of the programs are realized (Rodriguez, 1988; Wells and Brook, 1988; Gibson, 1988; Cohen, 1988; Sechrest and Rosenblatt, 1988). Quality assurance requires strategies for monitoring and assessing treatment process and outcome. They are essential in the context of justifying the choice and expense of a program for a specific client. Decisions about such choices depend on reliable and valid assessments (Shueman and Troy, 1988).

In selecting outcome measures, program developers must first enumerate specific outcomes that are relevant to the target condition. The subsequent outcome measures should be evaluated for both reliability and validity before they are matched with specific clinical conditions (Wells and Brook, 1988).

The critical step which is often missing is the validation of the instruments used in the assessment and treatment phases of therapy and in the outcome measures.

Purpose of the Study

The purpose of this study was to evaluate the usefulness and appropriateness of the Personal Change questionnaire as a measure of status in therapy. In order to do this, it was necessary to provide a measure of the internal consistency of the Personal Change Questionnaire and to establish an estimate

of both its content and construct validity. The study also evaluated the PCQ for its validity as a measure of client status in therapy. The study employed Cronbach's Alpha as a measure of the internal consistency. A factor analysis of the PCQ was performed, and several measures of construct validity were employed. Client and therapist views of client self-understanding were compared. Therapist total scores were compared to their intuitive evaluations of client status. Demographic and clinical information were also gathered and comparisons made between diagnostic groups.

Research Questions

The following research questions were addressed:

1) Is the PCQ a reliable measure of clients' self understanding?
2) Does the Personal Change Questionnaire show evidence of content validity?
3) Is there evidence of construct validity for the Personal Change Questionnaire?
4) Do the items on the Personal Change Questionnaire fall into four distinct factor areas?
5) Is there evidence of validation of the Personal Change questionnaire in terms of its relation to therapists' clinical judgement of status in therapy?
6) What relationships exist between client understanding as measured by the PCQ and diagnostic categories,

and other factors such as length of treatment and education level.

Summary

In Chapter I, the problem investigated was presented, along with the need for the study and theory about the research. Chapter II is a review of the literature in both quality assurance and psychoeducational designs. Chapter III presents the design and the methodology for the study. This includes explanation of and rationale for use of certain analytical methods. Formal presentation of the Personal Paradigm Shift and the Personal Change Questionnaire is also in this chapter. Chapter IV presents the results of the study. Chapter V discusses these results and conclusions drawn from them. Implications of the results and directions for further research are presented.

Chapter II

REVIEW OF THE LITERATURE

The areas to be covered in the literature review are: theory and historical development of psychoeducational models of therapy, definitions of the psychoeducational model, research in the application of these models, research with the Personal Paradigm Shift, theory and historical development of quality assurance, definitions of quality assurance, and research in quality assurance. A summary is provided with conclusions drawn from the research.

Historical Development of Psychoeducational Models

"In order to meet the ever increasing demands of preventative and creative mental health, the field of psychology must adopt the attitudes of public health and look for effective ways to administer to a growing population of clients."(Sanford, 1959, p. 832). In his presidential address to the American Psychological Association in 1959, Sanford allowed that this new direction would include more education and less absolute mandate, more advice and less prescription, and more facts with fewer arcane announcements. Psychologists would become more like teachers and less like doctors. The psychologist would become the translator for the field of behavior science, finding ways to apply that knowledge for

those who could benefit from it. Sanford advocated psychologists as proponents of the do-it-yourself movement in the behavioral sciences.

"Psychology, like consultation, is teaching and learning. The client must learn his way out of his problem and into independence. He must control himself, make his own decisions, be his own boss, run his own life. He must not learn long term dependency on the counselor. The counselor, through subtle manipulation of knowledge and skill, helps the client free himself, forever, from counselors." (p. 832)

Sanford clearly delineates the need for the egalitarian role as opposed to the authoritarian role and concludes that an essential step for the long term success of psychology is the active dissemination of technical knowledge about human beings. Believing that knowledge is power, Sanford proposes that the preservation of a healthy democracy demands that such knowledge be shared and increased whenever possible. He sets the tone for much subsequent theory, research and practice in psychoeducation.

Hobbs (1964) relates three revolutions in the history of psychology. He attributes one major change to Philippe Pinel in France, William Tuke in England, and Benjamin Bush and Dorothea Lynde Dix in the United States. This revolution involves the recognition that the mentally ill be treated humanely. They should be treated with kindness and dignity. Another revolution took place with the advent of Freud's

emphasis of the intrapsychic life of humankind.

The other revolution is that which began when concepts of public health were applied to the field of mental health. Mental health once was synonymous with its opposite, that is, mental illness. Now it has genuinely come to mean not just illness, but in a broader sense, mental well-being. It was acknowledged that mental illness is not just the private misery of an individual but that it is a social, ethical and moral problem, a responsibility of the total community.

Proponents of increased coverage of psychological services have argued for some time that the traditional medical model is inadequate to deal with the scope and immensity of human problems encountered in mental health services (Carkhuff, 1971, 1972; Guerney, Stollak and Guerney, 1970a, 1971b; Guerney, Guerney and Stollak, 1972; Ivey and Alschuler, 1973; Authier, 1977). Ivey and Alschuler (1973) advocated that the counselor be described as a psychological educator who actively intervenes, teaching healthy skills to others. This departed from traditional models which assume a knowledgeable, authoritarian figure who actively cures the passive patient. This change in the concept of patient-healer has come about for a variety of reasons.

While psychology had previously been influenced primarily by the basic sciences, it has more recently come to be influenced by educational psychology and the social sciences. Cole and Lacefield (1974) list three factors relevant to this

change in emphasis. The first factor is the increased use of psychometric methods, especially the use of intelligence testing, beginning in World War I and continuing since that time. The measurement of human traits and capabilities has become a major tool in the assessment of individuals for college placement and career management and planning. A second factor was the employment of persons in World War II who were knowledgeable in learning theory and who designed and implemented programs for the military. New psychologies of instruction were developed, and these new approaches paved the way for changes in teaching methodology and content. This type of assessment and training has become institutionalized in Veterans Administration hospitals.

A third factor was the work in experimental psychology that was carried on with government funds or at government facilities. The National Defense Education Act (NDEA) provided funds for educational and psychological research carried out in those years following the launch of Sputnik I. Programs for teaching psychological skills developed from new concepts of educational design resulting from such research.

Authier, Gustafson, Guerney and Kasdorf (1975) trace several sources for the development of psychoeducational models. Freud emphasized the importance of experience in development, and his concepts, often altered in several ways, have prevailed over the previously dominant models based on instinct (Watson and MacDougall, 1929) and genetics (Galton,

1869; Goddard, 1913). Pavlov (1927) and Watson (1916) were other early pioneers whose work was instrumental in models of human learning.Others such as Mowrer and Mowrer (1938) and Wolpe (1958) are credited in part for espousing the idea that therapy is essentially about learning new behaviors. Dollard and Miller (1950) were among those who advocated the idea that clients are capable of genuine learning rather than subjects who are to be conditioned.

Four factors are cited for the development of present models of psychoeducational design. First was the public awareness and acceptance of the need for psychologically oriented services and the recognition that new models of delivery are needed to fulfill present demands. A second factor was the growing dissatisfaction and disillusionment with the traditional approach's ability to effectively serve large numbers of people. Studies such as those of Landis (1937) and Eysenck (1952) cast serious doubts on the efficacy of traditional treatment. Despite criticism these articles received, questions about therapeutic effectiveness remained.

A third factor was the increasing recognition that therapeutic goals would have to include prevention. This includes the additional recognition that prevention is impossible using traditional models of intervention. Psychological education has become an integral part of any comprehensive program.

Finally, there was the realization that parapsychological

activities provide beneficial services. Organizations such as Alcoholics Anonymous provide essential supportive functions and as such can be an integral part of a psychological health care system. This support, as well as skills training by peer group members, appear to be effective. The development of sensitivity and encounter groups provided a method by which large numbers of people could learn interpersonal and psychological skills. While these groups were often not goal directed, they provided a format that represented a step toward delivery of services based on education rather than on treatment. A generalizable effect was the breaking down of the concept of "sick" versus "well" , a mainstay of the traditional medical model of psychological illness.

Many other theorists have helped to lay a foundation for present psychoeducational models. Carl Rogers' approach included a willingness to respect and encourage the client to choose their own goals. The high degree of respect associated with this attitude is essential in the "therapist as teacher" movement (Rogers and Dymond, 1954). B. F. Skinner allows that the therapist, not the client, must be the first to change their ways of approaching a program if things are not turning out right. An attitude commonly found among good teachers is quite similar in that adjustments must be made by the teacher rather than blaming the student's resistance. Skinner also sees the client as a consumer who sets the goals which environmental manipulations are designed to accomplish

(Skinner, 1948, 1971).

Thomas Szasz made an entire generation of therapists aware of the injustices of the medical classifications of "sick" versus "well". He greatly contributed to the awareness that tampering with people's right to behave as they wish must be done with great caution (Szasz, 1961a, 1961b, 1966).

The cognitive-emotional therapy of Albert Ellis involves learning which can be used for altering personal behaviors. Ellis has been a leader in organizational aspects of providing this type of service on a broad basis to the consuming public (Ellis, 1963; Ellis and Harper, 1961). He also advocates allowing the client to chose the kinds of values and goals they want to pursue (Ellis, 1977).

In summary, psychoeducational models of treatment are the result of an evolution in psychological and educational theory over the past fifty years. Theories of learning, development, motivation and personality have become combined with counseling theories and practice. There has been a general dissatisfaction with the medical model and there has been a growing recognition that this model is inadequate in the face of increased demands. New approaches for the dissemination of psychological knowledge have developed. Therapists using these approaches treat psychological and emotional deficits rather than illnesses. Such skills as decision making, problem solving, impulse control, and interpersonal sensitivity and communication can be taught, practiced and

learned (Guerney, 1977).

Psychoeducational approaches were developed to promote client involvement and increase therapeutic effectiveness by making the client a student participant while the therapist becomes a teacher of learnable skills.

Components of the Psychoeducational Model

Most advocates of the psychoeducational approach assume that psychological practitioners see their function, not in terms of the medical model, but in terms of client dissatisfactions. The teaching and learning involved in therapy includes not only the symbolic and cognitive processes, but it also includes instruction in overt behavior, especially interpersonal behavior (Guerney, 1977).

The affective-behavioral-interpersonal nature of the teaching process separates this experience from typical classroom education. The practitioner is forced to deal with questions of personal and cultural ethics and moral values, and the teaching is closely tied to the self concept and emotions of the client. The nature of the teaching requires that the therapist be knowledgeable in the overall field of psychology and education, as well as moral, ethical and cultural values. In addition, the therapist-as-teacher must be continually working at improving their own self awareness and knowledge as part of the overall growing process (Authier, et. al., 1975).

Psychoeducational teaching can be very problem specific and requires that the instructional materials and methods make use of the knowledge of psychodynamics and defense mechanisms acquired during generations of psychological research. Treatment programs can be developed and shared with the therapeutic community. Authier (1977) lists thirty-nine different programs developed in this manner.

The therapist takes on the role as teacher, one who helps the client define problems, set goals, acquire skills necessary to pursue those goals, and evaluate progress. The client becomes the student who has functional skill deficiencies which can be corrected with the client as an active participant in the learning process (Habeck and Fuller, 1986). Learning the skills is facilitated by providing an organized and often highly structured plan of training. This plan involves experiential learning as a critical element and focuses on long term internalization rather than short term knowledge and satisfaction (Ivey and Alschuler, 1973).

In summary, psychoeducational models exhibit the following general characteristics:

1) The therapist acts as teacher, helping set up a program which is followed by the client.
2) The client acts as an active and participating student, who, after stating a problem, sets a goal and pursues that goal by following the plan or program.

3) Psychoeducational programs demystify therapeutic principles and learning processes by eliciting active participation.
4) The programs are based on established learning principles and they consist of both didactic and experiential components.
5) The programs are highly structured with specified goals and methods of evaluating progress.
6) The programs focus on identification, mastery and maintenance of specific behaviors.

The Personal Paradigm Shift was developed as a program of treatment based on the experience of watching the dynamics of personal change (Hinds, 1983). It is programmed and highly structured and includes various aspects of the change process. It focuses on the identification of problem behaviors and the specification of outcome goals by the client. The therapist acts as teacher and guide through the process which includes determination of the problem situation as a first step. The behavior of the client in that situation is identified, and skills involved in decision making are enhanced or taught while the client works on identifying oppositional alternatives and sets up plans of action for changing behaviors.

The Personal Paradigm Shift satisfies the criteria for psychoeducational models of change. The therapist acts as

teacher while the client is in the role of active student. The client sets goals and pursues those goals through participation in the program. The program itself is based on sound learning principles and includes the opportunity for both didactic and experiential learning. The program is structured and provides ongoing methods of evaluating progress as part of working toward specified goals. The program focuses on specific behaviors, and there is a continual effort at identification of problem behaviors and their replacement with acceptable and desirable behaviors.

The unit on decision making is unique to the PPS, for often other programs do not focus on the process of deciding. The client is required to examine both the rewards and punishments for maintaining or changing the problem behavior. The effects of these rewards or punishments on the client's ability and desire to change is examined in detail as part of the program. Self understanding of personal change is an integral part of the Personal Paradigm Shift.

Research with Psychoeducational Models

Early researchers and theorists had a tendency to theorize without research into the practical application of their ideas. Psychoeducation as psychotherapy was not accepted until the development of general skill training programs of the late sixties and seventies. While Dollard and Miller (1950), Mowrer (1950), and Murray (1954) proposed the

therapist could act as teacher, it was the development and application of such techniques as counter-conditioning, aversive conditioning, etc., that paved the way for the use of educational concepts in therapy.

While these behavioral techniques set the stage, they dealt more with the manipulation of contingencies with clients as subjects rather than with clients as students who were actively involved in understanding the process of changing. The emphasis was on the "patient receiving a cure", a reflection of the medical model. Therapists' adherence to this model limited their ability to see themselves as teachers in the psychoeducational sense (Authier, 1977).

Maslow (1955) was among those who believed that if systematic training programs for counselors could be applied to paraprofessionals, they might be applied to psychiatric patients as well.

One early application of psychoeducation concepts was that of Pierce and Drasgow (1969). Their experimental group of seven psychiatric patients was given training in basic listening skills after having being rated on their helpfulness prior to training. Their performance was compared to that of four control groups: a medication group (on medication), a therapy group, an individual therapy group, and a random group that was receiving a variety of treatments. Analysis using the Wilcoxin paired-comparison signed rank test revealed that the training group showed significant changes from pre-

training measures on both post taping and standard interviewing measures. The control groups showed no significant differences from pre to post measures. On helpfulness, the training group differed from three of the control groups at the .01 level of significance and from the fourth group at the .15 level. The results indicated that psychiatric inpatients could improve their level of interpersonal functioning with only twenty hours of training time. They also showed this method to be more effective than all of the control groups on increasing the level of interpersonal functioning.

Their study was based on the training model established by Truax and Carkhuff (1967) which dealt with the enhancement of the dimensions of empathy, positive regard, genuineness and concreteness as an integral part of the therapeutic process.

Gutride, Goldstein and Hunter (1973), using a technique they called Structured Learning Therapy, tested twenty-seven psychiatric inpatients on their level of social interaction. The experimental group was then exposed to a four week program of training in four areas: interacting with someone who approaches them, interacting when they approach another, interacting when they approach a group, and resuming old relationships with family and friends. The control group received no training of special nature. A post training measure was made of all subjects after the four week period. All subjects took both the FIRO-B and the Psychiatric

Outpatient Mood Scales. All were subsequently asked to wait in a room with another patient (an experimental accomplice) and their interactive behaviors were measured on seven behaviors including eye contact, forward leaning and seconds of conversation. Their Structured Learning Therapy yielded significant differences in the predicted direction on four of the seven specific behavior variables. Analysis of covariance yielded a moderate number of main effects. F-scores at the .001 level of significance were found for social behaviors of forward leaning, responding to conservation, sitting with others and eye contact. The results indicate that this training model is effective in both acute and chronic patients, and that it works well in the absence of additional therapy.

Also using the Structured Learning Therapy approach, Gutride, Goldstein, Hunter, Carrol, Lower, Clark and Furia (1974) performed a similar experiment with one hundred and twenty chronic impatients in an attempt to foster social interactions at mealtimes with more seriously impaired patients, i.e., longer time in the hospital. An experimental group was trained with films and group interactions on a weekly basis. The films depicted a series of social mealtime behaviors, while group sessions featured discussions of the films, role playing activities, video feedback and more discussions. The group was trained for differing periods of time from two to seven weeks and was compared on post measures

to groups with some or none of the training plus some social interaction therapy. Post measures included the FIRO scale of interpersonal behavior and the POMS mood scale. Each patient was additionally rated by independent raters on their social interaction skills at a meal during the week following termination of training. ANOVAs performed indicated fifteen instances of significance in the social behaviors, ten at the .01 and five at the .05 level of significance. These included both simple and complex social behaviors.

Goldstein, Gershaw and Sprafkin (1984) present the model of Structured Learning Therapy in detail including case examples. The method has been applied in fifty or more studies with uniformly positive results. These studies include patients in the following categories: chronic adult schizophrenics, behavior disordered adolescents, geriatric inpatients, and child-abusing parents, among others. The method has also been applied to the teaching of teachers and the training of police officers in interpersonal skills. The authors point out three advantages of their method: 1) the acquisition of new skills has clearly been demonstrated as viable and reliable, 2) there is a transfer of learning into areas not specifically addressed in the original training, and 3) the large number of studies indicates that there are state, trait, cognitive, demographic and sociometric predictors of high levels of skills acquisition and transfer. Their psychoeducational model has now become a research tool in

itself.

A different approach was taken by Ely, Guerney and Stover (1971) who used a psychoeducational model in training couples in conjugal therapy. Twenty-three couples were randomly assigned to treatment and control groups after having been assessed according to the Ely Feeling Questionnaire, the Primary Communication Inventory, and a series of twelve role playing situations which were scored by independent judges. Experimental subjects were trained in each of two roles, speaker and listener. This training included explanations, demonstrations, discussions and role plays by each couple. The control groups received no training. Increases in Feeling Expression statements were significant at the .05 level on the Ely Feeling Expression Questionnaire. In the role play situation, these statements increased significantly more for the experimental group than for the control with a significance at .05 level. Feeling Clarification and Primary Communication were both increased significantly at the .05 and the .001 level respectively. The training was effective in expanding subjects' capacity to emit desired responses in the experimental setting. They forecast that longer term application of the program would provide greater opportunity for supervision of the application of these skills and their more integrated use on a daily basis.

A unique application of psychoeducational principles was seen in the study of Christensen and Arkowitz (1974) in which

the therapist was not in direct training contact at all but acted only as an information passageway between clients. In an effort to deal with dating problems, fourteen men and fourteen women on a college campus were set up with random practice dates matched only for age, height, race and distance from campus. Subjects were evaluated prior to the practice dates with three social anxiety inventories and each reported their own levels of anxiety in both dating and non-dating situations. After each date, all of the subjects completed evaluation forms of themselves which covered such things as perceived anxiety, self-perceived skill, partner's anxiety and partner's skill. Each subject also completed a form which included aspects of their date's appearance and behavior which they liked or disliked. After the experiment, subjects completed a satisfaction questionnaire. Forms were forwarded after each date to all subjects so there was constant feedback and opportunity for change. Changes in self perceived anxiety and social distress were significant at the .01 level using one-tailed t-tests with matching samples. This program did not teach special skills, but it allowed feedback about activities and the desire to change to act together as the teaching medium. The feedback gave information about the types of changes which would be desirable and it apparently worked well enough to prompt some positive change. Since there were no controls, the results should be viewed as preliminary. The authors see this as a relatively inexpensive

way to reach large numbers of people with this specific program.

A study by Archer and Kagan (1973) points out the usefulness of another psychoeducational approach to skills training in the realm of interpersonal communication. Based on the model known as Interpersonal Process Recall (Kagan and Krathwohl, 1967) and Affect Simulation (Kagan, Schauble, Resnikoff, Danish, and Krathwohl, 1969), the study involves the teaching of interpersonal skills to volunteers from a student population. Volunteers were placed into Interpersonal Process Recall, encounter-developmental and control groups. After the experimental period was over, peer relationship inventories were used as part of the assessment of interpersonal skills levels. A two way analysis of variance with the dependent variables as repeated measures assessed the general effect of treatments across all dependent variables. Tukey post hoc comparison tests evaluated the differences between specific treatments. There were significant treatment effects at the .05 level. There was significant evidence that Interpersonal Process Recall is a viable and effective way in which to provide learning in interpersonal communication skills.

Kagan (1984) describes the method of Interpersonal Process Recall in detail. He reports the scope of the research on IPR and relates the breadth of its applications. He refers to more than twenty studies confirming the efficacy of the method

as a means of influencing human interaction.

Hersen and Bellack (1976), repeating the techniques of Hersen, Turner, Edelstein and Pinkston (1975), taught social skills to chronic schizophrenic patients who were very non social. They targeted several social behaviors, such as speech duration, number of requests, appropriate affect and overall assertiveness, among others, and proceeded to train the subjects in these skills. After measuring baseline rates for these skills, training was administered by video tape presentation of skills followed by role playing and practice. Four weeks of five 20 to 40 minute sessions were offered. Due to small N's, statistical methods were not extensively employed beyond graphing the response patterns from the baseline rates. Subjects showed improvement in social skills which were maintained at follow-up times of two, four, six and eight weeks. This training of chronic schizophrenic patients is noted in Gambrill (1984) in her discussion of social skills training. In more than sixty studies, the training of various populations of subjects has been shown to be effective for social skills, regardless of the nature of the client. Results vary across subjects and specific methodology, but there is consistency of effect. According to Gambrill, this type of training works, and additionally, it generalizes across settings into non-experimental areas. Training in specific skills becomes internalized and generalized, a requirement for successful learning according to

psychoeducational models.

Using a video based format known as Microcounseling (Ivey, 1969, 1971), Moreland, Ivey and Phillips (1973) trained two groups of subjects. One group was trained by use of interviews with video taped feedback and didactic instruction. The other was trained with practice interviews and review with suggestions for improvement of skills. While both groups showed improvement in some skill areas, the microcounseling group was significantly higher in attending behaviors and in reflection of feeling statements (F-scores significant at the .05 level). More importantly, the microcounseling group showed a much greater generalization of skills across the six basic interviewer skills measured at posttest. The level of significance varied from .05 to .001, the latter being for attending and reflection of feeling scores. While both groups improved, the experimental format group produced greater change. The result is not inconsistent with other studies in which specific instruction, followed by discussion, role-playing and practice with video tape and feedback, produce more profound changes.

In their summary of Microcounseling, Ivey and Garwin (1984) conclude that there is an abundance of evidence that teaching skills with this method is successful and can be applied with confidence in a variety of settings. In addition, Kasdorf and Gustafson (1978) review more than one hundred and fifty data based studies which are in agreement

with this conclusion.

In summary, the number of studies conducted with various psychoeducational models of treatment is impressive. It is also conclusive in showing that specific skills, both personal and interpersonal, can be effectively taught to a wide range of clients/patients by a wide range of teachers/therapists. There is ample evidence that therapeutic gains can be made by the therapist who, acting as a teacher, relays knowledge and provides experience which enhances client learning. There is ample evidence that clients can learn to recognize problem behaviors, practice and acquire new behaviors and act as their own monitors after the training process is completed.

Research with the Personal Paradigm Shift

The Personal paradigm Shift (Hinds, 1983) has been used only sparingly in research settings although it has been used in counseling settings for several years with anecdotal reports of success. Jeney (1985) investigated the impact of applying the PPS as an intervention in the treatment of chronic pain patients. The effectiveness of the PPS was tested for (a) reducing chronic pain perceptions, (b) promoting higher incidence of health care behaviors, (3) modifying certain types of psychological disturbance toward "normality", and (4) encouraging the maintenance of treatment gains. Twelve groups of patients (N=51) in a multidisciplinary pain clinic were randomly assigned to one of two

treatments: training in the structured PPS intervention, or group discussion about pain and stress management. Treatment was administered during a one week clinic stay. All groups received the customary treatment for chronic pain established at the pain clinic. The design of the study was a pretest-posttest control group design with follow-up measures. Subjects completed the McGill Pain Questionnaire, a measure of pain perception, at pretest, posttest and three month follow-up. Subjects also completed the Minnesota Multiphasic Personality Inventory (MMPI) and the Lifestyle Coping Inventory (Hinds, 1983), a measure of health behavior performance, at pretest, posttest and three month follow-up. The follow-up measures were collected by mail with an 80% (N=41) return rate, with equal mortality in each of the treatment groups. The groups, not the individual, were the units of analyses, and the analyses were performed on gain scores obtained from the pretest-posttest and posttest-follow-up comparisons.

A multivariate analysis of variance was performed on the pain data and found to be non-significant for both the pretest-posttest and the posttest-follow-up comparisons at the p=.05 level. A multivariate analysis of variance was used on four scales of the MMPI (Hypochondriasis, Depression, Hysteria and Psychasthenia) and was found to be non-significant at the .05 level. A one way analysis of variance was performed on the health behavior data and found to be non-significant at

the p=.05 level. Chi-square tests on each of the six behavioral outcome measures collected at follow-up were found also to be non-significant at the p=.05 level.

Discussion of the negative results centered around several features. Small sample size was a methodological limitation. Analysis was based on only eleven degrees of freedom since the unit of analysis was the group and not the individuals. This effectively limited the power of the statistical tests, and the treatment would have to have had a very profound effect to ever be detectable with such a small sample size.

Since the nature of the effect of the PPS on chronic pain patients is unknown, there was some question as to the use of the MMPI, the MPQ and the Lifestyle Coping Inventory as being appropriate for the study.

There was some question as to the group therapy format since some groups became a therapeutic exploration of feelings and problems when they had been designed only as control for group interactions within treatment groups. This confounding effect may have masked treatment gains or enhanced certain control groups.

Because both groups in the study demonstrated improvement on several of the dependent measures, it was difficult to obtain statistical significance and conclude that one treatment results in greater gains than the other. Groups that obtained very good cohesiveness may well have thrown off

the experimental results with cohesiveness acting as a confounding variable.

Jeney felt that the twenty-four steps of the PPS may require more time to be effectively implemented. The complex nature of these many steps created some difficulty in those clients whose early comprehension was lower, and there was insufficient time to correct for the difficulty.

It was also observed that many of the clients clung to a more traditional medical model of their treatment, that is they expected to be cured and did not expect to play an interactive or proactive part in the treatment process. Since active involvement is a basic tenet of the program, clients who viewed themselves as passive recipients of a cure would not benefit from a program which requires their active participation.

Pretest differences of individuals in the PPS group indicated that this group was composed of subjects who were more psychologically disturbed than the control groups. This high within-group variance would make it difficult to observe small differences between groups. In fact, the within-group variance was almost as high as the between-group difference.

In a similarly designed study Parker (1987) studied the effect of the PPS program on stress, health behaviors and academic achievement. The effectiveness of the PPS was measured for (a) reducing psychological stress, (b) increasing health care behaviors, and (c) increasing academic achievement

as measured by grade point average.

A total of 106 students on academic probation at a state university were randomly assigned to one of two treatment groups: training in the PPS and no treatment. Both groups were allowed to participate in any normal university sponsored program for those on academic probation. There was a level of severity of academic underachievement nested in both groups. The study used a pretest-posttest control group design with follow-up measures.

Subjects completed the Taylor Manifest Anxiety Scale, the General Stress Chart (Hinds, 1983) and the Lifestyle Coping Inventory at pretest and posttest. Quarterly and cumulative grade point averages were obtained at pretest, posttest and follow-up after three months. A 99% return rate was obtained for each of the treatment groups. The group, not the individual, was the unit of analysis, and analyses were performed on gain scores obtained from pretest-posttest and posttest-follow-up comparisons.

A multivariate analysis of variance was performed on the psychological stress perceptions and was found not to be significant for the pretest-posttest comparison ($p=.05$). A two way analysis of variance was performed on the health care behavior performance data and was found to be not significant at the $p=.05$ level. Several two way analyses of variance were performed on the grade point average comparisons and found not to be significant for either the pretest-posttest comparison

or the posttest-follow-up comparison of cumulative grade point averages (p=.05). A two way analysis of variance performed on the posttest-follow-up comparison of quarterly grade point average was found to be significant at the p=.05 level.

Difficulties in the evaluation of stress perceptions of the two groups may well have been effected by the times chosen for the posttest and follow-up measures. Both were measured at times in the class term when students were under maximum stress due to class requirements. All students in the program were also facing severely increased pressures due to the nature of their academic difficulty in that they faced dismissal if improvement was not dramatic. As a result, pressure was very great throughout the term of the experiment.

Difficulties in measuring health behaviors was attributed to learning and maturation effects associated with the assessment instrument. The Lifestyle Coping Inventory offers numerous examples in its questions about ways in which health behaviors may be impacted. Knowledge provided in these statements makes an indirect, concrete behavioral assessment that may itself promote change. This may occur regardless of participating in the PPS program and may well have been a confounding variable in the experiment.

Use of the grand mean may well have obscured any more subtle differences that may have occurred between the two groups. Parker notes that it is also true that the relatively short elapsed time may not have been long enough for more

dramatic changes to be noted.

The difference between the changes in the two groups from pretreatment to post treatment in academic performance was found not to be significant. This was true for each of the hypotheses concerned with quarterly and cumulative averages. The long term nature of cumulative averages would not be expected to change dramatically in such a short period of time even if treatment was highly successful.

The quarterly differences would be expected to change more readily, and such differences were noted at the $p=.08$ level, but not the at $p=.05$ level. This indicates a trend in the desired direction, and perhaps this can best be understood by recognition that the effects of the PPS require time to be integrated in measurable terms.

It was found that the changes in the two groups from pretreatment to follow-up were significant in the quarterly grade point averages. This is indicative that the PPS program does have a positive effect that influences an individual's future behavior. The complex integration of the many aspects of the PPS takes time and can be expected to show up after internalization has had time to take place successfully. The significant differences noted at the three month follow-up does lend credence to the notion that additional time did provide a consolidation of the learning from the PPS program.

In summary, Parker asserts that the dependent measures, that is the General Stress Inventory, the Taylor MAS and the

Lifestyle Coping Inventory may have been inappropriate and that the time for the program and its effects may have been too short. He also suggests that a population of engineering students may have a personal orientation toward concrete thinking and prescriptive types of interventions. This may be a very real handicap in learning to apply some of the abstract and reflective thinking that is required for the PPS. These personality related factors may well add to the time required for proper integration of the PPS intervention.

In conclusion, it is suggested that the PPS might best be applied over longer time periods to allow for better integration of its many concepts. It was also suggested that some work be done to determine the optimal size of groups for training in the PPS.

Historical Development of Quality Assurance

The development of the concepts of quality assurance in mental health is a logical result of the quest for quality in medicine. Since as early as 1500 B.C. the quality and efficacy of medical treatment has been a concern in the various schools of medicine in different cultures such those found in as Egypt, China, India and Mexico. The development of codes of conduct and ethical behavior which are with us today originated with Greek prescientific medicine and the Hippocratic Oath of the Fourth Century B.C. (Wells and Brook, 1988).

The description, classification and treatment of mentally ill patients has taken place since the time of Galen, A.D. 138-201. Early treatment generally involved placement in institutions or support of benefactors who offered care. There was little concern from the medical community about quality of such care. Wells and Brook (1988) credit a Spanish merchant named Juan Ciudad Duarte as a forerunner in the creation of better treatment for mentally disturbed patients. Duarte reportedly experienced a transient psychotic episode and was treated by flogging. He eventually recovered and went on to found a hospital devoted to the humane treatment of the mentally ill. He was canonized posthumously as Saint John of God. Later, the Order of Charity for the Service of the Sick was established to carry on his methods.

This order influenced the thinking of Jean-Etienne Esquirol and Phillippe Pinel who are often credited with establishing the first modern psychiatric hospital. In his Medico Philosophical Treatise on Insanity (1801), Pinel set out his development of clear, logical standards of humane practice for treating the insane. This work had a great deal of influence since it took place at the time that psychiatry was emerging as a legitimate part of medicine (Wells and Brook, 1988).

Around 1835, Dr. Pierre A. Louis espoused that physicians should clearly demonstrate the degree of influence of any therapeutic agent or technique on the duration, progress and

termination of disease. This, he claimed, was the only real way of showing that treatment was effective. This familiar concept is the basis of modern quality assurance ideas and devices in both mental and physical medicine of the nineteen eighties (Tash and Sadler, 1984).

As universities began to study psychiatry in the mid eighteen hundreds, there was an attempt to apply medical expertise to the emerging study of mental disorders. The etiology of mental illness and the efficacy of treatment for mental disease became valid academic pursuits. Wilhelm Griesinger in Germany was an important influence in this time period. As a variety of medical schools developed in Europe, efforts were made to establish credentials for medical education. This was an essential step in delineating standards for physicians' education and training.

In the late 1850's, studies conducted by Florence Nightingale on the efficacy of hospital care in the British Army led to the assertion that sanitation changes could result in substantial decreases in fatality rates. Even though these changes were undertaken in purely medical settings, they established a method by which care could be reviewed on both individual and group bases. This approach allowed the investigation of cause and effect between the methods of care given and results achieved.

Concern over the adequacy of medical schools in the late eighteen hundreds led to the foundation of the Council on

Education of the American Medical Association. An evaluation of medical schools co-sponsored by the Carnigie Foundation in 1908 was critical of the organization, facilities and curricula that were being offered. Suggestions were made regarding the creation of more uniform standards based on scientific methods of research. From then until the 1960's, the focus of quality assurance was on the improvement of record keeping practices, hospital standardization, licensure requirements which affected staffing, and joint staffing of cases to assure proper diagnosis and treatment planning.

The American College of Surgeons developed the Hospital Standardization Program in 1917 which in part implemented the concept of review as an essential step in reviewing medical performance.

An essential step in the emerging field of psychoanalysis was the extensive training and analysis of the trainee, in association with required ongoing supervision. These two traditions are still in place and are essential parts of accredited training programs and governmental licensure requirements.

The eventual development of the Joint Commission on the Accreditation of Hospitals (JCAH) in 1951 was the culmination of an effort by the American College of Physicians, the American College of Surgeons, and the American Medical Association to find ways to control the quality of medical care by offering voluntary accreditation to health care

facilities. This organization has established standards for long term facilities, facilities for the mentally retarded and psychiatric inpatients, and child and adolescent facilities.

The greatest influence on mental health quality assurance in the last fifteen years has been the advent of government programs for Medicare and Medicaid. Facilities seeking the reimbursement of money for these clients were required to meet standards of care as set forth by the government. The development of professional standard review organizations, known as PSRO's, as established by the Secretary of Health, Education and Welfare, led to mandated quality assurance programs.

Additionally, private third party insurance carriers instituted similar programs in those agencies which were providing services for which they expected reimbursement. While changes in the public law have led the way, financial pressures in the private sector have had their impact in leading to these changes in quality assurance concepts and practices.

Wells and Brook (1988) list five social trends which can be credited with causing or influencing modern concepts of quality assurance. First, increased medical and psychological knowledge has made it impossible for a given physician to master all medical skills. Hence, specialization has increased. Because specialized technology and procedures carry with them increased costs, consumers and insurance

carriers (payers) have demanded some assurances of proper care, as well as protection from harm as a result of new procedures.

Secondly, third party coverage of medical and mental health services has led to increased demands for information about both the necessity and effectiveness of treatment. This information is used to determine eligibility for reimbursement and has become standard in the medical field.

An increasing sense of social responsibility as witnessed in the development of public employment programs and federal entitlement programs such as Medicare and Medicaid is listed as a third factor. Private attempts at providing health care benefits to larger populations were seen in the Kaiser Programs of the 1930's, but the influence of more recent federal programs has been extensive.

A fourth factor is the rising cost of medical care. All of the previously mentioned factors have had an impact on the cost of medical care. In general this has had a profound effect on medicine in that both consumers and payers want assurance that money is well spent. Rising costs have stimulated cost-containment efforts such as diagnosis-related-groups, known as DRG's. These approaches limit the type of care or the amount of care delivered and thereby limit costs. Such cost-containment efforts may have negative effects on the quality of care.

The fifth general trend has been the development of

consumer advocacy. The trend toward accountability for products and services in the market place is reflected by similar concerns in health care. Litigation and legislation supporting consumers' rights have been recognized and considered in making decisions about the application of procedures and their effects.

While these trends can be seen as normal consequences of market development, the health care market is not a normal market. The reliance on expert opinion and knowledge means that the consumer does not have sufficient knowledge and information to make decisions in many cases. These difficulties make it incumbent on the medical profession to regulate itself to a much higher degree than could be done by consumer pressure alone (Goldschmidt, 1988).

Current Concepts and Problems in Mental Health Quality Assurance

Quality assurance is best conceived as any activity in the health care delivery system which assures that the system will achieve the objective of maintaining and improving health. In the area of mental health, it is generally regarded as the implementation of any activity that will improve the outcome of mental health care.

According to Goldschmidt (1988), quality assurance mechanisms will essentially (a) measure a criterion attribute, that is, performance of a health care system, service or

provider, b) compare it to some normative standard of performance, and (c) indicate whether corrective action should be taken. He also suggests that in an ideal system, the quality assurance mechanisms would indicate the nature of the corrective actions needed. This would include some method of obtaining feedback on the corrective action's results. He points out that the manner in which this is to be accomplished is the variable that is in serious question.

Tash and Sadler (1984) report four methods of quality assurance measurement, based on independent but overlapping dimensions.

The most commonly used approach is that advocated by Donabedian (1966) which separates quality assurance activities into three categories: structure, process and outcome. While structural appraisal assess the adequacy of facilities, personnel and instrumentation, process evaluation determines whether the type of service is appropriate to the needs of the population being served. Outcome review attempts to measure whether clients improve as a result of a given treatment.

Woy, Luft, Toprac, Tash and Stahler (1983) suggest that quality assurance programs consist of either concurrent or retrospective reviews. Concurrent procedures focus on the treatment activities while the treatment is taking place. Retrospective procedures take place after treatment is concluded. One method implements change during treatment while the other makes plans for future changes. Both include

all the dimensions set forth by Donabedian (1966).

Racusin and Krell (1980) discussed quality assurance in community mental health centers. They concluded that the easiest separation was into internal and external evaluation procedures. They also indicate that all aspects of structure, process and outcome must be included in any comprehensive review.

Donabedian (1966) has also suggested that there are two ways of looking at any quality assurance data. These two approaches include reviewing either aggregated data or individual cases. Individual case review involves looking at treatment processes and outcome, giving a concurrent review in most cases. It may be done retrospectively. Aggregate data review may involve special studies, program review or profile analysis of care or service.

Given these various perspectives, it is important to look at what activities are included under this general category of quality assurance.

The most common form of quality assessment is peer review of cases performed by peer professionals, either internally or externally. Peer review may involve medical audits that determine if appropriate care has been provided. It may involve utilization review which requires that the organization being evaluated implement a review plan for determining how facilities were used. This generally includes such things as examination of admissions, length of stay and

professional services provided. Additionally, certification of admission and desirability of continued stay are often examined.

While these procedures are most commonly seen in the inpatient or hospital setting, they have their analogues in out-patient settings as well. When these aspects of health care are applied to mental health services, there are several obstacles to their conversion to psychological or psychiatric problems.

Generally mental health care systems have quality assurance programs that include the following elements:

1) a scope of focus of the QA system, that is, what should be included;
2) screening procedures for the selection of the cases to be reviewed;
3) criteria for what constitutes appropriate care;
4) a data collection instrument for obtaining information regarding compliance with the criteria;
5) a review format for analyzing data;
6) personnel who are trained to do the assessment;
7) a mechanism to provide educational feedback to induce corrective changes in the system.

(Tash and Stahler, 1984)

While the standards for quality assurance programs are generally based on these criteria, medical quality assurance are often not easily applied to outpatient programs. Some

standards are inappropriate, while others may be irrelevant or nearly impossible to implement. For example, many mental health centers do not generate a diagnosis at intake even though medical diagnoses are frequently used for hospital admissions and decisions about length of stay. The questions about length of stay become moot when the client is ambulatory. Length of treatment will therefore become more relevant and decisions about length of treatment may be much more complex. Admission criteria become less of a factor in outpatient settings while in hospitals they are often an essential factor. For mental health centers, assignment to a particular treatment program or modality is a much more relevant question.

There are several other problems with the generalization of medical health standards across mental health settings. It is more difficult in mental health care to define specific processes and to define explicit criteria and standards of treatment. Attempts to formulate treatment standards have met with controversy and opposition by professionals in the field. Therapists have less control over clients and the extraneous factors that may be present in cases of ambulatory care. Additionally, there is a greater gap between the measure of process and outcome. The ambulatory nature of treatment involves a much less concentrated or intensive use of resources than would be available in an inpatient setting. This means that cost efficiency for the review process in

outpatient settings is reduced.

Another problem is the timing of quality assessment. In mental health centers, clients' treatments may be spread out over many months, therefore the timing of assessment activities may well be much more difficult to determine in ways that will be meaningful.

While these are problems remain, Tash and Stahler (1984) believe the most crucial problem is the development of explicit criteria and standards about what constitutes quality in mental health. As Brook, Kamburg and Lohr (1982) indicate, the standard of care for many treatment modalities has not been agreed upon. Because therapeutic interventions are often difficult to describe and quantify, it is frequently problematic to establish explicit standards of adequate or quality care. The service record of treatment is the normal tool for making assessments about quality of care. The type of information determines the kind of study that can be done. Whether to do process or outcome studies is bound up in the nature of the information available. An outcome study might well be focusing only on success or failure of the program while ignoring all side effects which were an integral part of the process (Brook, Kamburg and Lohr, 1982, p. 37).

Quality assessment and quality assurance activities that focus only on the number of therapist hours or the size of treatment groups often miss an essential point: the improvement of the individual's mental health must be observed

and measured by specific criteria before overall program analysis can be effective (Brook, Kamburg and Lohr, 1982; Tash and Stahler, 1984; Affeldt, Roberts and Walczak, 1983).

As Rodriguez (1984) has pointed out, psychiatric records are difficult to evaluate, and the problems of measuring success of treatment remain the critical issue. Improvement in record keeping does little for the confusion which results from unmeasurable treatment results. Rodriguez concludes that data on the efficacy of psychotherapies and related objective measures is essential in the evaluation of quality assurance programs (p. 27-28).

Research in Quality Assurance

While the evaluation of quality assurance methods would ideally include structure, process and outcome as suggested by Donabedian (1980), most quality assurance research conducted at hospitals levels have emphasized structural concepts. This is in direct contrast with mental health research which generally involves the evaluation of process. There are very few experimental studies designed as comparative or controlled studies. Cohen (1988) reviewed the research in quality assurance, including several that were implemented to affect quality of services provided, and he found only two studies that were comparative.

The most extensively studied quality assurance research is a study set up in 1977 by the American Psychological

Association and the Civilian Health Medical Program of the Uniformed Services. This study, referred to as the APA/CHAMPUS study, consisted of three levels of case review within the CHAMPUS plan which consists of approximately eight million members nationwide. Level 1 review was a fairly technical review which evaluated the eligibility of beneficiary and provider in determining if service was a covered benefit. Level two consisted of case review by nurses. Using APA process criteria, they completed a treatment report which included a description of patient problems, the goals of treatment procedures and the patient's progress toward these goals. Level 3 review consisted of random assignment to three psychologists who reviewed each case. For every claim selected, three reviewers independently made recommendations concerning reimbursement for previous and proposed care. This procedure evaluated the clinical process with explicit screening criteria and professional peer review.

Cohen (1981) conducted a study of this process by comparing the responses of psychodynamic and non-psychodynamic therapists in the review process. Two hundred and twenty APA/CHAMPUS reviewers received a treatment report and 171 returned completed review reports (78%). Six clinical treatment reports were created, specifying that the client was a forty year old who had undergone either 40 or 60 treatment sessions and that the number of additional sessions depended on progress. Each claim specified dynamic therapy on a once-

a-week basis.

Reviewers were asked to rate on a five point scale the following: (a) necessity of care, (b) evidence of functional impairment, (c) adequacy of goals, (d) appropriateness of treatment, (e) adequacy of reported progress, and (f) overall adequacy of care. A 6x2x2x2 multivariate analysis of variance was performed using reviewers ratings of treatment, number of previous sessions recommended for reimbursement, the percentage of previous care recommended for reimbursement, and the recommended number of future sessions.

Significant results were found for the factors of the reviewer's theoretical orientation ($p=.001$), treatment length ($p=.001$) and the interaction of theoretical orientation and treatment length. The most important finding was that therapists of psychodynamic orientation were much more likely to approve of longer treatment than were eclectic/non-psychodynamic therapists. They were much more positive in their ratings of treatment results and more generous in their recommendations for past and future reimbursement.

This study raised many questions about how peer review committees should be composed, whether by dynamic therapists or others or by combined groups. It clearly indicated that further research was needed to clarify factors relevant to peer review and to aid in policy making decisions about the establishment of mental health quality assurance systems.

Similar studies (Cohen, 1981; Cohen and Oyster-Nelson,

1981; Cohen and Pizzirosso, 1982) have begun to build a data base of information about the effectiveness of peer review activities as seen in the APA/CHAMPUS methodology. The basic conclusion from this series of studies was that 1) there is a need for more scientifically based studies of quality assurance methods and 2) there is an abundance of issues that bear a closer scrutiny in the area of peer review of services.

A study based on a similar three level review was conducted by the Psychiatric Utilization Review and Evaluation Project at Yale University. Heinz, Goldblatt, Flynn and Garrison (1974) compared three methods of peer review using the same charts. An open ended evaluation was compared to a three level evaluation and a structured questionnaire that contained forty-seven specific questions regarding the case file. Twenty-seven charts were divided into three categories with three charts per category. They consisted of adolescents who had been (a) treated as out patients only, (b) talked of suicidal ideation or made suicidal attempts or (c) schizophrenics who were being treated as inpatients. The responses were graded and weighted so as to provide a numerical rating scale.

An analysis of variance was employed to determine whether or not the results obtained using the three methods differed concerning assessment of general adequacy, specific adequacy of patient care and recording of patient information. The results indicated that there were no significant differences

due to method of review. A measure of the time for completing evaluations did indicate that the questionnaire method took only 67% of the time of the individual review and 75% of the time required for the three level review.

Heinz and his associates suggest that the three level review process works as well as the other methods and suggests that it is worthy of further review. They make little of the 25% difference in time allowed for the review process.

Another study of the relative merits of different review styles was done by Hays (1977). This study compared three methods of case review for admission criteria into a state mental hospital. The review methods consisted of 1) reviewers who were in house hospital staff, 2) local mental health professionals as consultant reviewers and 3) researchers from the Texas Institute of Mental Services as reviewers. Each team consisted of a psychiatrist, a clinical psychologist, a psychiatric nurse and a clinical social worker.

Results using a binomial test comparison found that global judgements of admission were in agreement at the $p=.01$ level of significance at one facility and at $p=.05$ level at two other facilities. The research team concluded that review of admissions procedure and process could be adequately managed by a combination of in house and traveling review teams.

Luft, Sampson and Newman (1976) conducted a therapist and client follow-up survey to assess the impact of quality

assurance peer review on the therapy process. Eighty therapists and fifty patients were surveyed regarding therapy and results. They were also asked about how they felt therapy and its results were affected by the peer review of their cases. While the results of many specific issues were discussed, there was remarkable agreement between clients and therapists on the progress made. Therapist and clients were in agreement 77% of the time on the amount of therapeutic gain which was made (Chi-squared tests with p=.002). Clients and therapists agreed to a significant level about who needed more therapy and who did not (Chi-squared tests at .04). There was no indication that peer review was seen as a deterrent in the formation of therapeutic relationship by either therapists or clients. The therapist choice of treatment modality was reported to have been negatively affected by the peer review process in only ten percent of the cases. One fourth of the therapists who had presented ten or more cases for review said they thought more concretely and systematically about their treatment plans and goals as a result of the peer review process.

Luft, Sampson and Newman conclude that the peer review process was not as disruptive as some might fear and that it appears to help therapists focus on treatment goals more concretely and clearly. They concluded that the presence of third party payment requires fluidity about treatment goals. One third of the clients were concerned about confidentiality

while another third felt they would benefit from review of their cases by a committee composed of other professionals. Therapists agreed three fourths of the time that the review of their cases was a benefit in helping them confirm diagnoses and resolve difficulties involving transference and countertransference.

It was also discovered that clients used less than three fourth of their allotted visits, and therapists and clients were in remarkable agreement about the length and adequacy of treatment. The study concluded that peer review for this system effectively monitored the appropriateness of treatment and allocated limited treatment funds without unduly interfering with treatment patterns, processes or outcomes (Luft, Sampson and Newman, 1976, p. 895).

Dall and Claiborn (1982) evaluated the Aetna peer review pilot study in which Aetna Insurance Company had requested cases be submitted for peer review by APA reviewers. This involved sending to a selected board of APA reviewers approximately 4% of the cases covered in a given time. Benefits for clients who had reached a level of 24, 40 or 60 treatment sessions were used. Forty-five cases were reviewed in the six month time frame selected. Results of the study indicated that 90% of past care cases reviewed were recommended for payment, a tacit agreement of diagnosis and treatment plan. Reviewers were less reluctant to "intervene" in planned treatment, and termination of treatment was

recommended in only 27% of the cases. Partial Approval (24%) and Approval (18%) were also noted. Reviewers were unanimous in 27% of the cases and there was a 2/3 majority in 77% of the cases.

It was also evident that there were severe problems with information available in the charts. Often such things as marital status were not present in the charts, and 76% of them had either no progress report or had an extremely vague reference to treatment goals. These were regarded as major deficiencies in the charts.

Dall and Claiborn concluded that the reliability of the reviewers was less than might have been expected or preferred. The inadequate treatment forms did not elicit adequate or relevant descriptive information, but reviewers appeared to give the providers the benefit of the doubt. This was in direct contradiction to the reviewer instructions which indicated that inadequate information should be an indicator of less than adequate care. The findings suggest some interesting and troubling insights into practice and peer review. They could not explain why female reviewers seemed to be "tougher" than their male counterparts or why dynamically oriented care was reviewed with greater leniency. Differences in the adjudged adequacy of treatment reports as a function of the reviewers gender raises a question about possible gender determined inappropriate treatment. Further study may determine some answers to these questions.

Education as to the nature and conduct of the peer review process may enlighten future reviewers as to some of their responsibilities and potential problems in reviewing cases. Finally, they conclude that the peer review process is an integral part of the commitment by professional psychologists to quality assurance (Dall and Claiborn, 1982, p. 8).

Summary

As Cohen (1989) has indicated, the basis of treatment review in quality assurance requires the presence of valid and reliable information about screening criteria, process judgements and treatment documentation. The critical ingredient is valid and reliable measures of the assessment and treatment plans as they are implemented. It is for this reason that the present study was conducted.

The Personal Paradigm Shift provides a structured, goal-oriented, education-based treatment program that has shown itself to be viable in the treatment of stress, psychosomatic problems and in the positive changing of student grades. Proper implementation of the PPS to other problem areas requires the establishment of a measurement instrument for determining starting points and for measuring progress throughout the program. The Personal Change Questionnaire has been designed to accomplish this purpose.

CHAPTER III

DESIGN OF THE STUDY

The methodology of the study is described in chapter III. The chapter includes a description of the Personal Paradigm Shift and the Personal Change Questionnaire. The documents are compared, section by section, and the derivation of the items on the PCQ is explained. The chapter also includes a description of the sample used in the study and the procedures followed in obtaining the sample. Finally there is a discussion of the research hypotheses and an explanation of the logic for the choice of the statistical and procedural methods.

Description of the Personal Paradigm Shift and the Personal Change Questionnaire

The Personal Paradigm Shift was developed by Hinds (1983) as a psychoeducational approach to personal behavior change and health care management. It is a planned and organized method of teaching individuals about the process of personal change. It was developed from the observations about the process that people go through when making personal changes. It follows established psychoeducational principles and it requires the psychologist to become a teacher while the client becomes an actively involved student. It assumes that health

care behaviors are functional relationships that can be learned or changed (Jeney, 1985; Parker, 1987).

The Personal Paradigm Shift moves through a logical sequence of stages. The change process requires that clients experience (a) personal awareness, (b) decision making processes, (c) oppositional alternatives to present behaviors, and (d) planning and action that leads to change. Each of these stages is composed of detailed steps designed to educate the client about the relationships between external behaviors and internal phenomena such as thoughts, feelings and bodily reactions. Internal processes often maintain or exacerbate personal problems or distress. Understanding how this takes place is a critical step in the client's education about change.

The Personal Change Questionnaire consists of two forms which are designed to evaluate both client and therapist knowledge about the client's understanding of personal change. Since the test instrument is based on the Personal Paradigm Shift, the PCQ draws its items directly from the individual steps of the PPS. The following sections discuss each of the four stages and their individual steps, and each question on the PCQ is directly linked to the appropriate step from which it was derived.

There is an additional section on the therapist form which is based on observed motivational dynamics and it will be discussed at the end of the last section which is common

to both the client and therapist forms.

The Personal Paradigm Shift begins with a stage referred to as Personal Awareness.

Stage 1: Personal Awareness

The Awareness stage is designed to guide clients through a self analysis of their present behaviors and to enable them to confront the personal dynamics of their present problem or difficulty. This self analysis of their problem and its antecedent or concurrent thoughts and feelings is often difficult because clients are not familiar with this type of self observation. It is essential in Stage 1 that clients become aware of and examine relationships between internal and external variables that lead to the creation and maintenance of their personal problems. Step 1 requires that clients describe the problem on which they want to work. At this point, problems are usually described in general terms such as being "over-weight" or having "test anxiety".

The Personal Change Questionnaire is a series of statements about personal self knowledge to which the patient is asked to respond. Each part of the PCQ relates directly to one stage of the PPS or to a specific aspect of one stage. So for this stage of the PPS, the PCQ states directly: "I know what my main problem is." The clients are asked to rate themselves on a scale of self knowledge from 0 to 7, with 0 being "Don't Know" to 7 meaning "Know Very Well".

Additionally, the PCQ provides an example of the type of

response that might be given. The PCQ states:"I get depressed and can't work."

This section of the PCQ appears in this form:

DON'T KNOW KNOW

1. I know what my main problem is.

For example: I get depressed and can't work. 0 1 2 3 4 5 6 7

The client is requested to circle the number which corresponds to their own personal level of self knowledge. They are directed to respond according to their own actions, goals, thoughts, feelings, etc. They are told that goals refers to plans for changing their old actions.

The therapist form of the PCQ is divided into similar sections but each section is labeled. The section labels do not appear on the client form. The statements are similar to the client form, and the therapist has been instructed to rate the client on how sure the therapist believes the client is about each of the statements. Therapist ratings are based solely on the therapist's knowledge of the client. The form appears in this format:

A. <u>Personal Awareness</u>:

How sure are you that the client: doesn't know knows

1. what their main problem is? 0 1 2 3 4 5 6 7

The format remains the same until question #27. In the interest of space, therapist form answers will not be given for each part of the PCQ. The change in format starting with statement #27 will be presented at the point it appears.

Step two of Stage 1 asks the client to set some initial goal or goals related to the presenting problem. Stating specific behavioral goals forces the client to focus on possible favorable outcomes. Once again they are usually stated in general terms, such as "I want to return to work."

The PCQ states in item #2: "I know specific goals that will help me solve my main problem". For example:"I will lose twenty pounds and have more energy for work."

Step three of Stage 1 requires the client to identify specific events that precede the occurrence of their problem. This can be a difficult task since many people feel that their problems just "seem to happen." A record may be generated in the PPS of the places, people, times and events that appear to go with the problem situation.

The PCQ states in item #3:"I know the situation in which my problem takes place." For example:"I get depressed when I am alone too much."

Step four of Stage 1 is designed to develop understanding of the process by which the antecedent events cause an effect in the client's internal reactions. The client is instructed to identify and list internal reactions such as beliefs, feelings, mental images and physiological reactions that they commonly experience in the problem situation. The long term goal of this step is to create and nurture an understanding of the relationship between external events and the internal reactions.

The PCQ contains two statements related to this step:

#4: I know my own feelings in the problem situation. For example: I feel lost and very nervous.

#5: I know my own thoughts in the problem situation. For example: I wonder what is wrong with me.

Step five asks the client to identify specific behavioral actions taken as a result of antecedent events and internal reactions. The process herein is designed to assist the client in understanding how behaviors result from a sequence of events, both external and internal.

The PCQ states in #6:"I know what actions I take when I experience my thoughts and feelings in the problem situation." For example: I spend a lot of time reading to escape these thoughts and feelings.

Step six addresses the consequences of the actions taken in the problem situation as discussed in step five. These consequences are discussed in both internal and external terms. Links are established between the consequences of behavior and personal self judgements. This link is seen as essential since people often make self judgements based on the consequences of their actions. This step of the PPS also addresses the needs that the client is meeting by their present problem behavior. The acknowledgement of these needs becomes a foundation of client self understanding.

The PCQ addresses the consequences of behavior with two statements:

#7: I know the consequences of my own actions in the problem situation. For example: The more I sit and read, the more I feel isolated and alone.

#8: I know whether I am praising or criticizing myself in the problem situation. For example: I usually put myself down for feeling so low.

Step seven, the final step in Stage 1, is termed "taking a loss". The client is asked to identify how needs are met or which belief must be "given up" in order that change take place. A central concern of the PPS is that personal change involves giving something up as well as gaining something. This focus is unique to the PPS and is not elaborated upon in other models of behavior change.

Step seven also addresses in detail the personal beliefs about what a client feels is needed for survival in life. The ways in which a person holds to and acts upon their beliefs is important to their outlook on the world. Adjusting these beliefs is essential to the process of change.

The PCQ makes two statements related to losses and needs:

#9: I know what I will lose if I give up my present actions in the problem situation. For example: I will lose some of the attention I will get from some of my friends when I am depressed.

#10: I know what needs of mine are being met by my present actions in the problem situation. For example: Some of my needs for attention are being met.

Stage 2: Decision Making

This stage requires that the client use the information they have gained from the awareness stage. They determine how this information will influence their decisions about making changes. The process consists of three steps: constructing a balance sheet, making a commitment to change and confronting the barrier of fear. These are steps 8, 9 and 10. This stage of the PPS is similar to other behavior change programs.

In an attempt to understand specific inhibiting conflicts, the client is required to construct a balance sheet of thoughts and feelings surrounding personal changes. The writing down of these factors makes it difficult to avoid confronting them. In this way, unconscious forces are raised into conscious awareness and their influence on change can be mitigated. Specifically, the perceived punishments and rewards for changing or for remaining the same are brought forth. Clients can then determine more readily some of the forces which may have been hidden but still acting in previous attempts at change.

The PCQ addresses these issues with four statements:

#11: I know what punishments I will get when I change my actions in the problem situation. For example: It would feel like a punishment to lose some of that special attention.

#12: I know the rewards I will get when I change my actions in the problem situation. For example: If I change my actions I won't be alone and depressed as much.

#13: I know the punishments I will get if I don't change my actions in the problem situation. For example: If I don't change I can expect to feel isolated and alone a lot.

#14: I know what rewards I will get if I don't change my actions in the problem situation. For example: I can remain depressed and not have to go to work.

Step nine requires a commitment from the client, both cognitive and emotional, to making a change. This change is based on information from previous steps. The client is asked for a decision to continue working on making personal change. It is possible that the current situation is satisfactory to the client. In such a case, no such commitment is made.

The PCQ addresses the question of commitment directly.

#15: I know how much I am committed to making a change in my actions. For example: I am willing to miss some of my favorite activities to attend therapy sessions.

The inhibiting nature of fear on change is a central concept to the PPS. At this point in the PPS program, step 10, the client confronts the resistance to change by examining fears about change. The experience of these unpleasant emotions is discussed and the client identifies the defenses normally used to avoid these feelings.

The PCQ addresses fears in two ways.

#16: I know the fears I will have to face if I don't change my actions. For example: I will have to face the fear that I am a failure.

#17: I know how to avoid my fears. For example: I can avoid my fears by staying very busy, reading or playing pinball.

Stage 3: Oppositional Alternatives

This stage of the PPS is designed to help the client replace old internal reactions with new ones. Replacement is essential since failure to learn new, replacement behaviors will result in the re-emergence of the old behaviors. In this stage, the client will create new internal reactions that are different and often counter to the old internal reactions identified in the awareness stage. The steps of stage three also fosters a sense of self control over internal reactions and subsequent behaviors.

Step 11 is essentially a repeat of step 3 in which the client is asked to record information about the stressful conditions which normally surround the problem. This step is repeated to emphasize that the client cannot necessarily control external events, but that they can learn to control internal processes which are a result of external people, places or events.

Since this step is a repeat, it is not directly addressed as a separate statement on the PCQ.

Step 12 is the most essential and difficult step in the PPS. Changing the internal reactions of the client requires that they experience a shift in the way they regard events. This is the "paradigm shift" phase and requires a concentrated

effort to develop new feelings, thoughts, mental images, physiological reactions and self judgements. Each of these internal reactions is addressed directly by the PCQ.

The PCQ states:

#18: I know I can bring about new feelings in the problem situation. For example: I know I can develop feelings of self confidence even if I do fail.

#19: I know I can bring about new thoughts in the problem situation. For example: I can think about making new friends when I do things rather than being alone.

#20: I know I can bring about new mental images in the problem situation. I can see myself being congratulated for doing a good job and being successful.

#21: I know I can recognize new bodily reactions in the problem situation. For example: I'll be able to feel lighter and more energetic when I lose twenty pounds.

#22: I know I can bring about new self judgements in the problem situation. For example: I can think of my depression as a stage which I can successfully get through.

Step 13 has the client develop alternative behaviors to the problem situation. At this point, any alternatives are acceptable. No attempt is made to determine whether these alternatives are appropriate. The results of these alternative behaviors are dealt with in step 14. In the realistic application of the PPS, these two steps may well be taking place almost simultaneously as alternatives and the

results of alternatives are discussed.

The PCQ states:

#23: I know I can bring about new personal actions to solve my own problems. For example: I can do something active rather than bury my head in a book for two weeks.

Determining the results of these alternative behaviors is the essence of step 14. While some possible alternative behaviors may be negative, the emphasis is on developing new behaviors which will result in maximizing personal gains. While new or different losses may be expected, gains made in new behaviors will outweigh any new losses. These new gains may include such internal reactions as more self-control, self-esteem and self-confidence. Measurable external factors may emerge such as weight loss or reductions in test anxiety. The PCQ addresses consequences, self evaluations and needs with two statements.

#24: I know I can recognize the consequences of my new actions in the problem situation. For example: I'll be able to see that staying active helps me avoid unnecessary depression.

#25: I know I can bring about new self evaluations as a result of my new actions in the problem situation. For example: I can feel more in control and feel good about taking positive actions.

#26: I know I can recognize needs that will be met by my new actions in the problem situation. For example: Being

active will help me meet new people and satisfy my needs for attention.

Stage 4: Treatment Planning and Action

This final stage of the Personal Paradigm Shift is designed to provide a foundation for change. Realistic steps are provided for making and carrying out plans to bring about desired changes.

It incorporates reasonable steps such as goal setting, finding role models and support groups, and devising specific methods of record keeping and self evaluation. This approach is set up to reduce fears about change and to enhance feelings of control about the ongoing process. This foundation for change is reality based and provides for feedback about change.

Step 15 requires that a specific, realistic short-term goal to be defined by the client. The step provides for the establishment of behavioral goals which are attainable. This provides ongoing motivation for change.

The PCQ addresses this step as follows:

#27: I know I can choose a realistic starting goal for myself. For example: I can choose to lose two pounds in the first month of dieting.

At this point there is a slight change in the therapist form of the PCQ. The choices of "doesn't know" and "knows" are changed to "can" and "can't". The therapist choices now appear as: How sure are you that the client "can" or "can't"

(#27) "choose a realistic first goal for themselves?". This new format remains unchanged through item #37.

Step 16 addresses the identification and development of support for the client's desired change. Clients learn that dependency on others is an essential part of life and that they can use others as a source of strength and support in enacting change in their lives. This includes the gathering of appropriate information about what actually changes.

The PCQ addresses this step with two statements:

#28: I know I can find someone to support me in making a change. For example: I could attend Weight Watchers or arrange a conference with my doctor.

#29: I know I can seek information for making some changes. For example: My doctor can give me some good information about losing weight.

The learning concept of modeling is the focus of step 17. Clients are encouraged to identify and seek information from or about others who have made similar changes. This step requires the client to identify a model whom they can use to enhance their own personal changes.

The PCQ covers this step as follows:

#30: I know I can find a role model. For example: A good friend at work lost forty pounds and he looks great.

Step 18 deals with learning to provide self rewards for the accomplishment of the initial change goal. Positive reinforcement which is immediate will act as motivation for

the continuance of the change process. This is a critical component of operant learning and it provides a method by which the client can learn self motivation and self control.

The PCQ states:

#31: I know I can give myself rewards for making these changes. For example: When I lose weight, I can get that new leather jacket I've been wanting.

Organizing a specific plan of attack for working on their problem is the goal of step 19. Clients determine the sequence of behaviors they expect to perform in order to achieve the desired change goal. The essence of this step is that a predictable plan or blueprint increases the client's control and helps them maintain motivation.

The PCQ addresses this directly:

#32: I know I can make an organized plan for achieving these changes. For example: I can make a daily schedule for my exercise and food intake.

Step 20 deals with developing a feedback system for the client to measure their progress toward their change goal. The development of effective feedback mechanisms is important for making changes so that the client not be discouraged by slow or seemingly small changes. A lack of consistent positive feedback can be a negative influence on the change process. Teaching ways of self evaluation which are effective will provide positive feedback and thereby enhance motivation.

The PCQ states:

#33: I know I can give myself feedback on my progress. For example: I can keep a record of my weight each Monday to see how I am doing.

Teaching the client about establishing a time line for change is the purpose of step 21. This encourages the client to maintain their efforts and maximize the chance of success by staying on their time schedule. This scheduling sets time oriented goals that establish a sense of continuity and security for the attainment of change. A set schedule also diminishes the opportunity for procrastination about the goal.

This is directly addressed in the PCQ as follows:

#34: I know I can set a realistic period of time for change to take place. For example: If I work on losing a pound a week, I'll reach my goal by the new year.

Step 22 involves learning making backup plans. Since all plans include the possibility of failure, clients are taught to develop alternates to their first plan. Knowing how to deal with failure enhances motivation and feelings of self control.

The PCQ states:

#35: I know I can make a backup plan if I fail to reach my goal. For example: If my weight loss is too slow, I can increase my daily exercises a bit at a time.

Fear of success is often an unconscious motivator that can undermine the most earnest attempts to change. This is addressed in step 23 as clients are taught about the fears

associated with the risk of making change. Expressing and learning ways of dealing with these fears enhances self control and maintains motivation.

The PCQ states:

#36: I know I can make a plan to avoid sabotaging or undercutting my success. For example: Each week I will review what I have eaten to see if I have followed my plan.

The last step instructs the client in how to keep a record of their results. This record in the form of a diary or chart will provide specific and concrete information about gains or losses as the plans are put in action. This tends to provide ongoing support and motivation for the client.

The PCQ states:

#37: I can keep a diary or chart to follow my change. For example: I can make a chart that includes my daily calorie intake and exercise schedule.

This is the end of the client form.

It was noted in application of the Personal Paradigm Shift that certain clients did much better in completing the program successfully. It was proposed that motivational factors appeared to be present in some individuals who appeared to be more successful. These motivational factors are included on the therapist form and discussed in the following section.

Motivational Dimension: Therapist Form Section C)

1. Non-defensiveness: How non-defensive is the client? On the basis of past interaction with the client, the therapist is asked to evaluate how defensive the client is in the therapeutic situation. There is some belief that less defensive clients work through the program more successfully. It is expected that a higher non-defensiveness rating corresponds to better success. Therapists may be able to determine some aspects of projected outcome by observation of the client's defensive or non-defensive attitude in the first few sessions.

2. Introspection: The therapist is asked to rate the client on how well they look inside themselves. It is thought that those who can be more introspective may be more successful in the program.

3. Engagement: How well does the client engage the therapist in the sessions. Basically, are they attentive and communicative about their problem or do they remain distant or distracted in their interactions in therapy?

4. Self-disclosure: The therapist is asked to rate the client on how well the client can open up to the therapist about themselves and their problem. How well can they discuss the various, highly personal aspects of their problem?

5. Commitment: How committed is the client to making a change? Based on their interaction with the client, the therapist is asked to rate the client on the client's

commitment to making a change.

6. Emotionally ready to make a change: Does the therapist feel that the client is ready emotionally to become involved in the program?

Each of these dimensions is based on both deductive and intuitive processes within the therapist. While it is true that therapists operate in different ways, it is also true that therapists' intuitions may be valid reflections of client thinking. In addition, they always affect the interactions of client and therapist. An attempt is being made on the PCQ to measure these intuitive factors of the therapist and compare them to the other client factors.

Summary of the PPS and the PCQ

The Personal Paradigm Shift was designed to teach clients how to change. It employs a psychoeducational approach and it is highly structured and detailed in addressing a number of variables about change. While psychoeducational models have been applied with success in many settings, and the PPS has shown success in limited settings, there has been no way to measure client status for this program. Additionally, no method for determining specific progress through the program has been developed. The Personal Change Questionnaire is based on the tenets of the PPS and has been designed to measure the status of clients in therapy. In addition, it is hoped that the PCQ will prove to be an effective measure of

client progress through the PPS program. Each part of the PPS is directly addressed by a corresponding part of the PCQ. The PCQ is designed to be administered at any time in therapy.

Selection and Description of the Sample

Subjects for the study were selected from the clientele of several mental health facilities. These sources included at least one drug inpatient treatment facility for criminal offenders with drug addictions and one community mental health facility as well as several private practice settings.

The client pool consisted of 115 subjects. Of these subjects, 86% were between the ages of 21 and 45, with 51% female and 49% male. See Table 3.1 below and Table 3.2 on page 82.

Table 3.1: Age of Subjects

Age Range	Frequency	Percent
16-20	7	6.1
21-25	18	15.7
26-30	21	18.3
31-35	19	16.5
36-40	19	16.5
41-45	22	19.1
46-50	6	5.2
50+	3	2.7

Table 3.2: Sex of Subjects

Sex	Frequency	Percent
Female	59	51
Male	55	49

Of this sample, 44.3% were single, 37.4% married, 12.2% divorced and 1.7% widowed and 4.4% in other categories.

Table 3.3: Marital Status of Subjects

Status	Frequency	Percent
Single	51	44.3
Married	43	37.4
Divorced	14	12.2
Widowed	2	1.7
Other	5	4.4

Thirty-nine percent had a high school diploma or GED, while 11.3% had not attained a high school diploma. Those with two years of college made up 15.7% while those with a four year degree made up 19.1%. Those with graduate work comprised the final 14.8%. This is summarized in Table 3.4 on page 83.

In the area of employment, 32.2% were employed on an hourly basis. Salaried persons made up 29.6% while the self employed accounted for 7% of the sample. Housewives comprised

7% and 20.9% were unemployed. See Table 3.5 below.

Table 3.4: Educational Level of Subjects

Category	Frequency	Percent
No HS Diploma	13	11.3
HS or GED	45	39.1
2 yr College	18	15.7
4 yr College	22	19.1
Grad School	17	14.8

Table 3.5: Employment Status of Subjects

Category	Frequency	Percent
Self Employed	8	7.0
Hourly Wage	37	32.2
Salaried	34	29.6
Housewife	8	7.0
Unemployed	24	20.9
Other	4	3.5

Income levels are reported in Table 3.6 on page 84. Twenty-four percent of the subjects were in the 0 - $10,000 range while 9.6% were in the $10,000 - $20,000 range. Another 15.7% were between $20,000 and $30,000 with 13% between $30,000 and $40,000. A group of 9.6% were in the $40,000 to $50,000 range and 26.1% were above $50,000. See Table 3.6.

Table 3.6: Income Level of Subjects

Range	Frequency	Percent
0 - $10,000	28	24.3
$10,000-$20,000	11	9.6
$20,000-$30,000	18	15.7
$30,000-$40,000	15	13.0
$40,000-$50,000	11	9.6
$50,000 or more	30	26.1

With regard to therapy sessions attended, 13.2% had from 0-9 sessions and 8.3% had between 10-19 sessions. Another 28.3% had from 20-29 sessions. Eighteen point nine percent had between 30-39 sessions. Those with forty sessions or more comprised 24.5% of the sample. See Table 3.7 below.

Table 3.7: Number of Sessions

No. of Sessions	Frequency	Percent
0 - 9	14	13.2
10 - 19	30	28.3
20 - 29	16	15.1
30 - 39	20	18.9
40 - 49	11	10.3
50+	15	18.9

Insurance status of the subjects is reported in Table 3.8 below. As indicated, 50.4% had insurance and 36.5% did not. Another 13.1% did not know or did not respond to the question.

Table 3.8: Covered by Insurance

Category	Frequency	Percent
Yes	58	50.4
No	42	36.5
Don't Know/ No answer	15	13.1

Reasons for counseling were reported as follows: 22.6% reported substance abuse, 20.9% reported a family problem, 15.7% reported anxiety and 14.8% indicated that depression was the problem. A 2.6% sample reported a physical problem, 9.6% reported they were required to come, and 13.9% reported another, non specified problem as their reason for therapy. See Table 3.9 on page 86.

Subjects also reported on the length of time they had been experiencing their problem. Of the respondents, 78.3% reported having had the problem more than two years. Only 9.6% reported a time period of 1 - 2 years and 7.0% for three months to a year. Less than one per cent reported a time period of less than 3 months. A summary of this information is found in Table 3.10 on page 86.

Therapists were asked to describe their treatment

Table 3.9: Reason for Seeking Counseling

Category	Frequency	Percent
Anxiety	18	15.7
Depression	17	14.8
Fam. Prob.	24	20.9
Sub. Abuse	26	22.6
Phys. Prob.	3	2.6
Had to Come	11	9.6
Other	16	13.9

Table 3.10: Time Subject had the Problem

Time Period	Frequency	Percent
0 - 3 months	1	.9
3 mo - 1 yr	8	7.0
1 yr - 2 yrs	11	9.6
2 yrs or more	90	78.3

orientation and did so in the following manner. Only 10.4% were self described as Psychodynamic while 24.3% were Cognitive Behavioral. Gestalt and Psychoeducational both reported only 1.7% and the remaining 60.9% were self described as eclectic. Each subject was coded on the client form and had a treatment orientation though there were in fact less than 115 therapists. The information was coded in this manner

when it was noted that therapists did not necessarily describe themselves the same for each client. This information is summarized in table 3.11.

Table 3.11: Therapist Treatment Orientation per Subject

Category	Frequency	Percent
Psychodynamic	12	10.4
Cog-Behavioral	28	24.3
Psychoeducational	2	1.7
Gestalt	2	1.7
Eclectic	70	60.9
other	1	.9

The female/male distribution of the therapists is reported in Table 3.12 below. Of the participating therapists, 53% were female and 47% were male.

Table 3.12: Sex of Therapists

Female	53%
Male	47%

Reliability and Validity

In establishing instruments such as the Personal Change Questionnaire, attention must be paid to both the reliability

and validity of the instrument. These characteristics are related, but they are significantly different. Reliability is concerned with the precision of measurement and the ability of the instrument to repeatedly make measurements of the same precision. Validity deals with the question about whether quantities which are being measured have any usefulness. It is clear that a precise, repeatable measure, ie., one with high reliability, may not be useful for a particular purpose and in that sense have limited validity. On the other hand, if a measure is not reliable, it can never be valid. Reliability is a necessary but not a sufficient requirement of validity (Nunnally, 1970).

Reliability can best be conceptualized by recognizing that every measurement has some error in it. This error may be small and may be due to a variety of causes in either the instrument or in the measuring process or in both. The larger this measurement error becomes, the less precise is the measurement. The greater the error, the less likely is an accurate repetition of any given measurement. Reliability can be increased by decreasing the measurement error.

When trying to understand the relationship between events and behavior, the social scientist is often looking at very small correlations. If the reliability of an instrument is low, the measurement error may well obscure evidence of correlation. It is essential to minimize measurement error in order to maximize the detection of correlational evidence.

Reliability also refers to the generalizability of measurements. A reliable instrument is expected to give consistent results across settings such that similar groups can expect to attain similar results in a variety of situations. Any reliable test must meet the criteria of applicability across testing situations, times and subjects (Nunnally, 1970, p .118).

In summary, all tests have some "zone of uncertainty" that surrounds it's measured scores. Highly reliable tests minimize this zone of uncertainty by decreasing measurement error and increasing precision of measurement.

Validity is a multidimensional term which in general has come to refer to the test's ability to measure what it purports to measure. While this may appear straightforward, validity is not easily determined nor does it have only one meaning. The physical or hard sciences may provide reliable and valid measures such as height, weight or age. The social sciences often have less well defined concepts such as intelligence or motivation. Validation of measurements for these abstract concepts is more complex.

> "Validity is a matter of degree rather than an all-or-none property, and validation is a never ending process....New evidence may suggest modification of an existing measure or the development of a new and better approach to measuring the attribute in question" (Nunnally, 1970, p. 133).

Validity of a measurement device involves the use to which it is being put rather than just the nature of the instrument itself. Nunnally (1970) lists three major purposes of test instruments and three corresponding types of validity that need to be considered. These are predictive validity, content validity and construct validity.

When the purpose of an instrument is to establish an estimate of behavior, predictive validity is important. This involves the establishment of some criterion against which other factors are compared in order to determine if these factors can predict how well one can expect to do on the criterion measure. This has been referred to alternatively as "postdiction" or "concurrent" validity. In all cases it involves the use of a predictor variable and its relation to the criterion measure. The predictive nature relates only to the correlation between the two variables. It does not include the notion of causality.

Content validity is the term applied to the adequacy with which a certain test measures the universe of information it is supposed to measure. Content validity is most applicable to measures of achievement. It is best assured by obtaining a representative sample of test items from the larger universe of possible items and by employing reasonable methods of test construction. Test construction must control for both sampling and reasonableness. If not, critical elements within the universe of items will be ignored, over emphasized or

improperly addressed. The degree of content validity "rests mainly on appeals to reason regarding the adequacy with which important content has been sampled and on the adequacy with which the content has been cast in test items."(1970, p. 137)

According to Nunnally: "If it is agreed by most potential users of the test, or at least persons in positions of responsibility, that the plan was sound and was well carried out, the test has a high degree of content validity."(1978, p. 92) Expert inspection of the items and the logic behind their selection is an acceptable indication of content validity and is often used as a first step in test construction and validation. Additional steps might well include successive pilot studies to test the usefulness of items.

Content validity is also positively impacted by the presence of high internal consistency as measured by such statistical methods as Cronbach's Alpha. A moderate level of internal consistency is needed as further evidence of content validity.

Nunnally (1978) also suggests that performance on a test both before and after training increases the likelihood of content reliability, as does similar or equivalent performance on tests that purport to measure the same things.

Construct validity is essential to most psychological test validation, and it is central to this study. Abstract concepts approached in social sciences are often known as constructs since they include a variety of different and

possibly divergent thoughts, feelings and behaviors. Such constructs represent hypotheses about how these things relate together or how they might be affected by particular treatments. Most constructs are relatively diffuse and have indistinct boundaries. They may have several central ideas and other peripheral ideas which are directly or marginally related. Because of their nebulous nature, construct validation requires evidence from a variety of directions. This leads to the notion that no one test or questionnaire can be sufficient proof of the validity of the construct.

A collection of evidence may lead to the acceptance of the construct, without the presence of absolute proof. Nunnally (1970) delineates three requirements necessary for the development and validation of constructs.

First, the domain of the observable behaviors must be specified. This requires defining the terms and behaviors to be observed, and specifying what relationships one would expect to find among the behaviors. This amounts to outlining the domain of the observables so that one can examine what relationships exist among the various observables.

Secondly, construct validity requires some delineation of what relationships one would expect to find among the observables if the construct exists. They might all correlate together, they might cluster into different groups of correlations or they might fail to correlate at all. Attempts at validation should include predicted relationships as

dictated by the construct as a whole.

Finally, sufficient evidence for construct validity is the fact that supposed measures of the construct (either a single measure or a combination of measures) behave as expected. While there might be alternate explanations of their behavior, the collective action along predicted lines is considered sufficient evidence of existence of the construct.(Nunnally, 1978, p. 103)

Constructs in the social sciences are often nebulous and require a winnowing process that may expand or contract the construct as evidence is collected. In all cases, construct validity is never achieved as much as it is pursued. In this light, it is more likely that one observes evidence for construct validity rather than attaining certainty or absolute proof that a construct is real. The pursuit of construct validity involves a statistical approach to correlations and predicted interrelations of the various components of the construct.

One additional aspect of validity is that of the generalizability of results. In order for results to be generalized, it must be shown that a particular instrument gives results which are comparable to other tests purporting to measure the same thing. If this is not the case, one has to recognize that there may only be limited applicability of the instrument to the specific criteria of the original study.

Measure Used in the Study

The Personal Change Questionnaire was developed as a measure of client status and change in therapy based on psychoeducational principles. The PCQ was developed and administered to clients and a corresponding therapist form was completed by their therapists. The PCQ, Form S, is a 38 item self report instrument that measures psychoeducational aspects of therapy. Items for the PCQ are responded to on an eight point scale with a low end of zero and a maximum of seven. The scales range from "Don't Know" to "Know Very Well" for some items and from "Can't" to "Can" for other items. Each response is based on the individual's self knowledge about the content of the item.

The Therapist Form of the PCQ has forty-four (44) items. The first 38 correspond to the Form S items and require the therapist to evaluate the client based on the therapist's perceptions of the client's ability to deal with the content of the items. The Therapist Form has six additional questions that deal with motivational aspects of the client.

Higher scores are thought to delineate greater client self understanding and ability to deal with their problems.

The PCQ is comprised of four sub-scales developed from a model of personal change known as the Personal Paradigm Shift (Hinds, 1983). These scales are Personal Awareness, Oppositional Alternatives, Decision Making and Planning and Action. The development of the items is discussed at length

at the beginning of Chapter III (p. 62-81). Empirical support for this instrument's reliability and validity are a major component of this study are presented in Chapter IV. The design used to test questions of reliability and validity are presented later in this chapter.

Procedures Used for Data Collection

Clients were approached by their therapist after no fewer than four sessions and asked to participate. They were told that the survey was part of a study on quality assurance and that it was designed to evaluate the effectiveness of care provided by that facility. It was explained that their participation in the survey was essential in order to evaluate the survey itself. It was pointed out that it was the survey which was being evaluated, not the clients. The test itself was being checked to determine if it will effectively measure quality in the services which clients were receiving.

They were informed that they were not to put their name or any other identifying information on the survey. They were asked to complete some demographic information as part of the evaluation, and they were told that this information was to be used only as part of the evaluation. Such information would not be sufficient for identification of any individual. They were informed that all information gathered would be confidential. Information sheets and test forms were coded so that statistical analyses could be run later, but anonymity

of response was maintained.

All participants in the study signed a release form stating that they understood the purpose to which the information was to be put. All persons asked to be in the study had the option to refuse to participate, a condition explained to them before they began the test. They were allowed to change their minds and drop out of the study at any time prior to handing in the evaluation form. The consent forms were collected prior to the collection of the evaluation forms. They were placed in different envelopes than the ones containing the survey forms and the demographic forms. Participants were reminded that for the survey to be effectively evaluated, their answers should be as honest and accurate as possible. They were encouraged to answer to the best of their ability, and they were told to work as fast as they could without feeling hurried.

The first attempts at gathering information in the form of completed tests did not control for race, sex, age or any other demographic variables. Participants were asked to report the number of sessions they had attended as part of their therapy.

Therapist selection was achieved by presenting the nature of the study to a variety of therapists and asking for their participation. No attempt was made to select or control for sex or treatment orientation in this initial study. Therapists volunteered to participate and select clients as

subjects according to guidelines set forth in the research. These included: 1) clients were to be of legal age, 2) clients were to be in therapy for reasons that would be judged primarily psychological, and 3) clients were to be able to think clearly enough to participate in the study; ie, no thought disorders serious enough to impair the ability to complete the questionnaire.

Each therapist was given instructions for administration of the PCQ which they agreed to follow. These included how to distribute and collect the PCQ, the demographic forms and the consent forms. The nature of the research was never secret and therapists were encouraged to ask questions of the primary researcher about the nature of the research and plans for the completed PCQ and possible outcome reports that might be generated.

Design

The overall design of the study is descriptive, with major emphasis on the development of reliability and validity estimates for the Personal Change Questionnaire. An addition, the study was designed to determine if there is evidence for a psychoeducational component of psychotherapy and to develop an instrument to measure that component. Development of such an instrument provides one method of determining quality of therapeutic services by being able to determine clients' status in therapy based on the psychoeducational model.

The PCQ was developed specifically to be the instrument to make such a measurement. It was empirically tested for reliability and validity in order to fulfill this role. Statistical procedures employed include central tendency, correlation, t-tests, Cronbach's Alpha and factor analysis.

The descriptive nature of this research does not lend itself to discussion of cause. Results from the present study will hopefully provide a basis for further research into use of psychoeducational principles in therapy and quality assurance.

Research Hypotheses

Research hypotheses were developed around both aspects of the study. These included the need for validity and reliability estimates for the PCQ and the search for a psycho-educational component to psychotherapy. Several research hypotheses were generated.

The first three dealt with questions of reliability of the Personal Change Questionnaire.

Reliability of the PCQ:

Hypothesis I: The internal consistency of the total items of the Personal Change Questionnaire will be sufficiently high to infer homogeneity of the construct of a psychoeducational basis for personal change in therapy.

Hypothesis II: The internal consistency of each of the

four subsections of the Personal Change Questionnaire will be sufficiently high to infer that each subscale demonstrates internal consistency reliability.

Hypothesis III: The correlations between the total scale and the four subscales of the Personal Change Questionnaire will be sufficiently high to infer that the Personal Change Questionnaire is measuring a uni-dimensional concept.

Initial Validity of the Personal Change Questionnaire

Hypothesis IV: The content of the items on the Personal Change Questionnaire will be indicative of a psychoeducational basis of personal change in psychotherapy.

Hypothesis V: A linear correlation will be observed between therapist total scores on the Therapist Form and client total scores on the Client Form S of the Personal Change Questionnaire.

Hypothesis VI: A linear correlation will be observed between the Therapist Form total scores and the therapist rating of client status in therapy.

Hypothesis VII: A linear correlation will be observed

between the therapist rating of client's overall status in therapy and the client's total scores.

Hypothesis VIII: The mean scores for the items in the subscales will be ordered such that the scores will be highest in section I with decreasing scores in each following section, with the lowest scores being in section IV.

Hypothesis IX: There will be a linear correlation between the total scores of items on the Personal Change Questionnaire and the educational level of subjects.

Hypothesis X: There will be a linear correlation between the total scores of items on the Personal Change Questionnaire and the number of sessions of therapy reported by clients.

Hypothesis XI: Four distinct factors will be detected corresponding to the four subdivisions of the Personal Change Questionnaire.

Hypothesis XII: There will be differences in the mean score for items, subscales and total scores on the Personal Change Questionnaire between diagnostic groups.

This section presented the research hypotheses. Next the procedures for analyzing the results are presented.

Procedures Used in Data Analysis

Statistical procedures were used to test eleven of the original research hypotheses. Research statistics used to test the research hypotheses included: Cronbach's coefficient Alpha, the Spearman correlation coefficient, the Pearson product-moment correlation and the t-test statistic. A factor analysis was also performed. Procedures used for analysis of each hypothesis are discussed below.

Hypotheses I and II refer directly to the reliability of the Personal Change Questionnaire. According to Anastasi (1961), in a broad sense, test reliability indicates the extent to which individual differences in test scores are attributable to chance errors of measurement and the extent to which they are attributable to true differences in the characteristic under consideration. Mehrens and Lehmen define reliability as the degree of consistency between two measures of the same thing (1978). Measurements are reliable to the extent that they are repeatable (Nunnally, 1978). To attain an idea of how repeatable a measure is, a common method is to administer a given test more than once to the same individual. That being unwieldy or inappropriate, an alternative method is to administer two comparable halves of the test at the same time. This is known as the split halves method.

Split halves is considered a measure of internal consistency since the two administrations of equivalent forms of the test are contained in one single test. How to split a test can become a problem since splitting it different ways might exclude some types of items from one half or the other. To avoid this difficulty, Cronbach (1951) developed a technique for finding the average correlation between all possible split half combinations. It essentially measures the extent to which each item correlates with the total test score and the extent to which each item is tapping a similar concept. It employs methods by which all item variances are added together. This provides a way to calculate the internal consistency without having to devise multiple tests.

"Coefficient Alpha provides a good estimate of reliability in most situations, since the major source of measurement error is because of the sampling content "(Nunnally, 1978, p. 230).

Mehrens and Lehman (1978) suggest that Alpha coefficients of tests used in making decisions about people should be in the range of .85, but that for group decisions, a range around .65 may be acceptable (p. 122). Anastasi puts the acceptable figure in the .80's to the .90's (p. 118). Nunnally proposes a somewhat higher figure for decisions about people, depending on the particular use to which the test is being put. He suggests a level of .90 to .95. He suggests a level of .70 for the Alpha value in basic research.

For this pilot study, it was determined that values of .6 would be acceptable for correlations involved in the research setting.

Hypothesis III tests the relationship between the PCQ subscales and the total scale. A Pearson product moment correlation was computed. This is the single most often used measure of a relationship between two variables. When a psychological variable is measurable on eleven or more levels they can be said to be continuous and little information is lost in analysis if this is not the case. For comparison of the subscales to the total scores, such a correlation is appropriate.

The Pearson product-moment correlation takes into account not only the item's position in the group but also the amount of the deviation from the group mean. It generates a measure of direction and magnitude of the relationship between the variables being tested. Values range from +1 for a perfect one-to-one positive correlation to a -1 for a perfect negative correlation. This coefficient is the most stable measure of correlation and has the smallest standard of error of all correlation techniques (Sesan, 1983).

In order to infer a unidimensional construct, there must be observed a significant level of correlation between the total scale score and the sub-scale scores of the test (Anastasi, 1961, p. 146). The Personal Change Questionnaire must also meet these criteria.

Hypothesis IV deals with the content validity of the PCQ and was not tested statistically. Content validity is related to how adequately the content of the test items samples the domain about which inferences are to be made (Mehrens and Lehman, 1978, p. 124). There is no statistical method for determining content validity since it is determined by a thorough inspection of the items. The content area must be systematically analyzed to insure that all major aspects are adequately covered by the test items. In addition, the items must be sampled in the correct proportions (Anastasi, 1961, p. 136).

As discussed previously (p. 86), content validity rests mainly upon appeals to reason as to the appropriateness of content and the adequacy to which content has been addressed in the items. A scale can be assumed to have content validity if (1) the content domain was clearly defined, (2) specific objectives were developed and items generated around these objectives, and (3) there is high inter-rater reliability among expert judges who rate the content of the test as reflective of the defined content domain (Sesan, 1983, p. 110). Procedure for this hypothesis verification is discussed in Chapter 4.

Hypothesis V states that there will be observed a relationship between therapists scores and client scores. This hypothesis is partially a reflection of construct validity and partly a measure of the applicability of the

Personal Change Questionnaire to therapy settings as a measure of Quality Assurance. Construct validity has been addressed elsewhere and will be discussed with regard to Hypotheses VI.

A major goal in the development of the PCQ was to provide an instrument which would reliably predict client preparedness and status in therapy. This hypothesis is one attempt to establish links that apply to therapeutic settings.

This relationship was examined using both the Pearson product-moment correlation and the Spearmen correlation. The Spearman correlation is used with information which is ordinal in nature, that is, ordered from low to high, but not necessarily in even intervals. The format of the PCQ provides for scores from 0 to 7, but there is no way to adequately determine if the intervals are measuring the same amount of change. For example, does a change from 3 to 4 on a scale of knowing represent the same change as the change from 5 to 6? This question is presently unanswerable. Since there are less than eleven levels in the measurement scale of the PCQ, it was decided to look for correlations between individual items with the Spearman correlation first.

Since the information on the scales of the PCQ is ordinal, but not necessarily interval, the Spearman was used. It provides a measure of the direction and magnitude of the relationship between variables. In general, Spearman values tend to be higher that Pearson values for the same set of data (Gravetter and Wallnau, 1985).

In a separate analysis, the Pearson product moment was also computed for this relationship. In this case, the additive nature of the total scales being compared pushed the number of levels above eleven and rules regarding use of the Pearson apply.

Hypothesis VI relates to construct validity and again to the applicability of the measure for Quality Assurance. One aspect of construct validity is how well certain expected relationships are predicted and explained by the construct. One measure of status in therapy is therapist opinion. This is being directly compared by searching for the relationship between therapist opinion and the total scale scores on the PCQ. In this study, it was predicted that a positive correlation would exist between therapists total scores and therapist rating of clients status in therapy.

The Spearman correlation was again used since therapist rating had only eight levels.

Hypothesis VII relates to the applicability of the PCQ client form, FORM S, to decisions about status in therapy. A positive relationship between therapist rating of how well the client is dealing with their problem and client self rating total scores would enable the instrument to be employed as a meaningful self report instrument. The Spearman correlation was used in this analysis also.

Hypothesis VIII relates to an expected relationship between the subscales of the PCQ. Since the Personal Paradigm

Shift was designed as a progressive series of steps leading to self change, it was postulated that higher scores would be expected on earlier subscales as a person moved through the progression of stages. Initial inspection of score means of the subsections suggested that the expected relationship would not be present. It was decided that a two-way t-test would more appropriately determine any significant differences between the means of the subscale scores.

Hypothesis IX was descriptive in nature and it was believed that there would exist a relationship between educational levels and the total scale scores of the subjects. Again the Spearman correlation was used.

Hypothesis X sought to determine if there was a relationship between length of time in therapy and total scores. Therapy based on the Personal Paradigm Shift progresses sequentially through the steps as therapy continues. Therefore, longer therapy, ie., more sessions, was expected to relate to higher overall scores. This hypothesis was designed to investigate the possibility that clients in therapy based on other assumptions would follow a similar progressive pattern. The Spearman Correlation was used with this hypothesis also.

Hypothesis XI relates to the performance of a factor analysis of the PCQ and is concerned with questions of construct validity. Essentially, factor analysis is a refined technique for analyzing the interrelationships of behavior

data (Anastasi, 1961, p. 147) or for analyzing the inter-relationships between items on a test (Mehrens and Lehman, 1978, p. 565). The process involves reducing the number of variables or categories which are first used to describe traits or behavior. Geometrically, this method involves finding reference axes in terms of which each item can be plotted. Mathematically, this is accomplished by determining the linear combinations of all the variables in a data matrix. Each such linear combination is said to be a factor.

Analytically, this provides a method of determining the correlation between any factor and any item on a test such as the PCQ. The analysis provides a measure of the degree to which each item is "loaded on" or reflective of that factor. A factor analysis was done on the items of the PCQ in order to determine if the four subscales correspond to separate factors. This determination is accomplished by interpretation of any factors which appear as a result of the analysis.

Hypothesis XII was established to investigate differences between diagnostic groups which were observed in the sample. It is essentially descriptive in nature, and it has implications in the establishment of construct validity of both the instrument and the psychoeducational component of therapy. Mean scores were compared using the t-test statistic as discussed previously under Hypothesis VIII.

Supplemental Data Analysis

Original data collection was supplemented by data from two sources. The first was a direct result of correlations which were computed as part of the Spearman correlation matrices. One matrix was generated to determine relationships both within and between test forms on individual items, subscale scores and total scores, as well as client self ratings and therapist ratings of clients. In addition, a matrix was generated to investigate possible relations between the therapist "Motivational Dimensions" and items, subscales and total scores on the therapist form of the PCQ.

This information was reported in the form of Spearman correlation coefficients for each of the combinations. For example, item #2, "How sure are you that the client knows specific goals that will help solve the problem?", is correlated with Therapist Rating of Client Status in Therapy with a value of .6171. Such information was reported as correlation values and is contained in tabular form in Chapter IV. Information relating the Motivational Dimensions and items, subscales and total scores was also reported and appears in Chapter IV in tabular form. An example would be the relationship between Motivational Dimension 6, Emotional readiness to learn a program of change, and item 15, "How much are they committed to change?"

Only correlations above the value of .6 were reported. These individual correlations add to understanding and

integrating the overall picture generated by earlier data as it relates to construct validity. In addition, it provides evidence as to which items or concepts appear to weigh most heavily with therapists as they make evaluations of clients in this study.

A second source of data is taken from a series of t-tests for paired samples similar to that reported in Table 4.7 and 4.8. These tables compare the means of subscale scores on Client and Therapist Forms of the PCQ. The same analysis generated comparisons between the means of the subscale scores for the Client and the Therapists Forms. This information is useful is understanding how client reports and therapist reports might differ. Integration of such information may lead to further understanding of similarities and differences in client's self rating and therapist ratings of clients. Such information relates directly to the applicability of the instrument in Quality Assurance.

This information is reported in tabular form in Chapter IV and discussed further at that point.

Summary

The purpose of this study was to evaluate the usefulness and appropriateness of the Personal Change Questionnaire as a measure of achievement in therapy. In order to accomplish this, it was necessary to provide measures of internal consistency reliability, content validity and construct

validity. Investigation was made into the applicability of the instrument to questions of Quality Assurance. In addition, an attempt was made to find evidence of a psychoeducational component of therapy.

Responses to the Personal Change Questionnaire from 115 clients in psychotherapy and their therapists were gathered from various therapeutic settings including a community mental health setting, private practice clinics and a halfway house for criminal offenders with drug addiction problems. The PCQ is a rationally constructed instrument composed of four subscales developed to measure status in therapy based on a psychoeducational approach. It consists of forms for both therapists and clients.

Hypotheses related to the instrument, the applicability of the instrument and the psychoeducational component of therapy were developed and procedures to test these hypotheses were outlined. Cronbach's coefficient alpha was used to measure both client and therapist forms of the PCQ for internal consistency in both the overall test and the subscales. The Pearson product-moment correlation was used to determine if the PCQ was measuring a unidimensional construct.

Initial tests of validity for the PCQ focused on both content and construct validity. Content validity was established through expert appraisal and acceptance of the item content and construction. Several tests of construct

validity were made, including comparison of therapists overall scores and therapist opinion about client status.

Several hypothesis about the applicability of the instrument to therapeutic settings were also set forth. Demographic variables were compared to test scores in an effort to locate and identify relationships.

Additional descriptive and correlational information was discussed as was its relevance and importance to construct validity and instrument applicability to Quality Assurance.

Factor analysis was employed to investigate the presence of underlying factors in the PCQ. This technique provides further evidence of construct validity.

Statistical procedures included computation of Cronbach's alpha, the Spearman and Pearson product-moment correlations, and the t-test statistic. A factor analysis also was done.

Results of the present study provide groundwork for future adaptations of both the Personal Change Questionnaire and the Personal Paradigm Shift from which the PCQ was developed.

CHAPTER IV

ANALYSIS OF RESULTS

In this chapter the results of the data analyses are presented. Each hypothesis is restated in testable form when appropriate, and the results of the subsequent analysis are given.

Tests of the Research Hypotheses

Hypotheses Related to the Reliability of the Personal Change Questionnaire

Hypothesis I: The internal consistency of the total items of the Personal Change Questionnaire will be sufficiently high to infer homogeneity of the construct of a psychoeducational basis for personal change in therapy.

The internal consistency of the PCQ was determined by computation of Cronbach's coefficient alpha. An analysis employing Cronbach's alpha was conducted initially with n=59. A value of .95 was determined for the client form and a value of .96 was determined for the therapist form.

At that time there were no items of zero variance and it was decided to retain all items for the final analysis.

A final analysis was made at n=115 with the following results: Form S (client form) had a value of .95 and the therapist form had a value of .97.

These values are quite high and an inference can be made that the PCQ is measuring a homogeneous construct. The PCQ is an internally consistent measure of a psychoeducational component of therapy.

Hypothesis II: The internal consistency of each of the four subsections of the Personal Change Questionnaire will be sufficiently high to infer that each subscale demonstrates internal consistency reliability.

An alpha coefficient was computed for each of the four sub-scales of the PCQ. This was done at n=59 and n=115. For n=59, the client form had alpha values for the subscales as follows: .83 for Personal Awareness, .81 for Decision Making, .92 for Oppositional Alternatives, and .92 for Planning and Action. The Therapist Form at initial assessment had value as follows: .92 for Personal Awareness, .86 for Decision Making, .92 for Oppositional Alternatives, and .92 for Planning and Action.

At final analysis of n=115, the following values were obtained: Form S: .78 for Personal Awareness, .82 for Decision Making, .92 for Oppositional Alternatives and .93 for Planning and Action; Therapist Form: .90 for Personal Awareness, .87 for Decision Making, .94 for Oppositional Alternatives and .93 for Planning and Action.

All alpha coefficients are high enough to infer homogeneity of the subscale items.

The results are presented in Table 4.1 on page 115.

Table 4.1

Internal Consistency of the Personal Change Questionnaire for the Total Scale and Four Subscales

Cronbach's Coefficient Alpha

	CLIENT FORM S	
	N = 59	N = 115
Total Scale	.95	.94
Personal Awareness	.83	.78
Decision Making	.81	.82
Oppositional Alternatives	.92	.92
Planning and Action	.92	.93
	THERAPIST FORM	
Total Scale	.96	.97
Personal Awareness	.92	.90
Decision Making	.86	.87
Oppositional Alternatives	.92	.94
Planning and Action	.92	.93

Hypothesis III: The correlations between the total scale and the four subscales of the Personal Change Questionnaire will be sufficiently high to infer that the Personal Change Questionnaire is measuring a unidimensional concept.

The correlations between the PCQ Total Scale and the four sub-scales were determined by computing a Pearson product moment correlation matrix. On the Client Form, the inter-scale correlations ranged from .33 between Patient Awareness and Planning and Action to .89 between Total Scale and Oppositional Alternatives. The Patient Awareness scale is the scale with the lowest inter-scale correlations. On the Therapist Form, the inter-scale correlations ranged from .69 between Personal Awareness and Oppositional Alternatives to .94 between Total Scale and Planning and Action. All interactions were significant at the .01 alpha level. See Table 4.2 on page 117 and Table 4.3 on page 118.

Hypothesis Related to the Validity of the Personal Change Questionnaire

Hypothesis IV: The content of items on the Personal Change Questionnaire will be indicative of a psychoeducational basis of personal change in psychotherapy.

This hypothesis related to the content validity of the Personal Change Questionnaire and is not testable by the use of statistics. The three methods noted previously (p. 104)

Table 4.2

Correlation Matrix of the Total Scale and the Four Sub-Scales of the Personal Change Questionnaire - Client Form S

Scale	Total	Personal Awareness	Decision Making	Opposit. Altern.	Planning & Action
Total Pers.	1.00	.69	.80	.89	.84
Awar. Dec.	.69	1.00	.61	.51	.33
Mak. Opp.	.80	.61	1.00	.69	.47
Alt. Plan/	.89	.51	.69	1.00	.67
Act.	.84	.33	.47	.67	1.00

Note: All correlations significant at the $p < .01$

as described by Mehrens and Lehman (1978) and Anastasi (1978) were used to gain content validity. These criteria are listed, followed by a discussion of how they were satisfied.

Criteria for content validity include (1) the content area is clearly identified, (2) specific objectives were developed and items generated around these objectives and (3) there is a high degree of inter-rater reliability among expert

Table 4.3

Correlation Matrix of the Total Scale and the Four Sub-Scales of the Personal Change Questionnaire - Therapist Form

Scale	Total	Personal Awareness	Decision Making	Opposit. Altern.	Planning & Action
Total Pers.	1.00	.86	.89	.92	.94
Awar. Dec.	.86	1.00	.75	.69	.71
Mak. Opp.	.89	.75	1.00	.74	.77
Alt. Plan/	.92	.69	.74	1.00	.85
Act.	.94	.71	.77	.85	1.00

Note: All correlations significant at the $p < .01$

judges who rate the content of the test as reflective of the defined content domain.

The content area was clearly defined as those segments of the Personal Paradigm Shift which were used for treatment with the PPS. Each step of the PPS is clearly defined and structured so as to reflect one part of the overall process of change. Each item of the PCQ was derived directly from one

item of the PPS. This insured that each item was a direct reflection of a clearly defined content domain.

Three judges were selected who were deemed to be experts in the use of psychoeducational models. Two of these were familiar with the PPS. They were asked to read the PPS and the PCQ and decide if they agreed or disagreed that the item was a genuine reflection of the content of the corresponding segment of the PPS. They were offered the option of requesting that the item be rewritten if they felt that in their judgement that it was unclear or not adequate. The judges were unanimous in their agreement that the items on the Personal Change Questionnaire were true reflections of the content of the Personal Paradigm Shift.

Hypothesis V: A linear correlation will be observed between therapist total scores on the Therapist Form and client total scores on the Client Form S of the Personal Change Questionnaire.

This can be stated in the following form:

Ho: $P = 0$

Ha: $P \neq 0$

The correlation matrix generated by comparing all items and subsections of the client form, Form S, and all items and sub-sections of the therapist form provides this information. This matrix generated a Spearman correlation for each matched set of items. The Spearman value generated was .44 for n=115, a figure that was significant at the .001 level.

In addition, a Pearson product moment correlation coefficient was generated. Since the total scores included all possible ranges of scores from each item, the total is 37, the number of items, times 7, the number of levels for each score (minus 1 since a score of zero would not add to the total). The total 259 is greater than 11 and the Pearson can be employed. The Pearson value was .40 for n=115, with a significance level of $p > .01$.

In this case, the null hypothesis would be rejected since there is a minimum value of .40 (Pearson) and a maximum value of .44 (Spearman). There is a moderate linear correlation between the total scores on the Client Form S of the PCQ and the total scores on the Therapist Form of the PCQ.

Table 4.4 Correlation of Client Total Scores with Therapist Total Scores

	Client Total Scores
Therapist Total Scores	.40 (Pearson, n=115, p=.001) .44 (Spearman, n=115, p=.01)

Hypothesis VI: A linear correlation will be observed between the Therapist Form total scores and the therapist rating of client status in therapy.

The hypothesis can be stated in the following form:

Ho: $P = 0$

Ha: $P \neq 0$

The Spearman coefficient was calculated for this hypothesis. In addition, a separate correlation was run aside from the overall matrix. The values were both at .79 for n=115 and are significant at the .001 level. The null hypothesis would be rejected. There is a strong linear correlation between Therapist Form total scores and therapist ratings of client status in therapy.

Table 4.5 Therapist Total Scores vs Therapist Rating of Client Status

	Therapist Total Scores
Therapist Rating of Client Status	.79 (n=115, p=.001)

Hypothesis VII: A linear correlation will be observed between the therapist rating of client status in therapy and the client's total scores.

The hypothesis can be restated:

Ho: $P = 0$

Ha: $P \neq 0$

The Spearman correlation was calculated since the therapist rating had only a scale of eight. The value was

determined to be .32 for n=115 and it was significant at the .001 level. The null hypothesis is rejected. There is a moderate correlation between therapist rating of client's status in therapy and the client's total scores.

Table 4.6 Therapist Rating of Client Status vs Client Total Score

	Therapist Rating
Client Total Score	.32 (n=115, p=.001)

Hypothesis VIII: The mean scores for the items in the subscales will be ordered such that the scores will be highest in section I with decreasing scores being in each following section, with the lowest scores being in section IV.

The hypothesis can be stated:

Ho: $\bar{m}_{PA} \leq \bar{m}_{DM} \leq \bar{m}_{OA} \leq \bar{m}_{PAA}$

Ha: $\bar{m}_{PA} > \bar{m}_{DM} > \bar{m}_{OA} > \bar{m}_{PAA}$

A t-test comparison of the mean scores of the subsections of the PCQ indicates that differences between means of the subsection scores are not significant in the direction of the hypothesis. The null hypothesis is retained. Tables 4.7 and 4.8 summarize the comparison of mean scores for the subscales.

See page 123.

Table 4.7 Comparison of Means of Subscale Scores
Client Form S

SUBSCALES	MEAN	STANDARD DEVIATION	t-value	2-tailed prob.
Per.Aware.	5.1383	.900		
			-1.72	.087
Dec.Making	5.2932	1.190		
Per.Aware.	5.1383	.900		
			- .90	.372
Opp.Alt.	5.2345	1.317		
Per.Aware.	5.1383	.900		
			.29	.770
PLan/Act.	5.0979	1.513		
Dec.Making	5.2932	1.190		
			.64	.526
Opp.Alt.	5.2345	1.317		
Dec.Making	5.2932	1.190		
			1.48	.143
Plan/Act	5.0979	1.513		
Opp.Alt	5.2345	1.317		
			1.26	.211
Plan/Act	5.0979	1.513		

Note: None of the comparisons are significant.

Table 4.8 Comparison of Means of Subscale Scores
Therapist Form

SUBSCALES	MEAN	STANDARD DEVIATION	t-value	2-tailed prob.
Per.Aware.	5.1952	1.006		
			- .20	.842
Dec.Making	5.2096	1.142		
Per.Aware.	5.1952	1.006		
			2.58	.011**
Opp.Alt.	4.9816	1.199		
Per.Aware.	5.1952	1.006		
			2.44	.016**
Plan/Act.	5.0038	1.165		
Dec.Making	5.2096	1.142		
			2.91	.004**
Opp.Alt.	4.9816	1.199		
Dec.Making	5.2096	1.142		
			2.83	.005**
Plan/Act	5.0038	1.165		
Opp.Alt	4.9816	1.199		
			- .36	.719
Plan/Act.	5.0038	1.165		

Note: ** Indicates the t-values are significant. The null hypothesis is still retained since the overall order is PA < DM > OA < PAA not PA > DM > OA > PAA>

Hypothesis IX: There will be a linear correlation between the total scores of items on the Personal Change Questionnaire on Form S and the educational level of the subjects.

Restatement of the hypothesis provides:

Ho: $P = 0$

Ha: $P \neq 0$

The Spearman correlation was calculated and determined to be -.09 for n=115 with significance at .174. The null hypothesis is retained. There is no observable linear relationship between educational level and scores on the Personal Change Questionnaire.

Table 4.9 Correlation of Client Total Scores vs Educational Level

	Client Total Scores
Educational Level	-.09 (n=115, p=.174)

Hypothesis X: There will be a linear correlation between the total scores of items on the Personal Change Questionnaire and the number of sessions of therapy reported by clients.

The hypothesis can be stated:

Ho: $P = 0$

Ha: $P \neq 0$

The Spearman correlation was computed to be .16 for n=115. This was at a significance level of .01. The null hypothesis is rejected. There is a small linear relationship between the number of sessions and the total scores on Form S of the Personal Change Questionnaire.

Table 4.10 Correlation of Clients Total Scores vs Number of Sessions

	Clients Total Scores
Number of Sessions	.16 (n=115, p=.01)

Hypothesis XI: Four distinct factors will be detected corresponding to the four subdivisions of the Personal Change Questionnaire.

An exploratory factor analysis was performed on the data provided by the respondents to the PCQ. An analysis was performed on both the therapist and client forms of the PCQ. All items of the Client Form were used except #38, client self rating. For the Therapist Form, all items were used with the exception of #38, therapist rating of client status. In addition, the Motivational Dimensions were not included in the analysis of the Therapist Form.

A Varimax rotation provided four factors for each form of the PCQ. The criteria for determining the importance of an item to a factor are subjective. It is believed that items

with higher loadings are more important than having many items loaded at lower levels (Kim and Mueller, 1978). A level of .40 was chosen as a liberal cut-off point since it was felt that the purpose of an exploratory analysis was to identify clusters of items rather than eliminate items from the instrument.

In each case the results are indicative of the presence of two factors. The first factor loads heavily in all questions of the therapist form and also loads heavily in all questions of the client form except #1, #3, #4, #5, #6, #7 and #9. The second factor loads somewhat heavily on items #4, #5, #6, and #8. It loads slightly less on items #3 and #7. A second factor was observed on the client form. This factor loads heavily on item #6. It also loads slightly less heavily on items #1, #4, #5, #7 and #16. It was decided to retain only those factors which loaded on more than three items.

The hypothesis as stated would be rejected since there are not clearly four factors corresponding to the four subsections of the PCQ. Discussion of the meaning of the observed factors will be found in Chapter V.

Table 4.11 on page 127 demonstrates the factor matrix for the client form factor analysis. Table 4.12 on page 128 shows the factor matrix for the therapist form.

Table 4.11

Factor Matrix for Form S

ITEM	FACTOR 1	FACTOR 2
CL 1	.25	.39
CL 2	.57	.05
CL 3	.39	.15
CL 4	.25	.41
CL 5	.18	.38
CL 6	.17	.58
CL 7	.31	.47
CL 8	.53	.25
CL 9	.39	.07
CL 10	.44	.37
Cl 11	.57	.24
CL 12	.62	.24
CL 13	.54	.36
CL 14	.56	.17
CL 15	.55	.29
CL 16	.48	.44
CL 18	.71	.24
CL 19	.76	.14
CL 20	.78	.12
CL 21	.51	-.18
CL 22	.79	.13
CL 23	.73	.13
CL 24	.76	.22
CL 25	.75	.00
CL 26	.74	.02
CL 27	.65	-.32
CL 28	.46	-.29
CL 29	.60	-.29
CL 30	.56	-.30
CL 31	.69	-.41
CL 32	.77	-.46
CL 33	.78	-.40
CL 34	.57	-.45
CL 35	.66	-.40
CL 36	.68	-.32
CL 37	.68	-.21

Table 4.12

Factor Matrix for Therapist Form

ITEM	FACTOR 1	FACTOR 2
IN 1	.68	.33
IN 2	.76	.05
IN 3	.51	.40
IN 4	.51	.50
IN 5	.60	.57
IN 6	.44	.59
IN 7	.51	.41
IN 8	.43	.57
IN 9	.69	.02
IN 10	.64	-.14
IN 11	.63	-.14
IN 12	.71	.11
IN 13	.53	-.04
IN 14	.68	-.13
IN 15	.70	.78
IN 16	.68	.16
IN 17	.63	-.21
IN 18	.78	-.30
IN 19	.75	-.26
IN 20	.73	-.24
IN 21	.71	-.05
IN 22	.78	-.20
IN 23	.69	-.01
IN 24	.77	-.06
IN 25	.81	-.30
IN 26	.80	.08
IN 27	.76	-.19
IN 28	.69	-.19
IN 29	.75	-.18
IN 30	.62	-.16
IN 31	.64	-.11
IN 32	.81	-.01
IN 33	.78	-.08
IN 34	.68	.16
IN 35	.76	-.11
IN 36	.80	-.08
IN 37	.64	.03

Note: The designation "IN 1" refers to question #1 on the Therapist Form.

Hypothesis XII: There will be differences in the mean score for items, subscales and total scores between diagnostic groups using the Personal Change Questionnaire.

The hypothesis can be stated:

Ho: $\bar{m}_{\text{Cocaine Dependency}} = \bar{m}_{\text{Dysthymia}}$

Ha: $\bar{m}_{\text{Cocaine Dependency}} \neq \bar{m}_{\text{Dysthymia}}$

This hypothesis was generated from the data set when it was observed that, despite an overall n of 115, there were two clear diagnostic groups which emerged. These were Cocaine Dependence and Dysthymia. A series of t-tests were computed to compare the means of the individual items, subsections and overall scores for the two groups. The was done on the client and therapist forms.

Of the 43 possible comparisons of means, on the client form there were 9 comparisons significant at p=.05, 5 were significant at p=.01 and 1 was significant at p=.001. This is a total of 15 comparisons that were significant.

On the therapist form, there were 6 that were significant at p=.05, 6 that were significant at p=.01 and two that were significant at p=.001. This is a total of 14 comparisons that were significant. Observable differences exist between these diagnostic groups in individual item scores, subsection scores and total scores. The null hypothesis is rejected.

Significant differences between means are summarized on pages 130-134 in Table 4.13 and Table 4.14.

Table 4.13

Comparison of Means of Diagnostic Groups:
Cocaine Dependency Vs Dysthymia

Client Form S

ITEM	GROUP	MEAN	STANDARD DEVIATION	t-value	2-tailed prob.
11	Punishment when I change my actions				
	1	4.1667	2.057		
				-2.41	.021
	2	5.4091	1.403		
12	Rewards when I change my actions				
	1	5.3200	1.651		
				-3.42	.002
	2	6.5909	.796		
13	Punishment when I don't change				
	1	5.6400	1.150		
				-3.25	.002
	2	6.5455	.739		
17	How I avoid my fears				
	1	4.5600	1.873		
				-3.05	.004
	2	6.0000	1.345		
20	New mental images in response to problem				
	1	4.9200	1.891		
				-2.12	.040
	2	6.0000	1.604		
23	New, healthier reactions to counter old				
	1	5.5600	1.294		
				-2.10	.042
	2	6.223	.869		
27	I can choose a realistic first goal				
	1	4.6800	1.796		
				- .256	.014
	2	5.9545	1.618		
30	I can seek out a role model				
	1	4.8400	2.055		
				-2.02	.050
	2	6.0455	2.035		
32	I can make organized plan of attack				
	1	4.5600	1.895		
				-2.61	.012
	2	5.8636	1.521		
34	I can set a realistic time period for change				
	1	4.0000	2.062		
				-2.38	.022
	2	5.4091	1.992		

Note: Group 1 is the Cocaine Dependency Group, Group 2 is the Dysthymia group.

Table 4.13
continued

ITEM	GROUP	MEAN	STANDARD DEVIATION	t-value	2-tailed prob.
36 I can make plan to avoid sabotaging success					
	1	4.3600	2.018		
				-2.47	.018
	2	5.5455	1.224		
37 I can keep a daily chart to follow change					
	1	4.9200	1.382		
				-2.60	.013
	2	5.9091	1.231		
Total Scale scores for all items					
	1	5.2017	.955		
				-2.31	.026
	2	5.7211	.556		
Subscale for Decision Making					
	1	5.2057	1.031		
				-3.88	.001
	2	6.1104	.510		
Subscale for Planning and Action					
	1	4.9782	.262		
				-2.43	.019
	2	5.8099	.221		

Note: Group 1 is the Cocaine Dependency Group; Group 2 is the Dysthymia Group.

Supplementary Data Analysis

Additional data was generated from the correlation matrices developed for analyses of previously discussed hypotheses. This information falls into three categories. First is information regarding relationships between items, subscale scores and total scores, both within and between the Client and Therapist Forms.

This first type of information reports correlations which are significant statistically between items, subscale scores and total scores on the Therapist Form and the Therapist Rating of Client Status. Each such significant correlation is reported in Table 4.15 on page 134.

Table 4.14

Comparison of Means of Diagnostic Groups:
Cocaine Dependency vs Dysthymia

Therapist Form

ITEM	GROUP	MEAN	STANDARD DEVIATION	t-value	2-tailed prob
7	Consequences of actions in problem situation				
	1	5.1600	1.405		
				-2.69	.010
	2	6.1364	1.082		
8	Whether praising or criticizing in problem situation				
	1	5.7200	1.308		
				2.53	.015
	2	4.9091	.868		
11	Punishment when they change their action				
	1	4.5200	1.661		
				-2.57	.014
	2	5.5909	1.182		
12	Rewards when they change their actions				
	1	4.7200	1.137		
				-6.50	.001
	2	6.4091	.590		
13	Punishment when they don't change their actions				
	1	5.5600	1.356		
				-3.45	.002
	2	6.5909	.590		
14	Rewards when they don't change their actions				
	1	4.9600	1.274		
				-2.19	.034
	2	5.7727	1.270		
18	New feelings in the problem situation				
	1	4.1200	1.453		
				-2.49	.017
	2	4.9545	.785		
20	New mental images in response to problem				
	1	4.4000	1.225		
				-2.53	.015
	2	5.2273	1.020		
23	New, healthier reactions to counter their old				
	1	4.9200	1.256		
				-2.86	.007
	2	5.7727	.752		
28	Create a support system for self				
	1	4.8400	1.463		
				-2.76	.008
	1	5.9091	1.192		

Note: Group 1 is the Cocaine Dependency Group; Group 2 is the Dysthymia Group.

Table 4.14
continued

ITEM	GROUP	MEAN	STANDARD DEVIATION	t-value	2-tailed prob
30 I can seek out a role model					
	1	5.4400	1.227		
				-2.15	.037
	2	6.2273	1.270		
Total Scale Scores					
	1	5.0853	.763		
				-2.03	.050
	2	5.4449	.424		
Scale for Decision Making					
	1	5.9057	.974		
				-3.89	.001
	2	5.9285	.413		

Note: Group 1 is the Cocaine Dependency Group; Group 2 is the Dysthymia Group.

A second source of additional information was developed from comparison of the mean scores of subscales from the Client Form with the mean scores for subscales from the Therapist Form.

This information relates the average score for each subscale pair between the two forms and demonstrates by the use of the t-test stastistic if there are differences in the mean scores for the two forms. See Table 4.16, page 135.

A third source of supplemental descriptive data results from the correlation matrix generated by comparing the Therapist Form "Motivational Dimension" items to all items, subscale scores and total scores. It was believed that certain client characteristics best described as motivational might be related to therapy as described in the Personal Paradigm Shift and also to therapy in general.

Table 4.15
Comparison of Items, Subscales and Total Scores
with Therapist Rating of Client Status

ITEM		SPEARMAN	SIG.LEVEL
2	Goals that will help solve their problem	.61	.001
15	How much are they committed to change	.73	.001
18	New feelings in the problem situation	.68	.001
21	New bodily reactions in response to problem	.60	.001
22	New self judgements in the problem situation	.68	.001
24	New consequences of their behavior	.62	.001
25	New self evaluations as a result of new actions	.59	.001
32	Can make an organized plan of attack	.63	.001
33	Can give themselves feedback on their progress	.62	.001
36	Can make a plan to avoid sabotaging success	.70	.001
Subscale 1: Personal Awareness		.66	.001
Subscale 2: Decision Making		.62	.001
Subscale 3: Oppositional Alternatives		.75	.001
Subscale 4: Planning and Action		.75	.001
Total Scores Therapist Form		.79	.001

Correlations were computed between each item on the Therapist Form. Those which are significant are found in Table 4.17 on page 136 (only significant correlations noted). These provide information as to what variables might be accounting for therapists' ratings as they look at and rate clients.

Table 4.16
Comparison of Means of Subscale and Total Scores between Client Form S and Therapist Form of the Personnal Change Questionnaire

SUBSCALE/ SCALE	MEAN	STANDARD DEVIATION	t-value	2-tailed PROB.
TH:Pers.Awar.	5.1952	1.006		
			.54	.590
CL:Pers.Awar.	5.1383	.900		
TH:Dec.Mak.	5.2096	1.142		
			-.69	.494
CL:Dec.Mak.	5.2932	1.190		
TH:Opp.Alt.	4.9816	1.199		
			-1.72	.088
CL:Opp.Alt.	5.2345	1.317		
TH:Plan/Act	5.0038	1.165		
			-.67	.505
CL:Plan/Act	5.0979	1.513		
TH:Tot.Score	5.0894	1.018		
			-.86	.391
CL:Tot.Score	5.1788	1.011		

Summary

The Personal Change Questionnaire is based on concepts of psychoeducation as contained in the Personal Paradigm Shift. This programmed model of self change contains four subscales. These are (1) Personal Awareness, (2) Decision Making, (3) Oppositional Alternatives, and (4) Planning and Action. Procedures for generating items for the PCQ involved the generation of items around specific objectives and determining high inter-rater reliability between experts who judged the items prior to test administration.

Several hypotheses related to the internal consistency reliability of the PCQ were tested. Hypothesis I was concerned with total scale reliability. A Cronbach's alpha

Table 4.17
Correlations Between Motivational Dimensions
and Items and Subscale scores

ITEMS	SPEARMAN	SIG.LEVEL
TH.E5(Commitment) vs 15:How much committed to change	.75	.001
TH.E6(Emot.Read.to lrn.program...) vs 15:How much committed to change	.71	.001
TH:E6(Emotional Readiness...) vs 22:Bring new self judgements	.64	.001
TH:E6(Emotional Readiness...) vs 27:Choose real. first goal	.62	.001
TH:E6(Emotional Readiness...) vs 33:Give themselves feedback	.60	.001
TH:E6(Emotional Readiness...) vs 36:Plan to avoid sabotaging success	.60	.001
TH:E6(Emotional Readiness...) vs 37:Keep diary to plot progress	.63	.001
TH:E6(Emotional Readiness...) vs TH:Oppositional Alternatives	.68	.001
TH:E6(Emotional Readiness...) vs TH:Planning and Action	.67	.001
TH:E6(Emotional Readiness...) vs TH:Rating of Client Status	.67	.001

coefficient value was determined to be .95 for the Client form and .97 for the Therapist form.

Hypothesis II related to the internal consistency of the subscales of the PCQ. Alpha coefficients for the Client form were determined to be as follows: Personal Awareness: .78; Decision Making: .82; Oppositional Alternatives: .92;

Planning and Action: .93. For the therapist form, the values of alpha were: Personal Awareness: .90; Decision Making: .87; Oppositional Alternatives: .94; Planning and Action: .93.

Both the total scale and the subscale on both forms have shown high internal consistency reliability.

Hypothesis III tested whether or not the PCQ was measuring a unidimensional construct. A Pearson product moment correlation coefficient computed between the PCQ and the four subscales demonstrated significant levels of correlation among the scales. This finding suggests that the PCQ is measuring a unidimensional construct.

Hypothesis IV related to the content Validity of the PCQ. The PCQ is assumed to have content validity because (1) the content domain was clearly defined, (2) specific objectives were developed for the areas of content to be samples, and (3) very high inter-rater reliability among a group of expert judges rating items was obtained.

Hypothesis V began the testing of the construct validity of the PCQ. A small linear correlation was found between the total scores on the Client Form and total scores on the Therapist Form. A Spearman value was determined to be .44 and was significant at the p=.01 level. A Pearson correlation was found to be .40 and was significant at the .001 level. There is a moderate relationship between therapist ratings of clients and the clients' rating of themselves.

Hypothesis VI investigated the relationship between therapist total scale scores and therapist overall rating of clients status. This was an additional attempt at determining construct validity as well as an effort to establish plausible reasons to use the PCQ as a measure of quality assurance. The Spearman correlation was determined to be .78 with p=.001. This is a relatively high value and is further evidence of construct validity for the PCQ. It appears that the Therapist Form might provide a useful tool in the determination of client status in therapy.

Discovering the relationship of therapist rating to client overall scores was the object of Hypothesis VII. A Spearman correlation of .32 was found to be significant at p=.001. This relationship was moderate and positive.

Hypothesis VIII was originally established upon the belief that clients in therapy would experience higher scores in early subsections and subsequent decreasing scores in the following subsections. Preliminary analysis at n=59 indicated that this was clearly not the case and the hypothesis was amended to discover what relationships would exist between the subsections. It was discovered that there are significant differences between the subscale scores for different sections.

Hypothesis IX evaluated the relationship between total score and educational level. This hypothesis was rejected when the Spearman coefficient was determined to be -.09 with

a significance level of .174. There is no discernible difference in overall total scores as a result of difference in educational level.

The relationship between total score and the number of sessions in therapy was the subject of Hypothesis X. A Spearman coefficient of .16 with significance level of p=.01 is indicative of a very small correlation between length of time in therapy and PCQ total score.

Hypothesis XI projected that there would exist four distinct factor areas corresponding to the four subsection areas. The results of a factor analysis indicate that there are clearly two factors present in both the Client and Therapist Forms. These factor areas do not appear to coincide with the four subsections of the PCQ. The four factor hypothesis is rejected.

Hypothesis XII tested the existence of significant relationships between item means, subscale means and total score means for two different diagnostic groups who used the PCQ. Analysis of the client form revealed 15 significant differences including total score, Decision Making and Planning and Action. Therapist Form scores differed in 14 categories including total score and Decision Making. There is clear evidence that for this study, two clearly identified and separate diagnostic groups, Cocaine Dependency and Dysthymia, differ in both the way they report their own self perceptions and the way in which they are reported to be

perceived by their therapists.

Supplemental data analyses revealed the existence of several correlations that lend additional evidence to the notion of construct validity. In addition, supplemental analysis indicates that the mean scores for the Therapist Form and the Client Form are not significantly different. There are as well several strong correlations evident between items and subscale scores on the Therapist Form and the motivational dimension known as "Emotional Readiness to learn a Program".

Chapter V will report the summary of the study as well as conclusions and implications for future research.

CHAPTER V

SUMMARY, DISCUSSION AND IMPLICATIONS

This chapter summarizes the research study. The findings of the study are presented along with a discussion of the results related to instrument development and the psychoeducational component of therapy. Implications of the findings are discussed, along with suggested directions for future research.

Summary

The purpose of the study was to evaluate the usefulness and appropriateness of the Personal Change Questionnaire as a measure of status in therapy. The instrument was developed around and measures those components of therapy which can be said to be psychoeducational in nature. Additionally, the instrument was used to gather descriptive information about one group identified as Cocaine Dependent and another group identified as Dysthymic.

The Personal Change Questionnaire is a 38-item self report measure developed around psychoeducational concepts embodied in the Personal Paradigm Shift (Hinds, 1983). This model of personal change incorporates four areas of client experience in therapy.

These areas are Personal Awareness, Decision Making, Oppositional Alternatives and Planning and Action. The Personal Paradigm Shift is based on sound psychoeducational principles as set forth in the research of Sanford (1959), Carkhuff (1971, 1972), Guerney, Guerney and Stollak (1972), Ivey and Alschuler (1973 and Authier (1977). Each researcher or research team has set forth a series of guidelines as to the roles therapist and client play in psychoeducational counseling. These guidelines include the therapist acting as a teacher with the client becoming an active and involved student. The therapist helps the client define problems and set goals, acquire and practice skills, and learn how to evaluate progress.

Clients become students who face their problems as functional deficiencies which can be overcome. The learning of new skills is facilitated by developing and implementing an organized and often highly structured plan of training. Principles of learning and psychology are demystified and learning is enhanced by the active participation of the client. Psychoeducational programs focus on identification of problems, mastery of specific behaviors and development of feedback mechanisms by which learning can be measured and reinforced by the client without the long term help of the therapist. The Personal Paradigm Shift reflects these principles as does the Personal Change Questionnaire.

Procedures used to develop the PCQ included defining the

content from which items were to be taken, that is, the Personal Paradigm Shift, and having the items evaluated by expert judges as to their content and structure prior to the administration of the test. The test battery included a form for clients and for their therapists who would evaluate them without reference to the client responses.

A sample of 115 clients was gathered from the clientele of several private practice settings, one community mental health facility and one half way house for drug offenders leaving prison. Seventeen therapists were involved in the study as the therapist of record for these subjects.

Subjects were surveyed with regard to demographic information including age, sex, marital status, income level, duration of their problem and time in therapy. Therapists were surveyed about their treatment orientation and were asked to give a diagnosis for each client.

Eleven hypotheses related to instrument development and the psychoeducational component of therapy were tested. In addition, a descriptive analysis was done on the differences between two diagnostic groups which appeared in the sample. A quantity of supplementary descriptive data was collected which relates to several aspects of the study, including construct validity, applicability of the instrument and differences in the way clients are seen by therapists and how they see themselves. This supplementary information will be presented when applicable. Results regarding reliability and

validity of the PCQ are as follows:

1. The PCQ was determined to be an internally consistent and reliable instrument for both client and therapist forms. A Cronbach's alpha coefficient of .95 was obtained for the Client Form S total scale of the PCQ. An alpha coefficient of .97 was obtained for the Therapist Form for the PCQ total scale.

2. The four sub-scales of the PCQ demonstrated Alpha values of .78, .82, .92, and .93 for the Client Form S on sub-scales of Personal Awareness, Decision Making, Oppositional Alternatives and Planning and Action. For the Therapist Form, the corresponding values were .90, .87, .94, and .93 for the same sub-scales. All values are sufficiently high for research purposes, and values may be sufficient for other uses. Each value is sufficiently high to infer that each sub-scale demonstrates internal consistency reliability.

3. Intercorrelations between the Total Scale Score and individual Scale Scores were significantly high enough to infer that the PCQ is measuring a unidimensional concept. This was found to be true for the Client Form S and the Therapist Form.

4. Content validity was established through the use of a highly defined content area from which specific items were derived. There was high inter-rater reliability among expert judges as to the content being both appropriate and well structured.

5. Some evidence of construct validity was generated through the observation of a low but significant correlation between therapist total scores and client total scores (Pearson = .40).

6. Additional evidence for construct validity was found in the strong correlation between therapist total scores and therapists rating of client status in therapy. A Spearman correlation coefficient value of .78 was computed. This value is significant at the p=.001 level.

7. A Spearman value of .32 (p=.001) was computed for the correlation between therapist rating of client and client total scores. The statistical test of the hypothesis as stated was low but significant.

8. A hypothesis relating the the sequencing of mean score values for the sub-scale scores was disproved. Additional information about the relationship between the sub-scale scores was gathered. This information did not strengthen the evidence for construct validity of the PCQ as presently set forth in the model of the Personal Paradigm Shift. However, there are implications in the results from the Therapist Form as to how therapists and clients differ in their judgements which do relate to the process of therapy.

9. There was no evidence of a correlation between total scores and educational level as seen on the Client Form S of the PCQ.

10. There was no evidence of a correlation between the client total score and the number of sessions in therapy.

11. An exploratory factor analysis detected a factor on the PCQ which was highly loaded on almost every item of the test. A second factor was detected which was moderately loaded on several items of sub-scale Personal Awareness of both forms. No other factors were deemed significant since they appeared in less than three items. The factors did not conform to the four sub-scales of the PCQ. While not confirming the hypothesis, however, the detection of the two factors on each test is strong evidence again that the test measures at least two separate parts of a unidimensional concept.

Supplemental data analysis revealed the following:

1. Analysis of the means of items, sub-scales and total scores showed the existence of fifteen differences between diagnostic groups on the Client Form and fourteen on the Therapist Form of the PCQ. The strong evidence would indicate that Dysthymics and Cocaine Dependents differ in the way they report their self perceptions and the manner in which they are perceived by their therapists. Supplementary data analyses indicate the presence of differences between the way each of the two diagnostic groups understands rewards and punishments, and the way in which they handle decision making.

2. Therapists in this study had high correlations between certain items on the Therapist Form and their rating of client status in therapy. These centered around commitment, ability to make plans,

and the ability of clients to perceive themselves in a new conditions surrounding their problem.

3. Correlations between subscales and therapist ratings were different one from another and were ordered in the following manner: Planning and Action had the highest correlation with therapist rating. Oppositional Alternatives had the second highest correlation with therapist rating. Personal Awareness had the next highest correlation and Decision Making had the lowest.

3. There were no significant differences between the mean scores of the subscales between the Client Form S and the Therapist Form on the Personal Change Questionnaire.

4. Analysis of the Motivational Dimensions of the Therapist Form revealed the following: the dimension entitled "Readiness to learn a program of change" was significantly correlated to items relating to clients' abilities perceive themselves in new situations surrounding their problem. It was also highly correlated with the subscale scores of Oppositional Alternatives and Planning and Action and to total scores. This is additional evidence of which values therapists weighed most heavily when evaluating clients with this instrument.

Discussion

Reliability of the instrument. The internal consistency reliability of the Personal Change Questionnaire, both Client Form S and Therapist Form was determined in the study. The high alpha coefficient figure of .95 for the Client Form and .97 for the Therapist Form suggests that both forms exhibit sufficiently high internal consistency reliability for a self report instrument.

Several factors may have contributed to those high figures. Mehrens and Lehman (1978) list four such factors

which are considered. Generally, the longer a test, the more reliable it is. With thirty-eight items, the PCQ is not overly long. It is not felt that this length would contribute to the internal consistency in any great measure.

Heterogeneity of the responses tends to increase the reliability of the test. The sample was fairly heterogeneous with respect to client variables such as age, economic status, education and length of time in therapy. Both sexes were more or less evenly represented. This mixture provides for a greater variability of responses. An additional factor which may have contributed to the heterogeneity of responses was that different items had different internal degrees of difficulty. Knowing the nature of the problem is not as difficult as understanding the various rewards, punishments and losses one might encounter when undergoing change. This variability in difficulty may have added to the heterogeneity of response.

The scales used on the PCQ are commonly referred to Likert Scales in that they require a judgement of degree for the respondent. The use of such scales as opposed to a dichotomous scale also adds heterogeneity to the responses and hence adds to the overall reliability of the test.

The scales as chosen provide the respondent a choice of scores of from 0 to 7. This set of responses does not require that a difference from 3 to 4 is the same as from 4 to 5. While it seems logical that such intervals reflect similar

divisions, this has not been proven. In addition, a scale of only eight is not sufficient to assume a continuous variable. Therefore, the scale is ordinal, not interval. Ordinal scales require use of the Spearman rank order correlation coefficient for developing the correlation matrix on which alpha coefficients are based. Spearman values tend to be higher than Pearson product moment values. This may result in higher alpha values since it is true that the Spearman coefficient provides the highest correlational values.

The development of the items on the PCQ directly from corresponding segments of the Personal Change Questionnaire may have added to the reliability estimate. This is due to the direct correspondence to items on the PPS which are well founded in psychoeducational theory and empirical experience in providing therapy. Such close correspondence adds to the development of a homogeneous construct and hence increases internal consistency.

It is likely that the PCQ is measuring different aspects of a single construct. A consistent factor appears to be present throughout the test, perhaps appearing in different ways. High inter-scale correlations between all scales is suggestive that the PCQ is measuring a unidimensional construct. This is further supported by the results of the factor analysis which shows but two factors and one of them highly loaded on all items of the instrument.

The scale with the lowest inter-scale correlations may

well be measuring a different aspect of therapy which is not related to the other sub-scales. This is also supported by evidence which shows most items of the sub-scale known as Personal Awareness to be loaded on the second factor which appears in the factor analyses for both forms of the Personal Change Questionnaire.

In summary, the PCQ, both Client Form S and Therapist Form, demonstrates sufficiently high internal consistency reliability. The instrument appears to be measuring one construct with two different dimensions, one related to internal, perhaps dynamic, processes and one related to other learning processes.

Validity of the instrument. Content validity for the PCQ was established by the development of items on a one to one correspondence with segments of the Personal Paradigm Shift. Additional support for content validity is derived from high inter-rater reliability of expert judges who rated the PCQ on the basis of a psychoeducational component as found on the Personal Paradigm Shift. Content validity is also positively impacted by the high level of internal consistency reliability discussed in the preceding section.

Initial steps at the establishment of construct validity were also undertaken in this study. Determination of construct validity requires an ongoing evaluation of information about the construct from a variety of sources. In this study there were several attempts at gathering such

evidence.

One aspect of construct validity is that expected relationships should appear. It was assumed that therapist rating of client status in therapy, a somewhat intuitive and personalized measure, would be positively correlated with the therapist total scores from the PCQ. This relationship was found to be highly positive, indicating that therapist opinion correlated with the psychoeducational component as measured by the PCQ.

There was also observed to be a positive correlation between therapist total scores and client total scores. While the coefficient of correlation was not high, .40 (Pearson), it was positive. For the purpose of this study, this does not add significantly to the evidence for construct validity. One explanation for this moderate correlation is that clients are not trained to be as astute in their observations as are therapists. In addition, they are intimately involved in their situations and may not be as objective about their perceptions as are therapists.

An additional factor may well have been the low variance of scores per item. Few clients in the study had been in therapy for a short period. In fact most had been in therapy for some time. This may well have resulted in the absence of lower end scores and thus reduced the variability of those scores. Low variance generally results in lower correlations.

A hypothesized correlation between therapist ratings and

client total scores was determined to have a value of .32. While this was in the correct direction, the value was lower than that acceptable to this study. Again the factors discussed above may be important; that is, differences exist between therapist and client judgement and low variability reduces to ability to achieve higher correlations.

Of interest to construct validity is the factor analysis which was performed. The results clearly indicated the presence of two major factors. The first might well be labeled the "deciding-committing-acting" dimension of change. The other major factor might be labeled "internal responses" and it presents itself in items located in the Personal Awareness sub-scale. These could also be related as the "what" and the "why" components of therapy.

Two other factors which were detected in the items did not appear in three or more items and were not recognized as significant in this study. They may be only experimental artifacts or accidental by-products of the data analysis.

Construct validity can be advanced by the observation that expected relationships behave as predicted. This has been partially substantiated by some aspects of the study. It is further advanced by noting the differences in responses between Dysthymics and Cocaine Dependents. Denial, whether conscious or unconscious, is a major aspect of substance abuse. Failure to see the problem for what it is places severe limits on a client's ability to understand many aspects

of their situation. Comparison of the two treatment groups indicates that the Cocaine Dependency group had significant differences from the Dysthymia group in their self perceptions. On the Client Form S, Cocaine Dependents were significantly lower on mean scores on fifteen of forty-five possible comparisons with the Dysthymia group. On the Therapist Form they were significantly lower on thirteen of the scores. The groups were different on the PCQ in ways suggestive of differences in self perception and self understanding.

The two diagnostic groups differed significantly on their self perceptions of rewards and punishments. This was true on both the Client Form S and the Therapist Form. It is consistent, and therefore adds to construct validity, that they also differed significantly in the Decision Making subscale scores on both forms. There was no significant difference on Personal Awareness between the diagnostic groups.

Evidence for construct validity of a psychoeducational component of therapy is incomplete. This study does begin to establish that such a component is present and is measurable.

In summary, the study has shown the PCQ to have a high internal consistency reliability, with high reliability for the subscales as well. The PCQ appears to measure a unidimensional concept with several aspects which are slightly different. While there is some evidence of construct

validity, the issue is far from settled and requires ongoing investigation for additional confirmation.

Limitations of the Study

One limitation of the study was the lack of variation in the treatment orientation of therapists who were willing to participate. The psychoeducational nature of the study may have been partially responsible for the low participation rate among therapists who are Psychodynamic in orientation. Anecdotal reports of interaction with therapists of this orientation often centered around concern about "transference issues" if clients participated. In addition, there may have been a resistance on the part of some psychodynamic therapists to engage in a study which is psychoeducational in nature.

It was noted that of the therapists who declined to participate in the study, many expressed great enthusiasm over the notion of an educational component of therapy and were curious about results. Of the psychodynamic therapists known to this researcher, there was an almost complete disdain and lack of interest either in participating or knowing how the study progressed. This lack of participation limits the generalizability of the results to the population of clients in therapy and to the population of therapists doing therapy.

Similar to this limitation is that, of the participating therapists, 60.9% were self described as eclectic. This appears to be a disproportionately high number for one

theoretical orientation. Therapist characteristics which are unknown may have influenced the results of the study. This large number from one orientation further reduces the generalizability of the results.

A similar concern about therapist selection was that there may be unknown therapist variables which determine who will be inclined to participate in any study, much less one such as this. Therapists self-selected themselves into the study and then also selected subjects to participate. There may be unknown or even unconscious forces that govern how this selection takes place.

It was also observed that therapists did not follow directions for administration of the test. Many reported allowing subjects to take the test home and mail it back. While this may not have influenced the results, there may exist other unidentified and uncontrolled factors in the administration of the PCQ.

Additionally, there was no system for evaluating or even knowing which clients may have declined to participate in the study after being asked to do so by their therapists.

The client sample was fairly evenly distributed across the demographic variables. While it was not a specified demographic variable, it is also true that one facility provided approximately 30% of the subjects. This was a halfway house for men returning to the general population after criminal proceedings against them. These men made up

80% of the Cocaine Dependency group. Once again, the ability to generalize to the population of all clients is limited if the results of the study are too heavily influenced by this one large group of subjects.

There is anecdotal evidence of problems with the format of the PCQ. Several therapists reported that it looked rather formidable and that clients and therapists alike had "balked at filling out a booklet." Several clients commented on the test itself that certain examples did not apply to them. There were several comments that the examples for items on the PCQ were not necessary and even confusing.

One additional problem with therapists was that several expressed concern about what might happen if insurance companies decided that they could accurately limit authorization for visits with such an instrument. Several therapists who voiced this opinion were less than responsive to the study.

At the analysis stage of the study, a larger group of subjects would have provided more power in the factor analysis. It is common to expect a ratio of 5:1 for subjects to items in the factor analysis. The ratio for this study was closer to 3:1. While there is no evidence that this ratio invalidated the results, extrapolation from such an analysis should be done with caution.

Implications of the Research

The Personal Change Questionnaire was established to measure client status and progress in therapy. This study has established that the PCQ has internal consistency and content validity. It shows evidence of construct validity and the therapist form appears to have some applicability in the judgement of client status in therapy.

The study has shown that there is a psychoeducational component to psychotherapy, even when therapy is not based on principles of psychoeducation as such. It was also shown that diagnostic groups differ in self evaluation and therapist evaluation using the PCQ.

Several implications can be seen from this study.

First, this instrument does provide a way to measure differences between diagnostic groups as to how they perceive themselves and are perceived by therapists. This appears to provide clues as to how problems might be approached. The instrument measures client self perceptions and to some degree compares them with therapist perceptions. Perhaps there are ways to note the differences between these perceptions and incorporate learning about these differences as a part of therapy.

Second, this instrument points out that the assumption of placing Personal Awareness first in the process of change in the Personal Paradigm Shift is not necessarily true as a general rule in therapy. The study appears to indicate that

developing a clear plan of action, understanding the choices and making a commitment for change may be the critical step for change to begin, regardless of how well one understands their "internal responses."

Next, it has been shown that in this study, therapists appeared to place a high value on several aspects of the clients they evaluated. Therapists perceived emotional readiness of the client as a critical factor in clients' ability to participate in and learn a new program to change their behavior. Therapists also perceived clients' ability to make a commitment to such a program as critical to their rating of the client. Additionally, therapists perceived as important the clients' ability to perceive new reactions in the problem situation as they implemented new behaviors and responses.

Therapists perceived Personal Awareness to be more important as compared to Decision Making, but both therapists and clients rated Planning and Action and Oppositional Alternatives as more important than Personal Awareness. Client and therapist ratings of clients resulted in similar scores for subscales and total scores for the Personal Change Questionnaire.

It was shown that both forms of the Personal Change Questionnaire were meaningful measures of client and therapist understanding of clients. Therapist rating of client status in therapy was shown to be highly correlated with total

scores. Therapist rating was also positively correlated with client rating and client total scores.

Finally, the study has shown that there is a factor which was labeled the "deciding-commiting-acting" or "what" component of therapy. Tests of the research hypotheses have indicated that this factor explains 50% of the variance between a therapist's intuitive opinion of client status and the therapist's total scores on the Personal Change Questionnaire. Another 25% of the variance was explained by a factor labeled the "internal responses" or "why" component of therapy.

Directions for Future Research

Instrument Revision

The Personal Change Questionnaire in its present form appears long and tedious. Time for administration is reported to be less than fifteen minutes for subjects and less than that for therapists. However, it does look like a booklet and that often discourages potential users.

Revised versions might be produced which are designed differently to appear less formidable. A trial run comparing various forms might determine a better form of the test. One form could be given without examples for each question. Others might include a change of format with True/False answers. Another might include the revision in a different size type so that it would appear shorter.

With the format unchanged, this study might be replicated with specific diagnostic groups or therapists of specific orientations so that their response patterns could be compared.

Since the PCQ was designed to measure status and progress in therapy, a logical next study would be longitudinal in nature and would measure changes in responses for the same clients or groups of clients over time. This approach might provide a different estimate of test-retest reliability as well as a way to measure progress of specific groups or clients. Success of such a study would provide further evidence of construct validity.

Future research should focus on involving clients with less theapy time in order to provide some variability in responses. A study comparing responses of groups with five or less sessions to a group with fifty sessions might well show differences in response patterns which could be attributable to therapy.

Comparison of the Personal Change Questionnaire to other tests designed to measure client status or progress in therapy might well demonstrate the possibilities or limitations of both instruments.

Psychoeducational Component of Therapy

The Personal Paradigm Shift and the Personal Change Questionnaire both purport to involve a psychoeducational

basis or component. Other instruments for the evaluation of therapy which purport to involve psychoeducational components should be brought together. A critical step in construct validity is the comparison of measures which claim to measure the same construct. Any ongoing research into the validity of this instrument must include such a comparison.

Conclusion

The results of this study are positive with regard to the development of an instrument to measure client status in therapy. The Personal Change Questionnaire has been shown to possess high internal consistency and content validity. The search for construct validity has been moderately successful if limited. The instrument has been shown to be capable of detecting significant differences between diagnostic groups. The Therapist Form has shown a high correlation with therapist intuitive evaluation of client status. Each of these positive results lends itself to the further development of the Personal Change Questionnaire as a reliable and valid instrument to help insure quality in the delivery of psychological services to the therapeutic community.

Introduction

The Personal Change Questionnaire was designed to measure the status and progress of clients in psychotherapy. This instrument was developed from the concepts of psychoeducational models of treatment. More specifically, it was derived from the programmed model of change known as the Personal Paradigm Shift developed by Dr. William C. Hinds of Michigan State University. One of the critical steps in the development of such a measurement instrument is the establishment of content validity of the items. Content validity may be based on an analysis of the items as compared to the content of the model on which the instrument is based. It is essential to determine that each item on the Personal Change Questionnaire (PCQ) is representative of one aspect of the Personal Paradigm Shift (PPS).

Enclosed you will find a copy of the test instrument as well as a copy of the Personal Paradigm Shift. In addition will be a form which asks you to decide if each item on the PCQ reflects the content of one part of the PPS. There is a form provided which asks you to make a choice about each item. Your choices are:

A) AGREE D) DISAGREE R) REVISE

Choice (A) Agree means that you agree that the content of the item reflects the content of part of the PPS. Choice (D) Disagree means that you disagree, that you feel that the item does not reflect the content of that part of the PPS. Choice (R) Revise means that you feel the item should be revised to reflect the content in a more effective manner.

You are also provided with a form which shows the part of the PPS from which each item of the PCQ was derived. This will enable you to quick reference each item of the PCQ without having to read the entire PPS to find a particular item. The items of the PCQ follow the same order as do the corresponding sections of the PPS.

Please read each item and the appropriate section of the PPS and decide if you agree, disagree or think the item should be revised. If you have any questions, please contact me at 517-355-7648 during office hours (8:00-5:00) Monday through Thursday or at home at 517-336-0786 at other times. The speed of your response will be appreciated.

Thank you for your help in this matter.

Sincerely,

Joel L. Kelley, M.A.

Content Validity Evaluation Form

The following is a list of each item of the Personal Change Questionnaire and a brief indicator of the content of that item. In the space to the right of the item and its content, indicate whether you agree or disagree that the item content is reflective of the content of the Personal Paradigm Shift. You may also choose to indicate that the item needs to be revised to better reflect the content of the PPS. Indicate your preference by placing a circle around the appropriate response.

ITEM NUMBER	ITEM CONTENT	AGREE	DISAGREE	REVISE
1	main problem	A	D	R
2	specific goals	A	D	R
3	situation	A	D	R
4	feelings	A	D	R
5	thoughts	A	D	R
6	actions	A	D	R
7	consequences	A	D	R
8	praise/criticize	A	D	R
9	will lose	A	D	R
10	needs	A	D	R
11	punishments if change	A	D	R
12	rewards if change	A	D	R
13	punishments if don't change	A	D	R
14	rewards if don't change	A	D	R
15	committed	A	D	R
16	fears	A	D	R
17	how to avoid fears	A	D	R
18	new feelings	A	D	R

19	new beliefs	A	D	R
20	new mental images	A	D	R
21	new bodily reactions	A	D	R
22	new self judgements	A	D	R
23	new, healthy reactions	A	D	R
24	recognize new consequences	A	D	R
25	bring new self evaluations	A	D	R
26	recognize needs being met	A	D	R
27	realistic first goal	A	D	R
28	create support system	A	D	R
29	seek new information	A	D	R
30	seek role model	A	D	R
31	reward self for change	A	D	R
32	make plan	A	D	R
33	give self feedback	A	D	R
34	set realistic time for making a change	A	D	R
35	make a backup plan	A	D	R
36	plan to avoid sabotage	A	D	R
37	keep diary	A	D	R

Please return all materials in the enclosed envelope.

Thank you for you help with this project.

SUMMARY

Personal Change Questionnaire			Personal Paradigm Shift		
Section Title	Question Number	Question Content	Section	Step	
Personal Awareness	1	main problem	A	1	
	2	specific goals	A	2	
	3	situation	A	3	
	4	feelings	A	4	
	5	thoughts	A	4	
	6	actions	A	5	
	7	consequences	A	6	
	8	praise/criticize	A	6	
	9	lose	A	7	
	10	needs	A	7	
Decision Making	11	punishments if change	B	8	
	12	rewards if change	B	8	
	13	punishments if don't change	B	8	
	14	rewards if don't change	B	8	
	15	committed	B	9	
	16	fears	B	10	
	17	avoid fears	B	10	
Oppositional Alternatives	18	new feelings	C	12	**
	19	new beliefs	C	12	
	20	new mental images	C	12	
	21	new bodily reactions	C	12	
	22	new self judgements	C	12	
	23	new, healthy reactions	C	13	
	24	recognize new consequences	C	14	
	25	bring new self evaluations	C	14	
	26	recognize needs being met	C	14	
Planning and Action	27	realistic first goal	D	15	
	28	create support system	D	16	
	29	seek new information	D	17	
	30	seek role model	D	17	
	31	reward self for change	D	18	
	32	make plan	D	19	
	33	give self feedback	D	20	
	34	realistic time for change	D	21	
	35	backup plan	D	22	
	36	plan to avoid sabotage	D	23	
	37	keep diary	D	24	

PERSONAL CHANGE QUESTIONNAIRE

FORM S

Quality Assurance Project

William C. Hinds, Ed.D.

Joel L. Kelley, M.A.

Michigan State University

1989

Directions: For each statement, rate how well you know yourself on a scale of knowing from 0 to 7, with "0" meaning that you "don't know" to "7" meaning that you know "very well". Statements refer to your own actions, thoughts feelings, goals, etc. The word "Goals" refers to plans for changing your old actions.

	DON'T KNOW KNOW
1. I know what my main problem is. For example: I get depressed and can't work.	0 1 2 3 4 5 6 7
2. I know specific goals that will help me solve my problem. For example: I will lose twenty pounds and have more energy for work.	0 1 2 3 4 5 6 7
3. I know the situation in which my problem takes place. For example: I get depressed when I am alone too much.	0 1 2 3 4 5 6 7
4. I know my own feelings in the problem situation. For example: I feel lost and very nervous.	0 1 2 3 4 5 6 7
5. I know my own thoughts in the problem situation. For example: I wonder what is wrong with me.	0 1 2 3 4 5 6 7
6. I know what actions I take when I experience my thoughts and feelings in the problem situation. For example: I spend a lot of time reading to escape these thoughts and feelings.	0 1 2 3 4 5 6 7
7. I know the consequences of my own actions in the problem situation. For example: The more I sit and read, the more I feel isolated and alone.	0 1 2 3 4 5 6 7
8. I know whether I am praising or criticizing myself in the problem situation. For example: I usually put myself down for feeling so low.	0 1 2 3 4 5 6 7
9. I know what I will lose if I give up my present actions in the problem situation. For example: I will lose some of the attention I get from some of my friends when I am depressed.	0 1 2 3 4 5 6 7
10. I know what needs of mine are being met by my present actions in the problem situation. For example: Some of my needs for attention are being met.	0 1 2 3 4 5 6 7

	DON'T KNOW							KNOW
11. I know what punishments I will get when I change my actions in the problem situaction. For example: It would feel a punishment to lose some of that special attention.	0	1	2	3	4	5	6	7
12. I know the rewards I will get when I change my actions in the problem situation. For example: If I change my actions I won't be alone and depressed as much.	0	1	2	3	4	5	6	7
13. I know the punishments I will get if I don't change my actions in the problem situation. For example: If I don't change I can expect to feel isolated and alone a lot.	0	1	2	3	4	5	6	7
14. I know what rewards I will get if I don't change my actions in the problem situation. For example: I can stay depressed and not have to go to work.	0	1	2	3	4	5	6	7
15. I know how much I am committed to making a change in my actions. For example: I am willing to miss some of my favorite activities to attend therapy sessions.	0	1	2	3	4	5	6	7
16. I know the fears I will have to face if I don't change my actions. For example: I will have to face the fear that I am a failure.	0	1	2	3	4	5	6	7
17. I know how to avoid my fears. For example: I can avoid my fears by staying very busy, reading or playing pinball.	0	1	2	3	4	5	6	7
18. I know I can bring about new feelings in the problem situation. For example: I know I can develop feelings of self confidence even if I do fail.	0	1	2	3	4	5	6	7
19. I know I can bring about new thoughts in the problem situation. For example: I can think about making some new friends when I do things rather than being alone.	0	1	2	3	4	5	6	7
20. I know I can bring about new mental images in the problem situation. For example: I can see myself being congratulated for doing a good job and being successful.	0	1	2	3	4	5	6	7

	DON'T KNOW							KNOW
21. I know I can recognize new bodily reactions in the problem situation. For example: I'll be able to feel lighter and more energetic when I lose twenty pounds.	0	1	2	3	4	5	6	7
22. I know I can bring about new self judgements in the problem situation. For example: I can think of my depression as a stage I can successfully get through.	0	1	2	3	4	5	6	7
23. I know I can bring about new personal actions to solve my own problems. For example: I can do something active rather than bury my head in a book for two weeks.	0	1	2	3	4	5	6	7
24. I know I can recognize the consequences of my new actions in the problem situation. For example: I'll be able to see that staying active helps me avoid unnecessary depression.	0	1	2	3	4	5	6	7
25. I know I can bring about new self evaluations as a result of my new actions in the problem situation. For example: I can feel more in control and can feel positive for taking positive actions.	0	1	2	3	4	5	6	7
26. I know I can recognize needs that will be met by my new actions in the problem situation. For example: Being active will help me meet new people and satisfy my needs for attention.	0	1	2	3	4	5	6	7
27. I know I can choose a realistic starting goal for myself. For example: I can choose to lose two pounds in the first month of dieting.	0	1	2	3	4	5	6	7
28. I know I can find someone to support me in making a change. For example: I could attend weight watchers or talk to my doctor.	0	1	2	3	4	5	6	7
29. I know I can seek out information for making some changes. For example: My doctor can give me some good information about losing weight.	0	1	2	3	4	5	6	7
30. I know I can find a role model. For example: A friend at work lost forty pounds and he looks great.	0	1	2	3	4	5	6	7

	DON'T KNOW							KNOW
31. I know that I can give myself rewards for making these changes. For example: When I lose weight, I can get that new leather jacket I've been wanting.	0	1	2	3	4	5	6	7
32. I know I can make an organized plan for achieving these changes. For example: I can make a daily schedule for my exercise and food intake.	0	1	2	3	4	5	6	7
33. I know I can give myself feedback on my progress. For example: I can keep a record of my weight each Monday to see how I am doing.	0	1	2	3	4	5	6	7
34. I know I can set a realistic period of time for change to take place. For example: If I work on losing a pound a week, I'll reach my goal by the new year.	0	1	2	3	4	5	6	7
35. I know that I can make a backup plan if I fail to reach my goal. For example: If my weight loss is too slow, I can increase my daily exercise a bit at a time.	0	1	2	3	4	5	6	7
36. I know I can make a plan to avoid sabotaging or undercutting myself. For example: Each week I will review what I have eaten and how I exercised to see if I have followed my plan.	0	1	2	3	4	5	6	7
37. I know I can keep a diary or chart to follow my change. For example: I can make a chart that includes my daily calorie intake and exercise schedule.	0	1	2	3	4	5	6	7

This next question asks you to rate the present level at which you are dealing with your personal situation or problem, the one for which you are seeking counseling. Please rate it from 0 to 7, with 0 meaning that you are not dealing with it at all, and 7 meaning that you are dealing with it very well.

	not well at all						very well
38. At present, I am dealing with my problem.	0	1	2	3	4	5	6	7

END

Thank you for your help.

PERSONAL CHANGE QUESTIONNAIRE

INTERVIEWER FORM

FORM S

QUALITY ASSURANCE PROJECT

William C. Hinds, Ed.D.

Joel L. Kelley, M.A.

Michigan State University

1989

PERSONAL CHANGE QUESTIONNAIRE - INTERVIEWER FORM

Rate the client on how sure you are that they have an understanding about themselves in their problem situation.

A. Personal Awareness:

How sure are you that the client:	DOESN'T KNOW							KNOWS
1. what their main problem is?	0	1	2	3	4	5	6	7
2. specific goals that will help solve their problem?	0	1	2	3	4	5	6	7
3. the situation in which their problem behavior occurs?	0	1	2	3	4	5	6	7
4. their feelings in the problem situation?	0	1	2	3	4	5	6	7
5. their thoughts when they are in the problem situation?	0	1	2	3	4	5	6	7
6. what actions they take when experiencing their thoughts and feelings in the problem situation?	0	1	2	3	4	5	6	7
7. the consequences of their actions in the problem situation?	0	1	2	3	4	5	6	7
8. whether they are praising or criticizing themselves in the problem situation?	0	1	2	3	4	5	6	7
9. what they would lose if they gave up their present problem solving behavior?	0	1	2	3	4	5	6	7
10. the needs which are being met by their present problem solving behaviors?	0	1	2	3	4	5	6	7

B. Decision Making:

11. the punishments they will receive when they change their action?	0	1	2	3	4	5	6	7
12. the rewards they will get when they change their actions?	0	1	2	3	4	5	6	7
13. the punishments they will get if they don't change their actions?	0	1	2	3	4	5	6	7
14. the rewards they will get if they don't change their actions?	0	1	2	3	4	5	6	7

How sure are you that the client:	DOESN'T KNOW							KNOWS
15. how much they are committed to change?	0	1	2	3	4	5	6	7
16. the fears they will have to face if they don't change?	0	1	2	3	4	5	6	7
17. how they avoid their fears?	0	1	2	3	4	5	6	7

C. Oppositional Alternatives:	DOESN'T KNOW THEY CAN							KNOWS THEY CAN
18. bring about new feelings in the problem situation?	0	1	2	3	4	5	6	7
19. bring about new beliefs in the problem situation?	0	1	2	3	4	5	6	7
20. bring about new mental images in response to the problem situation?	0	1	2	3	4	5	6	7
21. recognize new bodily reactions in response to the problem situation?	0	1	2	3	4	5	6	7
22. bring about new self judgements in the problem situation?	0	1	2	3	4	5	6	7
23. bring about new, healthy reactions which will counter their old reactions in the problem situation?	0	1	2	3	4	5	6	7
24. recognize new consequences of their behavior?	0	1	2	3	4	5	6	7
25. bring about new self evaluations as a result of their new actions?	0	1	2	3	4	5	6	7
26. recognize the needs that will be met by their new actions?	0	1	2	3	4	5	6	7

D. Planning and Action:

How sure are you that the client:	CAN'T							CAN
27. can choose a realistic first goal for themselves?	0	1	2	3	4	5	6	7
28. can create a support system for themselves?	0	1	2	3	4	5	6	7
29. can seek out information about new behaviors?	0	1	2	3	4	5	6	7

How sure are you that the client:	CAN'T							CAN
30. can seek out a role model?	0	1	2	3	4	5	6	7
31. can give rewards to themselves for making changes?	0	1	2	3	4	5	6	7
32. can make an organized plan of attack?	0	1	2	3	4	5	6	7
33. can give themselves feedback on their progress?	0	1	2	3	4	5	6	7
34. can set a realistic period of time for making a change?	0	1	2	3	4	5	6	7
35. can make a backup plan if they fail to reach their goal with the first plan?	0	1	2	3	4	5	6	7
36. can make a plan to avoid sabotaging their success?	0	1	2	3	4	5	6	7
37. can keep a diary or chart to follow their change?	0	1	2	3	4	5	6	7

E. Motivational Dimension:

Rate the client on the following:	LOW							HIGH
1) Defensiveness	0	1	2	3	4	5	6	7
2) Introspection	0	1	2	3	4	5	6	7
3) Engagement	0	1	2	3	4	5	6	7
4) Self-disclosure	0	1	2	3	4	5	6	7
5) Commitment	0	1	2	3	4	5	6	7
6) Emotional readiness to learn a program of change	0	1	2	3	4	5	6	7

F. On a scale of 0 to 7 below, rate your client on how well they are dealing with their problem at this time.

POORLY							WELL
0	1	2	3	4	5	6	7

Quality Assurance Research Project
Michigan State University
Information Package and Consent Form

Dear Participant,

The following form allows us to use the results of this survey as part of a research project at Michigan State University. We are attempting to devise a survey that will help evaluate the quality of services at mental health facilities and counseling centers. A major part of this evaluation is the establishment of accurate and reliable instruments. The survey you are being asked to complete is being evaluated to see if it will be acceptable. In order for us to do this, we need your help.

We are asking you to complete the survey as accurately and honestly as possible. Your responses will be kept confidential. In fact, your name will never appear on the answer sheet itself, nor will it appear on the information sheet. We need your answers so that we can make an evaluation about validity of the survey. Information on the other sheet allows us to make comparisons about how groups of people will respond. This extra information is vital to us, but it will not be detailed enough to identify any one individual person. In addition, since your name is not on the survey or the information sheet, your answers will remain strickly confidential.

You are being asked to take this survey, but you are under no obligation to do so. You may change your mind at any time and decide not to complete the survey. If you choose not to complete it, just turn it in to the person who has given it to you. There is no obligation on your part.

If you agree to complete the survey, we hope you will be as honest and accurate as possible so that the survey can be evaluated effectively. It should take you about 30 minutes to complete the three forms included, that is the information form, the consent form and the survey.

If you are willing to complete the survey, please read and sign the consent form on the next page. When you have completed the survey and the information form, return all the forms to the person who has asked you to participate.

Thank you for your help and participation.

William C. Hinds, Ed.D. — Project Director

Joel L. Kelley, M.A. — Research Assistant

Quality Assurance Research Project
Michigan State University
Consent Form

To be filled out by each participant:

I,_____, do hereby give my consent to Michigan State University, William C. Hinds, Ed.D., and Joel L. Kelley, M.A., to use my answers on the Personal Change Questionnaire as part of their study on Quality Assurance.

I understand that I am under no obligation to participate in the study by completing this survey. I further understand that at any time during the taking of the survey, I can change my mind and choose not to complete it.

I understand that the results will be used solely for the study of the instrument itself and that my individual answers will remain confidential.

I understand that the results of the completed project will be public knowledge and that they will be used to evaluate this survey as a measurement device for quality assurance programs.

I am completing this survey of my own free will.

Signature _____ Date _____

Quality Assurance Research Project
Michigan State University

Please answer by checking the choice that applies to you:

AGE: 16-20 __
21-25 __
26-30 __
31-35 __
36-40 __
41-45 __
46-50 __
51-55 __
56-60 __
60- __

SEX: FEMALE __
MALE __

MARITAL STATUS:
SINGLE __
MARRIED __
DIVORCED __
WIDOWED __
OTHER __

FAMILY INCOME LEVEL
(Check one)
0-$10,000 __
$10,000-$20,000 __
$20,000-$30,000 __
$30,000-$40,000 __
$40,000-$50,000 __
$50,000 or more __

EDUCATION:
(Check highest level you attained)
DID NOT FINISH HIGH SCHOOL __
FINISHED HIGH SCHOOL OR GED __
COMPLETED TWO YEARS COLLEGE __
COMPLETED FOUR YEARS COLLEGE __
COMPLETED GRADUATE DEGREE __

EMPLOYMENT: (check one)
SELF EMPLOYED __
HOURLY WORKER __
SALARIED WORKER __
HOUSEWIFE __
RETIRED __
UNEMPLOYED __
OTHER (fill in) __

NUMER OF COUNSELING SESSIONS YOU HAVE HAD HERE:___ (If you do not know the number, write in the approximate number.)

ARE YOU COVERED BY INSURANCE FOR YOUR SESSIONS HERE: YES __
NO __
DON'T KNOW __

REASON FOR SEEKING COUNSELING:
(Check the most important one)
ANXIETY __
DEPRESSION __
MARITAL OR FAMILY PROBLEM __
ALCOHOL/SUBSTANCE ABUSE __
PHYSICAL PROBLEM __
I WAS TOLD I HAD TO COME __
By Whom? _____
OTHER REASON FOR BEING HERE FOR COUNSELING __
Explain:_____
_____

HOW LONG HAVE YOU HAD THIS PROBLEM?
0-3months __
3 mo. - 1 year __
1 year - 2 years __
2 years or more __

Directions for administration of the Personal Change Questionnaire:

1) Give the client/subject the packet containing the information form, consent form, the demographic information sheet and the Personal Change Questionnaire.

2) Have the client read the information form. If they agree to participate. have them sign the consent form and fill out demographic sheet. Then have them complete the Personal Change Questionnaire.

3) When they have completed all forms, they should place the demographic information sheet and the Personal Change Questionnaire in the envelope provided. They should attach the consent form to the outside of the envelope and return it to you. This allows you to identify the client/subject so that you can complete your portion of the Personal Change Questionnaire without seeing their answers. It is important for statistical and measurement purposes that their self evaluation be correctly matched with your evaluation of them.

4) After they are finished, you identify the client/subject in question and then fill out the Therapist information form and the Therapist Form of the Personal Change Questionnaire. Place them in the same envelope with the client forms.

5) Remove their consent form and place it in a separate envelope with all the other consent forms. It was on their envelope originally to help you identify them so you could effectively fill out your part of the survey and get it in the correct envelope.

6) After completing all forms from all clients/subjects, place all the client envelopes and the envelope containing all the consent forms in the mailing envelope and return to:

Joel L. Kelley
P.O.Box 26292
Lansing, Michigan 48909

or call me at 517-355-7648 (W) or 517-336-0786 (H) and I'll pick them up.

Thank you for your help.

Quality Assurance Research Project
Michigan State University
Therapist Form

This form is to be completed by the therapist of someone who has agreed to participate in this research project. These four pages should come to you in a packet of material which has your client's consent form attached. Please identify the client to your own satisfaction without looking at their answers. Then complete your questionnaire, ie., these sheets. When you have done this, please place your answer form (this sheet and the attached sheets) in the same envelope as your client has placed their answer form. Seal the envelope with the consent form outside and save both for the researcher to collect.

Thank you for your help.

---

1) Please check your theoretical/treatment orientation:
   a) Psychodynamic
   b) Cognitive/Behavioral
   c) Psychoeducational
   d) Gestaldt
   e) Eclectic
   f) other, please describe:_____

2) Please give your best DSM-III diagnostic code for the client, Axis I and II only, in the space provided. If you do not have such a diagnosis, please briefly describe your diagnosis of their problem.
   DSM-III Axis I:_____
   DSM-III Axis II:_____
   Your own Diagnosis:_____
   _____
   _____

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