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CLIENT READINESS FOR ACCEPTING SOCIAL WORK SERVICES IN SUBSTANCE ABUSE

Wayne State University

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CLIENT READINESS FOR
ACCEPTING SOCIAL WORK SERVICES
IN SUBSTANCE ABUSE

by

MOON-JA YOON

DISSERTATION

Submitted to the Graduate School
of Wayne State University,
Detroit, Michigan

in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

1984

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AND RESEARCH

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Chapter I
INTRODUCTION

Background of the Study

Social Work came into existence in the twentieth century from a number of specializations in diverse fields of practice. Ever since social work established an independent identity, this profession has been committed to empirical studies and to applications of the scientific method. Many of these studies have stressed the effectiveness of social work practice, but much remains to be done in distilling this effectiveness into quantifiable, transmittable, basic procedures and principles for the discipline of social work.

One of the areas in need of further study is scientific measurement of social work practice, so as to enhance the predictability of the effects of this practice. As Hollis stated in 1970, "We are still at a very primitive stage in our formal theory and practice. We use instruments and designs borrowed from social and behavioral science, which may or may not measure what we use them to measure or what we need to have measured."¹ In the more than ten years since Hollis' observation was made, students in social work have been involved in more sophisticated training in research methods and measurement, but little has been done

toward measuring the client's attitude toward help with identified problems.

Perlman and Ripple have explained that measuring the client's attitude (motivation to get help) before dealing with the client's problem is essential, and that it is the first obstacle for the social worker to overcome. Perlman says, "... when dealing with the unmotivated client, the caseworker's first treatment efforts must be directed less to the problem that makes the person a client and more to such reluctance as interferes with his being one."² Ripple comments in this matter: "one of the dispositions ... seemed to be used in quite different ways for clients who have strongly positive motivation and capacity and for those who did not."³

Among the problems a social worker faces is how to grasp the client's attitude towards social work treatment — whether the client has positive attitudes towards the treatment, whether the client is ready to accept the need to undergo personal and social changes. Understanding client readiness is particularly important when, as so often happens, the client's presentation is not entirely voluntary, when the person's perceived maladjustment with


the social environment has been severe enough to evoke some form of social coercion.
Statement of the Problem

In social work practice, treatment begins with the first interview. Ideally, the social worker has prior knowledge of the client's history in order to make sense of the interview and to conduct the interview in an appropriate direction. However, in reality, the worker often has to grasp pertinent information on the client during the interview, while the treatment has already begun. What is the pertinent information the worker needs, and what is the worker to look for to obtain this information?

Ripple introduces "motivation," "capacity," and "opportunities" as criterion factors upon which the treatment plan should be made. Lippitt says, "the degree and quality of change which the client achieves will depend very largely upon how much energy and ability it itself can bring to the working relationship. The change agent (social worker) must assess the client's readiness to enter into a helping relationship..." Perlman, in her work introduces the concept of "workability" - the client's ability and willingness to help himself.

4 Ripple, Motivation, Capacity, and Opportunity.


6 Perlman, Social Casework, A Problem-Solving Process, p. 197.
Perlman goes so far as to define "client" as "a person who is ready to use his services." These statements lead to the obvious question of how to assess client readiness. How does the social worker know that the client has strong positive "motivation" and "capacity," or "ability" and "willingness" to use social services? Perlman raises a similar question: "What are the signs by which the worker may know the client's willingness?" For the answer, Lippitt says, "We shall try to develop a general classification of the forces which may increase or decrease the readiness of a client system to change." In Perlman's attempt to answer her own question, besides the very fact of "the client's presentation of himself with a problem, something that has made him uncomfortable enough to seek the agency's help," she points out that the client will exhibit certain nonverbal behaviors - body or facial tensions, emotional expressions, or those defenses against such expressions which bespeak stress.

Can one help clients and workers to be more systematic in expressing and manifesting the client's "workability?" Can this be quantified? Can one determine what factors seem

6 Perlman, Social Casework, A Problem-Solving Process, P. 188.
9 Lippitt, The Dynamics of Planned Change, P. 71.
to affect this? The need for clarifying the client's attitude in the initial stage of social work is great. Little work has been done to examine the factors underlying client readiness for accepting social work services.

The main focus of this study is to answer these questions: (1) what are the factors affecting client readiness for accepting social work services, and (2) how do those factors affect client readiness for accepting social work services?
Objectives

The purpose of this study is to determine factors which will provide a foundation for better understanding of social work services clients -- their attitudes towards their problems and towards social work services in relationship to problem solving processes. Perlman states that "the caseworker needs to both test and promote the person's readiness (emphasis supplied) to recognize that his behavior is an actual or potential dynamic in his problem situation or in its solution, that he is a working member of the caseworker-client team." This study will attempt to test client readiness for social work services.

The primary objective of this study is to investigate some of those common factors underlying client readiness for accepting social work services the agency may offer. As a result of the literature reviewed, six factors appear to emerge along with many other contingencies, which appear to underlie this readiness. It is hypothesized that the client readiness for social work services is affected by the following six factors:

1. Commitment to change
2. Belief in self and the social worker
3. Support from family and others
4. Knowledge of social work
5. Past experience of social work services
6. Resistance to social work services and change

11 Perlman, Social Casework, Problem-Solving Process, p. 188.
The secondary objective of this study is to examine the amount (degree) and order of the contribution of the various factors affecting client readiness for social work services. It is hypothesized that some factors contribute more than others to client readiness for social work services. This analysis, however, will be only exploratory.

To test these two hypotheses, an instrument called "Readiness for Social Work Services" was developed and employed. Validity and reliability procedures for this instrument have been conducted and explained in depth in the Methodology section. Briefly, content validity has been obtained by consulting "experts" in theory and practice in social work. Construct validity has been tested utilizing factor analysis techniques. For the test of reliability of the instrument, Hoyt's method for estimating reliability ($r_{tt}$) has been employed.

The data for the study were limited to and focused upon substance abuse clients of social work services in selected centers in Wayne County, Michigan. The generalization of the findings therefore might be somewhat limited in this respect.
Assumptions

Northrop\textsuperscript{12} has pointed out that no theoretically defined concepts are directly measurable; an instrument can only be constructed on the operational level if some assumptions are made. The assumptions underlying the "Readiness for Social Work Services" are: (1) There are six common measurable factors affecting client readiness for social work services; other possible factors are assumed to be insignificant to the client readiness; and, (2) the six factors can be operationally defined and measured by a set of developed questions. Each factor is assumed to be measured by thirteen questions. These selected questions are assumed to cover the operationally defined domains.

Following are operational definitions of the six factors:

Commitment

"Commitment" refers to the client's felt need and obligation to do something about a problem. "Commitment" is defined as urgency and willingness to do something about the problem, and client's conscious, mobilized intent to involve himself in using help to change.

Belief

"Belief" refers to confidence in self as well as in others - in this case, the social worker and social work services. Self-distrust and feelings of impotence and

inadequacy have been found to influence an individual to resist changes. The "credibility of the worker" has been found to have a positive relationship with client's opinion changes.

Support

"Support" refers to support from family, friends, and others. This factor is based upon findings that awareness of others' expectations of self can inspire the actualization of the others' expectations. "Support" is limited to client's awareness of emotional and material support of family and others and of these positive expectations for the client.

Knowledge

"Knowledge" here is used in the limited sense of client's knowledge of social work services and its benefits. This factor is based on two assumptions: 1) when the presumed knowledge is favorable, the change is more acceptable, and 2) an individual will adopt the proposed change which seems desirable.

Past experience

"Past experience" here means only experience with the social worker and/or social work services. This factor is based upon previous investigations which demonstrate that individuals make choices based on experience. From past experience, an individual internalizes values, norms, and attitudes which influence behavior.
Resistance

"Resistance" is seen here as a force which contributes to stabilization of illness and reduces the possibility of making changes. Resistance is believed to be reflected in lack of interest, dissatisfaction, fear, doubt, and neglect of social work services.
Limitations

"Readiness" in this study has been conceived of as a multidimensional variable and has been hypothesized to be comprised of six different dimensions such as "Commitment", "Belief," "Support," "Knowledge," "Past Experience," and "Resistance." By the same token, each factor might be more satisfactorily thought of as multidimensional as well. For example, the "Support" factor has a dimension of family and another of friends' support; and the "Belief" factor has one for the belief in counseling and another for the belief in oneself. However, this study postulated that those six predictors as unidimensional variables and, accordingly, defined them operationally. For practical purposes, this study limited the number of the predictors to six because this facilitated the analysis, and because it provided a workable set of variables in the field.

This study faced and tackled the classically inherent problem of measurement: How to bridge the gap between theory and research. This study attempted to translate well developed theories into practice and to generate data from practice to feed back into those theories. The instrument developed here is expected to function as a "bridge" between knowledge and practice in the social work field. In this study, the concepts of "Client Readiness" is examined by means of an instrument of "Client Readiness for Accepting Social Work Services". However, what is the "Client
Readiness" and how does one measure "Client Readiness" in social work practice?

Balogh mentions the measurement problem, saying "no theoretically defined concept is directly measurable. But... some will be sufficiently close to the operational level that agreement is easily reached. For practical purposes, one can conceive of these as directly measured." Considering Blalock's points, this study emphasized the importance of the process of developing an instrument so that the instrument measures the theoretically defined concepts of "Client Readiness" as closely as possible. In doing so, several assumptions were made concerning the link between the theoretical concepts and the operationally defined variables. Consequently, validity of the instrument was thoroughly examined. However, the limitation is that the "Client Readiness" can only be conceptualized by what the "Client Readiness for Social Work" questionnaire measures.

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Chapter II
A REVIEW OF RELATED LITERATURE

Social work is generally characterized as a "helping activity, concerned with services with people," and this helping activity is directed toward individuals, groups, and communities. Social work in this study was conceptually limited to effects on the individual since this is the primary domain and interest of casework.

Casework practice has been conceptualized differently by various schools of thought, specifically:

1. The psychosocial approach,
2. The functional approach,
3. The problem-solving approach, and
4. The behavioral modification approach.

The main assumption in all the approaches involves the conscious and controlled use of the worker-client relationship to achieve the ends of treatment, which involve change, growth, and adaptation to reality. Social workers aim to bring about change toward an improved interaction between the person and environment. This planned change is central to this study.

Studies concerning planned change have burgeoned. Among them is the work of Chin & Benne which introduced general strategies that affect changes in human services. They are:

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1. The empirical-rational strategy,
2. The normative-re-education strategy, and
3. The power-coercive approach.¹⁵

Hollis suggests that the objective of casework treatment may be to enable change to occur in the individual(s) or in the situation or in both.¹⁶ When casework is involved in helping a client to change in any form or degree, then casework practice needs information about the individual's openness to change and any preparation needed.

This literature review examines the various factors concerning "readiness for change" from the point of view of the various schools of thought. This literature search has been limited to that which is relevant to planned change in social work settings and measurement of the client readiness for accepting social work services, and examined these focal points:

I. Theories of casework process,
II. Strategies of planned change,
III. Processes of planned change, and
IV. Factors affecting client readiness for accepting social work services.


¹⁶ Hollis, Theories of Social Casework, p. 37.
Theories of Casework Process

It is a natural phenomenon that more than one approach to casework is developed as workers meet a wider range of needs across a wider variety of people and situations. In each approach, the problem is defined differently; helping processes are applied in special ways toward different tasks or objectives. These approaches overlap in some aspects in theoretical constructs. There is a need to examine the major approaches, to see the major difference of application in casework practice and to see how these differences might affect the client readiness for change. Among many approaches or schools of thoughts in casework, the four most prevalent approaches are chosen for review by this study. They are the psychosocial, the functional, the problem-solving and the behavior modification approaches. For the purposes of this study, these have been reviewed only in regard to the aspect of behavioral change.

The Psychosocial approach

Florence Hollis, Mary Richmond, Gordon Hamilton, Charlotte Towle and many others have contributed to this approach.

Hollis says that today the "Psychosocial view is essentially a system theory approach to casework. The major system to which diagnosis and treatment are addressed is the person-in-situation "GESTALT" or configuration. ... The person to be helped...must be seen in the context of his interactions or transactions with the external world, and
the segment of the external world with which he is in close interaction must also be understood." Change in one part of the person-in-situation configuration brings changes in other parts as a moving equilibrium is maintained.

The caseworker's special role in this approach is to understand the client's need and to respond in an individualized way according to the worker's understanding of that need. This involves fact-finding and a professional opinion called "diagnosis" or "assessment." For the most part these processes consist of communication among clients, the worker, and others.

It is assumed that personality change and growth can occur in response to casework treatment and that environmental changes brought about by treatment can facilitate adaptation. This makes the relationship between worker and client a major determinant of the degree to which the client is helped."

The Functional Approach

Influenced by Freudian psychoanalysis, the functional approach was originated by faculty members of the Pennsylvania School of Social Work in the 1930's, then corroborated and further developed by this group as well as other researchers.

17 Ibid., p. 35.
18 Ibid., pp. 35-37.
According to Ruth Smalley, the functional school of casework has drawn on the ideas of scientists in diverse fields who have recognized that "man" is to be properly conceived as the center of his own life, capable of modifying both himself and his environment, in accordance with his own changing purpose within the limitations and opportunities of his own capacity and his own environment. For casework help to be effective, the individual served must be understood in the context of uniqueness and differences. Smalley defines social casework as "a method for engaging a client through a relationship process, essentially one to one, in the use of a social service toward his own and the general social welfare."

The worker's main role is engaging in a relationship process which releases the client's own power to choose and grow. Workers do not attempt to classify a client and select a type of treatment, but rather, enter into the relationships with clients and work together on what clients can do with the help offered.

The Problem-Solving Approach

The problem-solving model, whose adherents are led by Perlman, is focused upon system theory, which postulates that the personality is an open system; that the person is

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2" Ibid., p. 81.
formed and developed through continuous transaction with social realities; a process of becoming, rather than a state of being. Perlman\textsuperscript{11} sees all living as a problem solving process, posits process as the very condition for growth, and suggests that the casework encounter can be a transactional experience in the changing adaptation of a human being. Since a system is characterized by some degree of connection among its parts, it is postulated that change in one part of the system will affect some other parts and balance, or increased competence in one aspect of the life situation will increase the person's sense of potentiality, and perhaps mastery in some other respects.

The worker's function in the approach includes problem identification, enhancement of the client's limited motivations and capacities for using help, and locating resources and opportunities within the person's own command. Problem-solving diagnosis does not focus upon the bio-psychosocial organization of the total personality, since this approach does not aim at total personality change or reorganization.

The diagnosis in the problem-solving model, according to Perlman,\textsuperscript{12} focuses first upon what the person wants and how much he wants it (motivation) in relation to the


\textsuperscript{12} Ibid., p. 166.
problem-to-be-worked; second, upon what capacities the person has (or has not), or can develop by which to cope with the problem-to-be-worked; and, third, upon what means there are (or are not) in the client's own environment by which the problem-to-be-worked can be affected.

The Behavioral Modification

The development of behavioral modification can be traced to Pavlov and Thorndike, and has been influenced by Skinner's research. It was, however, in the 1960's that this approach and therapy became a competitor in the therapeutic market place.

Followings are brief excerpts from Edwin Thomas' manuscript on Behavioral Approach.¹²³

Behavioral Modification is a focus upon observable human responses, and on very fundamental classes of behavior -- operant behavior (voluntary) and respondent behavior (involuntary). Operant behavior is controlled mainly by consequences in the environment, whereas respondent behavior is controlled mainly by an eliciting stimulus which antedates the responses.

Casework in the Behavioral Modification assumes the following: the behavior (1) falls predominantly into the respondent or the operant realm, (2) was learned through processes of conditioning, (3) obeys the same laws of

learning and conditioning as does so-called normal behavior, and, (4) is amenable to modification through the careful application of what is known about learning modification.

Thomas emphasizes that most behavioral practitioners make it explicit what is to be worked on. An explicit contract serves to focus the attention of all parties and provides better ethical protection for the client. It is recommended that the client be committed to full cooperation in the modification regimen. This commitment should be emphasized in order to encourage client compliance with the requisites of assessment and modification and thereby to increase the likelihood of achieving success.24

Only four among many different approaches have been briefly examined. They have different behavioral science foundations upon which the theoreticians' conception of man and of practice theory were developed. There are degrees of differences in various approaches as to what the caseworker does with the client's view of problem. However, all approaches share the same basic purpose, which is the promotion of the welfare of the individual in society, and the same basic function, which is the implementation of this purpose. These various approaches acknowledge (1) the importance of the relationship between worker and client and (2) the importance of the assessment at the initial phase of treatment. For the treatment, (3) all the approaches

24 Ibid., p. 196.
emphasize the necessity of the assessment (diagnosis) as an early or simultaneous stage. Because of this, in all cases, treatment should be based on a thorough understanding of individual and interpersonal dynamics. The thorough understanding can only be made from the information, facts, and feelings of clients gathered from the client and his family and friends.

The most important and essential information in social work practice is about the client's attitude towards his problem and towards social work services in relating to his problem; in other words, client readiness for accepting social work services. It is important and essential because depending on client readiness, different assessments can be made and different treatments can be followed. Thus, understanding the factors affecting client readiness is of the prime importance for caseworkers as accurate assessments for the treatment plan are developed. This study is focused on these factors affecting client readiness for change.
Strategies of Planned Change

Planned change is defined by Chin & Benne as "changes in which attempts to bring about change are conscious, deliberate, and intended, at least on the part of one or more agents related to the change attempt." This is felt to be the social workers' main interest and the most common intention regardless of differences among theoretical approaches.

Further, Chin and Benne introduced general strategies for effecting, explicitly, change in human services. According to them, strategies may be grouped into three types: Empirical-Rational, Normative-Re-educative, and Power-coercive strategies. These strategies have been reviewed in terms of how these contribute to the understanding and measurement of client readiness for change in the social work process.

Empirical-Rational Strategy

This strategy is based on the fundamental assumption that human beings are rational and moved by self-interest; a person will adopt the proposed change if this can be rationally justified and if can be shown that change will mean gains. Based on this assumption, a change is explicitly proposed by the change-agent (social worker) who knows of a situation that is desirable, effective, and in

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26 Ibid., p. 43.
line with the self-interest of the individual (client) who will be affected by the change. "Change" in this strategy involves changes in knowledge, information, and intellectual rationales for action and practice. Thorndike and Everett Rogers among many others support this strategy.27

**Normative-Re-education Strategy**

Normative-Re-education strategy is based on the assumption that humans are guided in their actions by socially funneled and communicated means, norms, and institutions - in brief, by a normative culture.28 Patterns of action and practice are supported by socio-cultural norms and by commitments on the part of individuals to these norms. Sociocultural norms are supported by the continuing belief, valuation, and commitment of the members of the culture, or some designated segment of it.

Change in a pattern of practice or action, according to this view, will occur only as the persons involved are brought to change existing normative orientations to old patterns and to develop commitments to new ones. Changes in normative orientations involve changes in attitudes, values, and significant relationships. At the personal level, people are guided by internalized meanings, habits and values.

27 Ibid., p. 56.

28 Ibid.
Two approaches are dominant among those using this strategy: Problem-solving structures and Personal growth approaches. The problem-solving structures and procedures of a human system must be developed to deal with a range of sociotechnical difficulties, converting the relevant processes of data collection, planning, invention, and the tryout of solutions. Personal growth procedure, on the other hand, should be designed to stimulate and support personal growth and utilize the resources of non-verbal exchange and communication to induce personal confrontation, discovery and commitment to continuing growth.

According to Chin & Benne, Freud and Lewin's views support this strategy.

**Power-Coercive Strategy**

This strategy is based on the application of power in some form. The influence process involved is basically that of compliance of those with less power to the plans, directions, and leadership of those with greater power.

Chin & Benne illustrate further that "power" in this strategy includes the utilization of moral power, playing upon sentiments of guilt and shame, as well as political and economic sanctions. Examples of the power-coercive strategy, which is common in this society, can be found in the educational system, industry, and units of government.

"Ibid., p. 52."
Nevertheless, it also can be seen used to induce individual behavior change in social work field.

The ideas of Gandhi, Martin Luther King, Karl Marx, and others support this strategy.

Reviewing the various strategies for effecting change is helpful for conceptualizing how the change in human behavior occurs and what the major ingredient behind the change is. One element in all approaches to planned change is the conscious utilization and application of knowledge as an instrument or tool for modifying patterns. Planned change dealt with in the social work practice seems to be influenced by these three strategies, perhaps one dominant over the others depending on the nature of the change involved and depending on who has to undergo the changes. Measuring client readiness for change has to be based on behavioral knowledge of change and its strategies.

The empirical-rational strategy includes a variety of specific approaches but all are based on the assumption that human beings are guided by reason and self-interest. Social work can utilize this rationale of self-interest in determining needed changes in behavior. Among factors affecting readiness for change, "Commitment," and "Knowledge" are generated based on this rationale.

Changes within the social work process can be involved with the noncognitive determinants of clients' behaviors

"Ibid., pp. 35-43."
such as values, attitudes, and feelings. Chin & Benne say that "changes in normative orientations involve changes in attitudes, values, skills, and significant relationships." Among factors affecting readiness for change, "Belief," "Resistance toward social work services," "Past Experience" and "Support" deal with these noncognitive aspects of client behavior.

In general the power-coercive approach puts emphasis upon political, social and economical sanctions in the exercise of power. In social work, the power-coercive approach influences the "planned change" incorporated with either the normative-re-educative or the empirical-rational approach; for example, in the form of authority of the social worker and social work agency.

31 Ibid., p. 34.
Process of Planned Change

When social work is involved in clients' changes in any form or degree, the social work practice should also be related to the process of the change; and some explanation regarding process of change is required. Kurt Lewin, in his pioneering analysis of the process of change, suggested that a successful and permanent change includes three phases: \(^3\)

1. Unfreezing (if necessary) the present level,
2. Moving to the new level, and
3. Freezing on the new level.

"Unfreezing' describes the necessary initial phase in which the need for change is realized, and a willingness to give up old ways of doing things is evidenced. 'Moving' includes the activity involved in implementing change, and 'freezing' indicates the establishment and firm rooting of the new behavior." \(^3\)

Lippitt has expanded Lewin's three phases and proposed a list of five general phases of change process: \(^4\)

1. Development of a need for change (unfreezing).
2. Establishment of change relationship.
3. Working toward change (moving).
4. Generalization and stabilization of change (freezing).
5. Achieving a terminal relationship.


Lippitt further explains these phases -- each embodying important characteristics of its own. On the use of these divided phases, he says, "we have found it helpful to review descriptions of change - in persons, groups, organizations, and communities - in terms of this sequence of phases. And we have found it very helpful to use these phases in separating and classifying the specific helping techniques."\(^3\)

Edgar H. Schein explained in detail Lewin's three stages of change process to encompass the kinds of change in belief, attitudes, and values, in the following outline.\(^3\)

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**Unfreezing:** creating motivation to change  
**Mechanisms:** a) Lack of confirmation or disconfirmation  
b) Induction of guilt-anxiety  
c) Creation of psychological safety by reduction of threat or removal of barriers

**Changing:** developing new responses based on new information  
**Mechanisms:** a) Cognitive redefinition through  
(1) Identification: information from a single source  
(2) Scanning: information from multiple sources

**Refreezing:** stabilizing and integrating the changes  
**Mechanisms:** a) Integrating new responses into personality  
b) Integrating new responses into significant ongoing relationships through reconfirmation

Social workers would be more able to choose an appropriate technique to work with a given client when there

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\(^3\) Ibid., p. 130.

is an understanding of where clients stand with respect to the change process. The measurement of client readiness for change could be used to determine this stance of the client between "unfreezing" and "moving." As Lewin indicated, the unfreezing stage can be skipped when it is not necessary. This indicates that the measurement of the client readiness is essential for effectiveness, as the three steps of Lewin's change process can be done by two steps of processing, skipping the "unfreezing" stage, when the worker is sure that the client does not need to be "unfrozen," means that the client is assessed as "ready to move on."

Hill and Havelocks\(^\text{37}\) say that the actual problem-solving process of change can not begin until the client himself is aware of his own problem and has developed a need for change. The "unfreezing" stage is characterized by such terms as "problem awareness", "felt need," "felt dissatisfaction," "identification of concern," and "developing a need for change."\(^\text{38}\) Identifying such characteristics of the "unfreezing" stage during initial contacts with clients makes an opening for the social work process of change and makes the process move.


\(^{38}\) Ibid.
Factors affecting Client Readiness for Change

This literature review is limited only to elements and factors involved in changes within the social work setting. What makes the client "unfreeze" and "move?" What elements are involved in the client readiness for accepting social work services?

Ripple, in a series of reports on her research, examined client's motivation, capacity, environmental opportunity, and social work services opportunity as possible variables affecting clients accepting services. Her studies conclude that "the client with appropriate and adequate motivation and adequate capacity, to whom the services offered are appropriate and supplied in an adequate manner, makes use of casework help, provided forces outside of agency or client influence are not too restricted and unmodifiable."

In Ripple's study, motivation is taken to comprise what the client wants and how much this is wanted. Capacity encompasses the abilities to use the therapeutic relationship and the activity directed toward problem-solving. Environmental opportunity covers the whole set of conditions and influences surrounding the person. Social work services opportunity refers to activities of the caseworker and the agency which are directly experienced by

3' Ripple, Motivation, Capacity, and Opportunity.

40 Ibid., p. 2.
Ripple's analysis is based on the concepts of the problem-solving strategy. Originally, Charlotte Towle identified motivation, capacity, and opportunity as the significant variables in contrasting learners and non-learners. \(^1\)

Lippitt and others\(^2\) developed a general classification of the forces which may increase or decrease the readiness of a client to change. "Change forces," they explained, increase the willingness of the client to make a proposed change, while a "resistance force" reduces the willingness to make a change. It is the social worker's task to evaluate the balance between change forces and resistance forces in the client. Resolution of this conflict is an important part of the change process in the initial stage.

Lippitt and others further discussed the general character of the change process, noting that there are four distinct types of motivation working as change forces.\(^3\) Among them are desire for relief from the pain associated with the present situation and dissatisfaction from a perceived discrepancy between what is and what might be.

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\(^1\) Ibid., p. 3.
\(^3\) Lippitt, Watson, & Westley, *The Dynamics of Planned Change*.
\(^4\) Ibid., pp. 73-74.
to make it change its behavior form another type of motivation. Lippitt and others illustrate an example of an environmental requirement as the expectation of society that an individual will change his behavior as he grows older. Finally, internal requirements set up pressures toward change. These above mentioned four "needs" are assumed to be steady "change forces" operating within the system.

In regard to "resistance force," Lippitt and others say43 that it grows out of a combination of fear and ignorance. The clients may fear that they will be unable to change successfully, that they are unable to deliver. Fear and ignorance stem from lack of skill, experience, or capacity of action, all of which would be necessary to carry through a change. This actual inability would result in opposition to proposals for change.

Another form of resistance to change might be the client's suspicions and doubts of the value of the help which the worker has to give, and consequent dissatisfaction with the worker may reflect as resistance force.

These forces described as change or resistance are assumed to be representations of "motivation," "capacities," and "situational factors" which influence the behavior of the client system.45 These forces emerge at the any time during the change process and may exist in different forms at the same time. "There is an awareness of problems and a

"" Ibid., p. 83.

"" Ibid., p. 89.
genuine desire to do something about them, but these are accompanied by resistance to the idea of help from outside."

Alan Guskin reviewed and analyzed the individual factors that relate specifically to the dissemination-utilization process. These factors can also be applied to the client readiness for accepting social work services, as both concepts have to do with accepting or adopting newness and change from the old situation.

Guskin divided these factors into two major groups — those characteristics which are more enduring or not easily changed, and those which are less enduring and more subject to changes in an individual's situation. Among the enduring characteristics which were reviewed relevant to "readiness for accepting services" would be competence, values, needs, past experience. Among the less enduring characteristics would be the effects of fear, the motivational bases of attitudes, influence of others, and effects of knowledge. Following will be a list of some of the factors which Guskin analyzed as variables that seem most relevant to knowledge utilization."

"" Ibid., p. 132.


"" Ibid.
Sense of Competence and Self-esteem

According to Guskin, an individual's feeling of competence is a strong motivating force to accept changes. One would expect that individuals who have considerable confidence in their abilities would be more prone to try innovations or to be willing to evaluate new knowledge.

However, self-esteem has been viewed differently in a number of studies. Watson\(^5\) proposes that self-distrust and feelings of impotence lead an individual to resist change. Lippitt and others\(^6\) propose that feelings of inadequacy are justified by opposing proposals for change. Janis' study\(^7\) shows that an individual with a very low self-evaluation tends to be more dependent on others and seek out others in order to gain approval.

Needs

Generally needs are defined in a broad sense as individual's basic desires, drives and motives. Based on several studies reviewed, Guskin proposes an hypothesis: when particular needs are seen as important to the individual and relevant to a particular situation, innovations or new knowledge will be accepted only when they

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\(^6\) Lippitt, Watson, and Westley, The Dynamics of Planned Change, p. 84.

befit these needs. When a desired change requires a shift in a need which is highly important and salient to the individual, it tends to be rejected. The needed change has to fit, otherwise, there is resistance to such changes.

**Past Experience**

The development of certain values and needs occurs as a result of continuous experience in the individual's life. Similarly, a person's sense of competence emerges from his past experience. Guskin concludes from reviewing a great number of studies that individuals make choices based on experience. By past experience is meant the values, the norms, and the attitudes which an individual has internalized and which represent the frame of reference he uses when approaching events in his environment.

**Effect of Fear**

While fear or anxiety do affect an individual's receptivity to new information, Guskin finds that different degrees of fear in a person have different effects on his attitudes. Leventhal and others have found that the higher the fear the greater the attitude change. Findings from a very different point of view would be the study of

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54 Guskin, "Individual," p. 4-33.

Merrill and others. They report that one of the reasons that mothers refused permission for their children to be vaccinated with the Salk vaccine in early days was their fear of its negative effects.

Guskin concludes from his review that "fear is a very complex variable which must be viewed within the framework of the individual's previous and potential behavior. One cannot merely state that fear-inducing communications of a certain level will or will not lead to acceptance or rejection of scientific knowledge, new practices, or innovations."  

Self-Fulfilling Prophecies

Under self-fulfilling prophecies, Guskin includes self-expectation, effects of early experiences, and other's expectations as factors affecting individuals to accept planned changes.

From Brickman's reviews of literature on the effects of experiences of self and others on behavior, it can be generalized that people who expect to fail are more likely to fail eventually even when they succeed and want to succeed. People who expect someone else to fail are more likely to induce him to fail even when they intend him to


57 Guskin, "Individual," p. 4-14.

55 Phillip Brickman, Performance Expectations and Performance (Ann Arbor, Research Center for Group Dynamics, University of Michigan, 1966), Mimeo.
succeed. Individuals desire to live up not only to their own expectations but to others.

In regard to effects of early experiences, Stark's study showed that in social casework interviews mistakes in the first interview were much more critical than later mistakes. A related finding by Guskin reports that administrators who perceived a researcher as lacking luster in the first meeting tended to discount future briefings and reports.

From an extensive review of the literature, Guskin concludes that first impressions and early experiences in interpersonal interaction greatly affect future relationships.

Effects of Knowledge

The amount and type of knowledge have an important effect upon the individual's accepting changes. When the presumed knowledge is favorable, the knowledge about a particular innovation may predispose an individual to accept the innovation. Among many studies supporting the above statement, Chu's study of farmers found that a knowledge of the causes of a problem plays an important role in the

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5' Frances B. Stark, "Barriers to Client-Worker Communication at Intake," Social Casework, 40 (April, 1959), pp. 177-183.


decision to adopt remedial measures; mere recognition of the existence of the problem did not produce such a reaction.

It is postulated that there is a connection between the knowledge about the change and the benefits that will accrue as a result of its use.

Thus far, from Guskin's intensive literature reviews, only psychological variables related to the individual's change or resistance have been considered. As a conclusion, Guskin pointed out that the following items are related to the "openness" (readiness) factor in accepting changes.*2

To be dissatisfied with current stage.
To be ready and willing to change.
To perceive outside resources as potentially useful.
To listen, to give, and to receive feedback.
To seek out new information.
To be flexible and modern in outlook.

Davis & Salasin*3 presented central characteristics of the utilization of evaluation in organizations and social systems. However, those characteristics happen to evolve from a behavioral model derived from Hullian learning

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*2 Guskin, "Individual," p. 4-38.


theory, so that they are also applicable to the individual's readiness for accepting changes, provided the jargon of their work is adjusted. Davis and Salasin themselves suggested, "We would hope specialists with other backgrounds would translate the human approach to change into their own jargon and concepts."  

Davis and Salasin analyzed the factors affecting utilization of evaluation in three broad senses: (1) the motivation, drive, sensed obligation to "do something" about a matter; (2) availability of a selected course of action, an idea for achieving a solution; (3) consequences of implementing the idea for action. Eight factors are subdivided under these three categories. Followings are the eight factors and along with operational definitions.

Ability -- capacities to carry out the solution; by Davis definition, ability is represented by intelligence, the biochemical condition of the nervous system at a given point in time.

Obligation -- the motivation of change, felt need to do something about a problem.

Circumstances -- prevailing factors pressing for or distracting from certain actions; stimulus conditions impinging on the individual.

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" Ibid., p. 635.

Timing -- synchronization with other significant events; phases of events that may help or hinder change.

Resistances -- both frontstage and backstage concerns for loss if the specific action is taken; inclinations to preclude the change.

Yield -- felt rewards benefits for changing.

Values -- predecisions, beliefs, manners of operating, characteristics of the change; values encompassing self-expectancy and characteristic ways of handling stimuli.

Idea -- information relevant to taking steps to solve the problem.

From the eight factors - Ability, Values, Idea, Circumstances, Timing, Obligation, Resistances, and Yield - Davis and Salasin generated AVICTORY, the acronym for the above listed factors, out of a series of conferences and experimental studies over ten years supported largely through the National Institute of Mental Health (NIMH). AVICTORY has been applied in technical assistance and in research consultation and administration within the services program at NIMH.

From AVICTORY, Kiresuk and his colleague in the Program Evaluation Resource Center (PERC) developed an instrument of 250 items of "Readiness for Change," which was designed to measure out-patients' readiness to accept the medical treatment in the Mental Hospital in Minneapolis, Minnesota.

The scale of "Readiness for Change," which was basically expanded from the AVICTORY model, includes 20 factors. Among them, only 14 factors were found to be used
in the instrument called "Readiness for Accepting Medical Treatment." They are:

1. Willingness and ability to pay.
2. Self-perceived emotional, mental, physical ability to adopt services.
3. Religion.
4. Attitudes towards doctors and the medical establishment.
5. Values concerning health and the living of life.
6. Doctor/patient communication.
8. History of ability to change.
9. Support for treatment adoption or lifestyle change.
12. Felt need to do something about the problem.
13. Patient perceived characteristics of hospital and staff.
14. Lie scale.

Kurt Lewin's theoretical concerns were more broadly defined: he attempted to integrate all the determinants of behavior under one dynamic cognitive system. His basic proposition was symbolically expressed by the equation: \( B = f(P, E) \). Behavior (B) is a joint function (f) of the Person (P) and his Environment (E). Lewin means that behavior was determined by the simultaneous operation of momentary conditions of the individual in combination and interaction with the structure of his environment.

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Similar to Lewin's theoretical equation but more specifically explained are Cook and Selltiz's two classes of variables that influence a person's behavior in situations: (1) characteristics of individual - dispositions, motives, values, and styles of expression; (2) characteristics of situation - norms of appropriate behavior, expectations of others, and the consequences of the action.

Thus far, understanding various factors involved with clients' readiness for change facilitates the understanding of clients' internal and external forces and resources, which subsequently expedite the practice of social work.

Chapter III

METHODOLOGY

Procedures

In exploring the area of "Client Readiness for Social Work Services," this study was carried out in the following four stages: (1) Developing an instrument, (2) Testing the validity and reliability of the instrument, (3) Sample selection and data collection, and (4) Testing the hypotheses.

To test the hypotheses, it was necessary to develop an instrument and evaluate its validity and reliability thoroughly. The subject of this study came from a homogeneous population of substance abuse clients. The circumstance of selecting subjects compelled employment of the convenience sampling method. The data have been collected by using the instrument developed for this study, and analyzed to test the two hypotheses.

Developing an Instrument

Introducing methods of constructing an instrument, Upshaw states that "the construction of predictive instrument involves a theory, a hunch, or an empirical result linking the criterion property to another property." Thus, an instrument measuring client readiness for social work services was developed as Upshaw described, by incorporating

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various theories, studies, and essays about social work practice.

Factors relating to readiness for change which are researched by Ripple, Lippitt, Guskin, Davis & Salasin, Kiresuk, Lewin, Cook & Selltiz and others were reviewed. Among the suggested factors, only six were chosen for incorporation into a model for the purpose of this study. They are "Commitment," "Belief," "Support," "Knowledge," "Past Experience," and "Resistance." These factors are selected based on the following criteria:

1. They are applicable to the general population of clients of social work services.
2. They are operationally workable at the clinical social work settings.

The selected factors have been operationally defined. Thirteen questions, which are assumed to cover the operationally defined six domains, have been generated to comprise each factor. A total of 78 question items were constructed to compose a model for a testing instrument for this study. Those items have been incorporated into the questionnaire and developed in such a way as to render the questionnaire appropriate to the purpose of this study. In doing so, an existing instrument, "Medical Treatment Readiness Questionnaire," (MTRQ) has been utilized with a

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"Medical Treatment Readiness Questionnaire," which was developed by members of the Program Evaluation Resource Center (PERC) in Minneapolis, Minnesota, is available upon request.
great deal of revision. It was found that MTRQ shares with this study the same basic measuring purposes.

Each item has been constructed with the following constraints:

1. The sentences are short and simple.
2. Each sentence renders only one message.
3. The content is general but clear.
4. The vocabulary used is simple, everyday English.

The questions are stated in declarative sentences which require only "True" or "False" answers. The true-false format was chosen, because it is a widely recognized mode of questioning when respondents are clients undergoing personal stress and therefore unable to tolerate the distraction of a large array of question choices. The developed instrument "Readiness for Social Work Services" is attached. (See APPENDIX)
Testing Validity and Reliability

An instrument was constructed to meet the purpose of this study. The next step was to evaluate the instrument—to find out whether the instrument measures what it is supposed to measure (validity) and whether it measures consistently and accurately (reliability).

Both validity and reliability are concerned with the influence of certain variables on the test scores. Validity is concerned with the adequacy of a measurement and the accuracy of the inferences made from the scores, while reliability is concerned with the consistency of obtained score. Both are indispensable aspects in evaluating the properties of the instrument. However, validity is of primary importance because "Reliability is necessary but not a sufficient condition for validity," which means a test can not be valid unless it is reliable.

Validity

In The Guidelines for Test Use, validity is succinctly explained: "Questions of validity relate to what the test measures and/or predicts, what can be inferred from the test scores, and how useful the test results will be."74 As explained in the above, tests are used for different evaluation needs, and for each need a different method of investigation is necessary to establish validity.

The three basic types of validity are agreed upon by the American Psychological Association in the Standards for Educational and Psychological Tests and Manuals. They are (1) Content validity, (2) Criterion-related validity, and (3) Construct validity.75

Due to the nature of this study, the developed instrument was only evaluated in terms of its content and construct validity. The criterion-related validity might be important and necessary if this study aims to infer client's success in solving problem from the measures of "client readiness." However, this study was aimed at measuring factors underlying client readiness which concern only with the properties of content and construct validity of the instrument.

Content validity involves essentially the systematic examination of the test content to determine whether it covers a representative sample of the behavior domain to be measured.74 Two major standards for ensuring content validity are (1) a representative collection of items and


(2) "sensible" method of test construction." Content validity is built into a test from the outset by the selection and/or construction of appropriate items. The preparation of test items is preceded by a thorough and systematic examination of relevant course syllabi and textbooks, as well as by consultation with subject-matter experts."

Through the process of content validation, each item was carefully examined considering the relevancy to the objectives of the domains to be measured. In establishing content validity, the subject-matter expert's participation, which is the most widely used method, was followed. Four "experts" - two in theories of social work and other two in practice of social work were consulted to examine the contents of the instrument. Specifically they were expected to examine the contents of the 78 items in the light of the six operationally defined factors and the format of the items used. It was aimed to establish not only items accurately reflect the objectives of six factors but also a proper coverage of content and format in regard to the specific subject matter. Their suggestions were incorporated into the final construction of the instrument.


Construct validity of the instrument was considered in order to find out whether the instrument was useful to locate the underlying factors for the study. In *Guidelines for Test Use*, the author states that "Construct validity is appropriate when we want to more clearly define the trait or attribute (i.e., construct) measured by a particular test or assessment method. ...Our concern is whether, in fact, the measure actually reflects the underlying construct. The process of verification is called construct validation."¹

The goal of construct validation studies is to better describe (define) the trait characteristics being measured.

Cronbach list three major procedures in construct validation: correlation, experimentation, and logical analysis.¹⁰ He further explains each procedure in depth. However, the procedure of "correlation" was only used for this study; therefore, correlational study will be mentioned here. Briefly, correlational studies is determined on the basis that persons who score high on the test ought to score high on other indicators of the same construct.¹¹

The correlational research on test validity employs factor analysis which performs essentially the same function for finding clusters of related variables. Nunnally and Durham explain that "The explication of constructs mainly

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¹¹ Ibid., p. 466.
consists of determining (1) the internal statistical
structure of a set of variables said to measure a construct
and (2) the statistical cross structures between the
different measures of one construct and those of other
constructs". Factor analysis provides some of the tools
that are most useful for determining internal structures and
cross structures for sets of variables.

The validation of the instrument required the same
procedures of testing hypothesis I for this study; factor
analysis served the purpose for both the construct
validation and testing hypothesis I. If the hypothesis was
confirmed, there would be some evidence of construct
validity. If it was not confirmed, the instrument then
would be revised to make it a better measure of the
construct.

Reliability

When the developed instrument measures what it was
designed to measure, then how well does it measure? That is
the question of reliability of the instrument. In the
Guidelines for Test Use, it states that "Reliability is
concerned with the consistency of performance over samples
of items, test forms, and/or testing occasions." Thorndike
states that "Reliability is concerned with the precision
with which the test score, that is, the sample, represent

"3 Brown, Guidelines for Test Use, p. 42.
the universe."" However, the *Encyclopedia of Educational Research* states "Reliability concerns the extent to which measurements are repeatable."" In short, it sums up that reliability is concerned with consistency, accuracy, and stability of the measurement.

The problems of consistency, accuracy, and stability are due to chance errors. Some random error is involved in any type of measurement. To the extent that the measurement error is slight, a measure is said to be reliable. To put it in more technical terms, Anastasi states that "Measures of test reliability make it possible to estimate what proportion of the total variance of test scores is error variance."" Anastasi further defines "error variance" as "any condition that is irrelevant to the propose of the test.""

There are three known sources of variability (error) that cause unreliability."" The first set is concerned with the test administration. The second source of error includes factors associated with the test taker. Concerning these two sources of error, it was attempted, for the best

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"" Ibid.

results, to administer data collection uniformly when the instrument was actually employed on the subjects.

The third source of error, which is the main concern for the quality of the developed instrument, comes from the sampling of items comprising the test. This contributing error factor might be anything from item content, style, and length of tests which are built into the instrument. To reduce this error variance, and thereby increase test reliability, the rationale of the questionnaire was particularly studied, and arranged so that responses should not yield all true or all false responses. The content of the items was also examined so that there would be just about an equal number of positive and negative sentences. Studies' found that clients with certain personality traits have a tendency to answer "yes" rather than "no" regardless of item content. Most of all, items were written clearly in easy English and the instructions were simple to follow. Despite the efforts to

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have the optimum testing conditions, as Anastasi says, "no test is a perfectly reliable instrument."*3

There are several types of testing reliability. They are: Test-retest reliability, Split-half reliability, and Kuder Richardson reliability. All of these methods are limited to some extent. Due to these limitations, e.g., test-retest requires two sets of test on same subjects - they can not be used in this study. However, it was found that "internal-consistency" method was possible and the most applicable to the instrument.

Among the internal-consistency methods are KR20, KR21, Cronbach's Coefficient Alpha, and Hoyt's method. The Analysis of Variance algorithm suggested by Hoyt was utilized to test the reliability of the instrument. Hoyt says "... this method of estimating the reliability of a test gives a better estimate than any method based upon an arbitrary division of the test into halves or into any other fractional parts."*4 Thorndike has also recommended the analysis of variance method for the reliability test, saying this "One great virtue of analysis of variance models is their built-in versatility. They can handle item responses that are scored 0 or 1"*5 which is the mode utilized in the instrument developed for this study.

*3 Anastasi, Psychological Testing, p. 71.
*5 Thorndike, "Reliability," p. 290.
Hoyt defines the coefficient of reliability as "the percentage of the obtained variance in the distribution of test score that may be regarded as true variance."

Simply, reliability is the ratio of true variance (total minus error) to total variance. The reliability coefficient may be expressed as:

\[ r_{tt} = \frac{a_t - a_d}{a_t} = 1 - \frac{a_d}{a_t} \]

where \( a_t \) = variance of obtained score
\( a_d \) = discrepancy between obtained and true score

However, the results obtained from Hoyt's formula are identical with KR20 and Cronbach's Alpha.

The Laboratory of Educational Research Test Analysis Package (LERTAP) presents a computer package which offers a test reliability as well as a test item analysis. The LERTAP program uses Hoyt's algorithm for estimating the reliability of test based on Analysis of Variance. This LERTAP program was utilized to test the reliability of the instrument.

Thus far are explained the procedures of: (1) Developing an instrument which is called "Client Readiness,"

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and (2) Evaluating the instrument in terms of validity (content and construct) and reliability by Hoyt's method. Next, the procedures will be explained on (3) Sampling the subjects for this study and data collection from them using the developed instrument, and (4) Testing two hypotheses for this study.
Sample Selection & Data Collection

The population for this study comprised only the residents of substance abuse treatment centers which were under the auspices of the Wayne County Department of Social Services (WCDSS). There are presently fourteen such centers in Wayne County, Michigan. As of January 1983, a report from WCDSS shows that in Wayne County there are approximately 700 cases (residents) which includes a turnover of about 200 every month. These cases are adult residents (both male and female) who have alcoholic or drug related problems and receive social services, with different levels and amounts of social work counseling depending upon the characteristics of the treatment centers.

These fourteen substance abuse treatment centers in the Wayne County area are privately administered by their own directors. All fourteen directors were contacted and asked to participate in this study. Directors of twelve of the fourteen centers agreed to take part in it. The residents of those centers were then given a brief explanation of the purpose of the study. Those residents who agreed to participate with this study were asked to complete the questionnaire at their regular counseling sessions during the Summer of 1983. In addition, selected patients from Henry Ford Hospital Substance Abuse Treatment program were also included in this study. These patients met all the criteria of the population of this study except that their treatments were not subsidizied by the Department of Social
Services but by private insurance. At the end of September, 1983, data on 313 cases were collected.
Testing Hypotheses

The major objectives of the study are to test the following two hypotheses: \( H_{r1} \) and \( H_{r2} \).

\( H_{r1} \): Research Hypothesis: There are several common factors affecting client readiness for accepting social work services. They are:
1. Commitment to change.
2. Belief in self and the social worker.
3. Support from family and others.
4. Knowledge of social work.
5. Past experience with social work services.
6. Resistance to social work services and change.

\( H_{01} \): Statistical Null Hypothesis: There are no measurable common factors affecting client readiness for accepting social work services.

The above hypothesis was designed to test the presence of the factors affecting client readiness for social work services. For testing the hypothesis, factor analysis was employed to determine the respective strength of the various factors underlying the client readiness. Among the most common applications of the factor analysis are 1) exploratory uses, 2) confirmatory uses, and 3) uses as a measuring device;" in this case factor analysis is employed for the confirmatory uses, as it is aimed at testing the hypothesis relating to the six postulated factors. Based on the literature on factor analysis in Statistical Package for

the Social Science (SPSS)\textsuperscript{100} and in Foundations of Behavioral Research,\textsuperscript{101} the following decisions were made.

1) Rao's canonical factoring was chosen as the best method for testing the hypothesized factors.

2) Varimax rotation was used because it minimizes factor complexity and maximizes the variances of loading in columns.

3) Numbers of the factors were set to six because this study is hypothesized to have six factors which would be examined in depth.

The factor analysis program in SPSS was utilized for the testing research hypothesis $H_{r1}$.

$H_{r2}$: Research Hypothesis: Among factors which are found to exist, some factors contribute more than others to client readiness for accepting social work services.

$H_{02}$: Statistical Null Hypothesis: The factors which are found to exist contribute equally to client readiness for accepting social work services.

The designed hypothesis is to test the order and strength of the factors affecting client readiness for social work services. This is to find which factor contributes more to the explanation of client readiness. For testing this hypothesis, multiple regression analysis in SPSS was employed to find the order and degree to which each factor variance accounted for the criterion, client readiness. Stepwise inclusion was considered to find the order of the factors which enter into the regression equation.

\textsuperscript{100}Ibid., pp. 468-514.

Testing this $H_{r2}$ is mainly dependent upon the findings of $H_{r1}$. Predictor variables for the multiple regression were identified as the six factors extracted from the factor analysis in $H_{r1}$. The predictor variables ($X$s) depended upon the identified variables (test items) in each factor. The criterion variable for the multiple regression was generated by the same factors extracted from the factor analysis done in $H_{r1}$. The criterion variable ($Y$) was composed of raw scores of 31 item variables from the factors extracted from the primary factor analysis.
Chapter IV

FINDINGS

Interpretations

Data analysis yielded information in three dimensions: findings on the instrument, on the subjects, and on the hypotheses. This section will be devoted mainly to these three areas. First, the instrument, "Readiness for Social Work Services," which was developed for this study was examined in terms of its reliability and validity. Second, the subjects of this study - substance abuse clients - were reviewed with regard to their demographic status. Last, Hypothesis I \( (H_{r1}) \) was tested by using factor analysis in SPSS and Hypothesis II \( (H_{r2}) \), by multiple regression analysis.

Findings on the Instrument

Validity

Content validity using "Expert method" was established in the process of developing the instrument. The items of the questionnaire were first constructed by modifying an existing questionnaire "Medical Treatment Readiness Questionnaire". New items were also constructed in keeping with the purposes of this study. The items of the questionnaire were, then, broken down into six hypothesized factors.

Experts in the theory and practice of social work were consulted to examine the factors and the items against each factor in terms of: 1) operational definitions of each of
the six hypothesized factors, 2) item relevancy to the defined factors, and 3) test item format.

The experts' suggestions and opinions were incorporated in the final instrument. The aim was to achieve factors properly defined and adequately reflecting the domain as defined by the test items.

The construct validity of the instrument was examined in view of testing the hypotheses of this study. Studer defines construct validity and she further explains that ".. construct validity is subsumed within the theory building process thus requiring the theoretician at some point to make explicit not only what specific constructs mean but how they are related to one another." Hypothesis I (H₁) in this study deals with what factors underlying the readiness and Hypothesis II (H₂) deals with how the factors relate to one another. Because of the way the hypotheses of the study have been framed, construct validity was examined as the hypotheses themselves were tested.

Ibid., p. 66.
Reliability

The reliability of the instrument was tested by utilizing LERTAP program, a computerized test analysis package.

The outcomes of the LERTAP program for the total test are shown in Table 1.

**TABLE 1**
The Outcomes of the LERTAP Program

<table>
<thead>
<tr>
<th>SOURCE OF VARIANCE</th>
<th>D.F.</th>
<th>S.S.</th>
<th>M.S.</th>
</tr>
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<tr>
<td>INDIVIDUALS</td>
<td>312.00</td>
<td>334.23</td>
<td>1.07</td>
</tr>
<tr>
<td>ITEMS</td>
<td>77.00</td>
<td>793.98</td>
<td>10.31</td>
</tr>
<tr>
<td>RESIDUAL</td>
<td>24024.00</td>
<td>3767.60</td>
<td>0.16</td>
</tr>
<tr>
<td>TOTAL</td>
<td>24413.00</td>
<td>4895.80</td>
<td>0.20</td>
</tr>
</tbody>
</table>

HOYT ESTIMATE OF RELIABILITY = 0.85
STANDARD ERROR OF MEASUREMENT = 3.48
NO. SUBTESTS WITH NON-ZERO WT = 6.00
CRONBACH'S ALPHA FOR COMPOSITE = 0.78

Stanley points out the results obtained from Hoyt's Formula are identical with those from Cronbach's Alpha. Nelson also mentions that Hoyt's formula and Cronbach's Alpha produce the same value. However, the reliability test using the LERTAP program yielded two different results for Hoyt's formula and Cronbach's Alpha as noted in Table 1.

The reason the value of Cronbach's Alpha is lower than the Hoyt's reliability coefficient is that Cronbach's Alpha

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104 Nelson, Ibid., p.276.
represents the internal consistency reliability index among the six subtests. The six subtests are supposedly measuring six different domains of client readiness for change. Nelson explains clearly regarding this same situation as "One can, in fact, have items which are both reliable and valid yet have a low 'internal consistency' reliability index. This will happen when the test items are measuring different traits."10*

This instrument exhibits the same phenomenon as that on which Nelson commented, namely Cronbach's Alpha value is expected to be lower than Hoyt's, because the instrument includes measurement of six different domains. In this case, therefore, the indices of Hoyt's reliability coefficient which is 0.85 would be referenced because the instrument was designed to measure different factors underlying the client readiness in social work services.

The coefficients of reliability for the whole instrument and each of the six hypothesized factors (subtests) are reported by means of Hoyt's algorithm in Table 2.

According to the Guidelines for Test Use,10* reliability coefficients on many standardized maximal performance tests are .85 - .90 or higher. But for original instruments, .80 or better is promising. A lower level of reliability may be tolerated when the test is used to interpret only group

10*Ibid., pp. 298-299.
10*Brown, Guidelines for Test Use, p. 69.
### TABLE 2

<table>
<thead>
<tr>
<th>Instrument &quot;Client Readiness&quot;</th>
<th>Reliability Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole Test</td>
<td>.85</td>
</tr>
<tr>
<td>Subtests (Factors)</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>.58</td>
</tr>
<tr>
<td>II</td>
<td>.66</td>
</tr>
<tr>
<td>III</td>
<td>.61</td>
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<tr>
<td>IV</td>
<td>.53</td>
</tr>
<tr>
<td>V</td>
<td>.67</td>
</tr>
<tr>
<td>VI</td>
<td>.54</td>
</tr>
</tbody>
</table>

means. However, in the section on Reliability, the Encyclopedia of Educational Research states that "In basic research a good working rule is that the reliability coefficient should be at least .70." Accordingly, noting 0.85 by Hoyt's reliability coefficient, the instrument developed for this study has attained a satisfactory level of reliability.

Findings on the Subjects

The data for this study is from the information obtained from 21 patients of Henry Ford Hospital, Alcohol and Drug Treatment Center and 292 adult residents of twelve substance abuse treatment centers in Wayne County. The twelve treatment centers which are involved in this study are financed jointly by OSAS (Office of Substance Abuse Services of Michigan Department of Public Health) which administers public funds for substance abuse treatment services and DSS (Department of Social Services) which administers State funds for residents living expenses. OSAS establishes technical assistance for program development, administration, prevention, evaluation, and planning for those centers. DSS is responsible for the health and financial services for the residents. However, these centers are private agencies and operate their own programs independently. Some centers provide long-term (over six months) residential care while other centers provide only two-weeks of intensive treatment program; some centers provide services for female or male only while others are coeducational or are extended even to the family. Those 313 respondents, however, are all receiving counseling as a part of the treatment plan for their drug or alcohol related problems.

From the data collected, it was found that the majority of the subjects of this study were black, single males,
between the ages of 31-45, who had earned a high school diploma. Data are provided in Table 3.

### TABLE 3

#### Demographic Information on the Subjects

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<thead>
<tr>
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<tr>
<td>18-30</td>
<td>126</td>
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<tr>
<td>31-45</td>
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<tr>
<td>Over</td>
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<td>12.8</td>
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<td>8</td>
<td>2.6</td>
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<tr>
<td>Total</td>
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<td>100.0</td>
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</table>

<table>
<thead>
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<th>Pct</th>
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<tr>
<td>Black</td>
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<td>56.9</td>
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<tr>
<td>White</td>
<td>116</td>
<td>37.1</td>
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<td>Hispanic</td>
<td>7</td>
<td>2.2</td>
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<tr>
<td>Other</td>
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<td>1.3</td>
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<tr>
<td>Missing</td>
<td>8</td>
<td>2.6</td>
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<table>
<thead>
<tr>
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<td>Female</td>
<td>42</td>
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<tr>
<td>Other</td>
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<td>0.3</td>
</tr>
<tr>
<td>Missing</td>
<td>23</td>
<td>7.3</td>
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<tr>
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<tr>
<td>Married</td>
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<tr>
<td>Separated</td>
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<tr>
<td>Divorced</td>
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<tr>
<td>Widowed</td>
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<td>2.6</td>
</tr>
<tr>
<td>Missing</td>
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<td>2.6</td>
</tr>
<tr>
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<table>
<thead>
<tr>
<th>Education</th>
<th>Freq</th>
<th>Pct</th>
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<td>116</td>
<td>37.1</td>
</tr>
<tr>
<td>13</td>
<td>23</td>
<td>7.3</td>
</tr>
<tr>
<td>14</td>
<td>26</td>
<td>8.3</td>
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<tr>
<td>15</td>
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<td>7</td>
<td>2.2</td>
</tr>
<tr>
<td>17</td>
<td>1</td>
<td>0.3</td>
</tr>
<tr>
<td>Missing</td>
<td>15</td>
<td>4.8</td>
</tr>
<tr>
<td>Total</td>
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<td>100.0</td>
</tr>
</tbody>
</table>
It was found that most of the subjects (61 percent) receive counseling more than twice a week. However, 18 respondents (5 percent) reported that they presently receive counseling once a month. It was also found that respondents are involved with the counseling in various levels. Table 4 gives a breakdown of the data and shows the length and frequency of counseling for various demographic categories.

A majority of the subjects (71 percent) have a high expectation of the treatment results, and only nine (3 percent) of the subjects responded "None" to the question of "How much do you expect to be helped from the counseling?" The outcomes of the responses to the above questions are shown in Table 4.
### TABLE 4
Responses to Q6 and Q8

<table>
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<tr>
<th>CATEGORY</th>
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</thead>
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<tr>
<td>Once a Month</td>
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<td>5.8</td>
</tr>
<tr>
<td>Twice a Month</td>
<td>10</td>
<td>3.2</td>
</tr>
<tr>
<td>Once a Week</td>
<td>70</td>
<td>22.4</td>
</tr>
<tr>
<td>Twice a Week</td>
<td>85</td>
<td>27.2</td>
</tr>
<tr>
<td>Everyday</td>
<td>106</td>
<td>33.9</td>
</tr>
<tr>
<td>Missing</td>
<td>24</td>
<td>7.7</td>
</tr>
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<td><strong>Total</strong></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>FREQ</th>
<th>PCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>For a Week</td>
<td>64</td>
<td>20.4</td>
</tr>
<tr>
<td>For a Month</td>
<td>52</td>
<td>16.6</td>
</tr>
<tr>
<td>More than a Month</td>
<td>94</td>
<td>30.0</td>
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<tr>
<td>More than 6 Months</td>
<td>71</td>
<td>22.7</td>
</tr>
<tr>
<td>Missing</td>
<td>32</td>
<td>10.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>313</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>FREQ</th>
<th>PCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>9</td>
<td>2.9</td>
</tr>
<tr>
<td>A Little</td>
<td>58</td>
<td>18.5</td>
</tr>
<tr>
<td>A Lot</td>
<td>223</td>
<td>71.2</td>
</tr>
<tr>
<td>Missing</td>
<td>23</td>
<td>7.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>313</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Findings on Hypothesis I

$H_{r1}$: There are several common factors affecting client readiness for accepting social work services. They are:
1. Commitment to change.
2. Belief in self and the social worker.
3. Support from family and others.
4. Knowledge of social work.
5. Past experience with social work services.
6. Resistance to social work services and change.

$H_{01}$: There are no measurable common factors affecting client readiness for accepting social work services.

Rao's canonical factoring was used to examine the 78 variables (13 items for each factor.) Six factors were extracted and their loadings, eigenvalues and communalities are presented in Table 5. The rotated (varimax) factor matrix, communalities, and eigenvalues are shown in Table 6. The reason for the rotation is that the rotated factors were found to give a simplified and meaningful pattern to the variables. The values of the communalities and eigenvalues are included in the tables because they are accounted for by the combination of all common factors and are useful for interpretation of the factor patterns. The communalities are generated by summation of the squares of each row of the regression coefficient: The eigenvalues are generated by summation of the squares of each factor column of the regression coefficient.

A number of decisions may be made for the interpretations of the factor loadings in factor analysis.

The factor loadings of this study, as shown in the Tables 5 and 6, tend to diminish in magnitude progressively
so that factor loadings after factor I were considered to be relative. The variables (items) which have factor loadings of .5 or more are generally considered in the interpretation of the nature of the factor. In some cases, however, variables whose factor loadings are less than .5 but at least more than .3 are also included in the interpretation. The criterion value of factor loadings, e.g., .5 or .3, was determined by considering Thurstone and Fruchter's suggestions. Thurstone says "A projection is not considered as significant in naming a factor unless it is as large as .4." However, Fruchter observes that "Factor loadings of .2 or less are usually regarded as insignificant; loadings of .2 - .3 as low; .3 - .5 as moderate; .5 - .7 as high and above .7 as very high." 

In short, items whose factor loadings are considered relatively high, but those with values of at least .3 and over were sorted out to be included for interpretation.

10"L. L. Thurstone, Primary Mental Abilities, (Chicago: University of Chicago Press, 1938), Ch. 5.

<table>
<thead>
<tr>
<th>FACTOR 1</th>
<th>FACTOR 2</th>
<th>FACTOR 3</th>
<th>FACTOR 4</th>
<th>FACTOR 5</th>
<th>FACTOR 6</th>
<th>COMMUNALITY</th>
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<td>0.34453</td>
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<td>0.07933</td>
<td>0.17460</td>
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<tr>
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</tr>
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<td>-0.02792</td>
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<td>0.03724</td>
<td>-0.12311</td>
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<tr>
<td>-0.10073</td>
<td>0.21896</td>
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<td>0.09041</td>
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<td>0.12619</td>
<td>0.15543</td>
<td>-0.02380</td>
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<td>0.01222</td>
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<td>0.14438</td>
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<td>-0.02195</td>
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<td>FACTOR 4</td>
<td>FACTOR 5</td>
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<td>COMMUNALITY</td>
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<td>-0.03650</td>
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<td>-0.08271</td>
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<td>0.12026</td>
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<td>-0.02147</td>
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<td>0.01460</td>
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<td>0.06289</td>
<td>0.39767</td>
</tr>
<tr>
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<td>-0.01126</td>
<td>-0.08246</td>
<td>-0.11848</td>
<td>0.12713</td>
</tr>
<tr>
<td>0.65002</td>
<td>0.03326</td>
<td>-0.20524</td>
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<td>0.09520</td>
<td>0.02452</td>
<td>0.48403</td>
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<tr>
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<td>-0.17776</td>
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<td>0.13320</td>
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<td>0.09976</td>
<td>0.23063</td>
<td>0.07613</td>
<td>-0.0405</td>
<td>-0.00053</td>
<td>0.20460</td>
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<tr>
<td>0.17796</td>
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<tr>
<td>-0.09036</td>
<td>0.28511</td>
<td>0.15696</td>
<td>-0.07213</td>
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<td>0.17428</td>
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<tr>
<td>0.13214</td>
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<td>0.79244</td>
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<td>0.13432</td>
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<td>-0.03702</td>
<td>0.02166</td>
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<td>EIGENVALUE</td>
<td>6.83813</td>
<td>3.94068</td>
<td>3.51063</td>
<td>2.76792</td>
<td>3.08334</td>
<td>4.06674</td>
</tr>
</tbody>
</table>
**Factor I: "Belief in Counseling"**

The first factor was so extracted that there are loadings which are significant on each variable. It was noted that 23 variables (29 percent) have loadings of over .3; fifteen variables have loadings of over .4; and, eight variables have loadings of over .5.

It was decided for Factor I that only variables which have loadings of .5 and over would be included in the interpretation. In Table 7, eight variables which have factor loadings of .5 and over from the Varimax rotated matrix (Table 6) are listed in the order of the absolute value of their respective factor loadings.

Four of the eight variables (Q51, Q07, Q75, and Q34) were found to belong to the factor hypothesized as "Belief." The other four variables of Q31, Q40, Q69, and Q57 seem to reflect faith or confidence in counseling or in the counselor in common. Hence, these eight variables which have been identified as Factor I have been named "Belief in Counseling." This factor contributes 38.9 percent of the total variance.
<table>
<thead>
<tr>
<th>No</th>
<th>Item Contents</th>
<th>Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>51</td>
<td>I am very confident that counseling will help me.</td>
<td>+.73</td>
</tr>
<tr>
<td>07</td>
<td>I have a lot of confidence in professional counseling.</td>
<td>+.66</td>
</tr>
<tr>
<td>69</td>
<td>With counseling I will be able to lead a better life.</td>
<td>+.66</td>
</tr>
<tr>
<td>75</td>
<td>I have faith in the counselor.</td>
<td>+.65</td>
</tr>
<tr>
<td>57</td>
<td>I feel good when I talk to a counselor.</td>
<td>+.62</td>
</tr>
<tr>
<td>40</td>
<td>I have learned that my kind of problem can be solved through counseling.</td>
<td>+.69</td>
</tr>
<tr>
<td>34</td>
<td>I don't trust counselors.</td>
<td>-.55</td>
</tr>
<tr>
<td>31</td>
<td>I am going to follow my counselor's suggestions.</td>
<td>+.52</td>
</tr>
</tbody>
</table>
Factor II: "Feeling Toward Counseling"

The second factor was extracted so that four variables loaded higher than .5; and, these are listed in the order of their loading values in Table 8.

Three of the four variables (Q18, Q37, and Q67) highly loaded in the second factor were found to belong to the factor which was hypothesized as "Resistance." Furthermore, it can be seen that the variables highly loaded (over .3) on the second factor appear to have a common underlying perspective, that is, negative feelings towards the counselor or counseling.

Factors I and II seem to measure related aspects of human feelings. However, variables highly loaded in Factor I appear to be more related to confidence and trust in the counselor, while variables highly loaded in Factor II seem to be more related to liking or disliking the counselor and counseling.

Hence, Factor II is named "Feelings toward Counseling." This factor contributes 18.3 percent of the total variance.

TABLE 8

Factor II: "Feelings toward Counseling"

<table>
<thead>
<tr>
<th>No</th>
<th>Item Contents</th>
<th>Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>37</td>
<td>I am embarrassed by the counseling.</td>
<td>+.65</td>
</tr>
<tr>
<td>67</td>
<td>I don't feel comfortable telling my problem to the counselor.</td>
<td>+.60</td>
</tr>
<tr>
<td>09</td>
<td>I often feel hesitant about meeting a counselor.</td>
<td>+.51</td>
</tr>
<tr>
<td>18</td>
<td>Going through counseling makes me feel terrible.</td>
<td>+.51</td>
</tr>
</tbody>
</table>
Factor III: "Awareness of Change & Problems"

The third factor was so extracted that only two variables have loadings of .5 and over; seven variables have loadings of .45 and over, and the loadings of the remaining variables fall below .35. It was decided to consider the variables which have loadings of .45 and over for the interpretation; these are listed in Table 9.

This factor seems to be bifurcated in representing the common concepts. Variables of Q63, Q59, and Q2 address client's perception of and ability to change; while variables of Q3, Q53, and Q56 address the client's awareness of problem and the feelings about the problem. All the variables, except Q17, generally are concerned with the client's adaptability and problem awareness.

The common underlying concepts of these seven variables have been difficult to pinpoint in Factor III. However, it has been named "Awareness of Change and Problems." This factor contributes 14.3 percent of the total variance.

**TABLE 9**

Factor III: "Awareness of Change and Problem"

<table>
<thead>
<tr>
<th>No</th>
<th>Item Contents</th>
<th>Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>63</td>
<td>It is easy for me to change.</td>
<td>+.56</td>
</tr>
<tr>
<td>59</td>
<td>In the past, change has been very difficult for me.</td>
<td>+.53</td>
</tr>
<tr>
<td>03</td>
<td>My problem does not bother me.</td>
<td>-.50</td>
</tr>
<tr>
<td>56</td>
<td>I am not very worried about my problem.</td>
<td>+.49</td>
</tr>
<tr>
<td>17</td>
<td>I have dropped out of counseling before.</td>
<td>-.48</td>
</tr>
<tr>
<td>02</td>
<td>I have always been able to change easily.</td>
<td>+.48</td>
</tr>
<tr>
<td>53</td>
<td>My problem is too serious to ignore.</td>
<td>-.45</td>
</tr>
</tbody>
</table>
Factor IV: "Family Support"

Table 10 lists the variables that contribute relatively highly to the common variance of the fourth factor. Since this is the fourth factor, it has considerably lower loadings on each variable.

As indicated in Table 10, only six variables have loadings greater than .3. However, the underlying common concepts within this factor are clearcut, and all share in the nature of the factor hypothesized as "Support." Furthermore, each variable highly loaded in this factor included a reference to "family," while variables relating to non-family support systems dropped out of the consideration due to their non-significant loadings.

Hence, this factor has been named "Family Support."

This factor contributes 12.4 percent of total variance.

TABLE 10

Factor IV: "Family Support"

<table>
<thead>
<tr>
<th>No</th>
<th>Item Contents</th>
<th>Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>77</td>
<td>If I need to make changes in my life to solve my problem, my family will help.</td>
<td>.79</td>
</tr>
<tr>
<td>58</td>
<td>My family will help me to follow my counseling.</td>
<td>.74</td>
</tr>
<tr>
<td>35</td>
<td>My family is very supportive of me.</td>
<td>.66</td>
</tr>
<tr>
<td>12</td>
<td>My family doesn't take my problem seriously.</td>
<td>-.48</td>
</tr>
<tr>
<td>47</td>
<td>With counseling I can contribute more to my family.</td>
<td>.35</td>
</tr>
<tr>
<td>28</td>
<td>I have people to turn to for emotional support.</td>
<td>.32</td>
</tr>
</tbody>
</table>
Factor V: "Denial"

The fifth factor has one variable loaded greater than .5 and three greater than .4. Table 11 shows the variables that correlate highly on this factor.

The nature of this factor would appear to be "resistance" or "denial." Each of these variables indicated somewhat similar psychological traits of negative reaction toward counseling or change.

The second factor also expressed results concerning the negative aspects of change and of feeling toward the counselor. The difference between this factor and the second factor appears to be that Factor II pertains to the resistance in the feelings and emotions of the client while this fifth factor pertains to resistance in the willingness and commitment part of the mind.

The underlying concept of this factor seems to be denial or resistance due to poor image or knowledge of counseling or the counselor. It is accordingly named "Denial." This factor contributes 8.8 percent of the total variance.

TABLE 11

Factor V: "Denial"

<table>
<thead>
<tr>
<th>No</th>
<th>Item Contents</th>
<th>Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>I will not gain anything by changing in the way the counselor suggests.</td>
<td>.53</td>
</tr>
<tr>
<td>60</td>
<td>I am unable to do anything for myself.</td>
<td>.48</td>
</tr>
<tr>
<td>22</td>
<td>Counseling has not help me before, so I do not know why it should now.</td>
<td>.48</td>
</tr>
<tr>
<td>06</td>
<td>I am too set in my ways to change.</td>
<td>.41</td>
</tr>
</tbody>
</table>
Factor VI.: "Sense of Need for Counseling"

The sixth factor is the last one to be extracted. Two variables are loaded as high as .6. However, there is no other variable that can be found loaded over .3. Table 12 shows the two variables with their loadings.

The only common concepts of these two variables seem to be the ultimate sense of need for counseling. There are no other variables which provide a place for the expression of as strong a sense of desperation as these two variables. That may be the reason there are no others with similarly high loadings.

Two variables seem scarcely enough for purposes of naming a factor; however, they both have very high loadings different from the rest of the variables, and both have an urgent sense of need for counseling. Hence, this factor is named "Sense of Need for Counseling." This factor contributes 7.1 percent of the total variance.

TABLE 12

<table>
<thead>
<tr>
<th>No</th>
<th>Item Contents</th>
<th>Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td>Having counseling is the only way to solve my problem.</td>
<td>+.69</td>
</tr>
<tr>
<td>36</td>
<td>My problem can only be solved through counseling.</td>
<td>+.63</td>
</tr>
</tbody>
</table>
The six factors thus far extracted and explained were found to have contours similar to the six hypothesized factors. In Table 13, the numbers of the significant variables in the hypothesized factors are listed in relation to the six extracted factors.

From Table 13, it was suggested that each hypothesized factor seems to include more than one concept in its nature. This finding led to a question of the construct validity of each factor. Factor analyses for each factor were conducted to test the validity.

Principal factoring was conducted for the thirteen variables of each hypothesized factor. Quartimax rotation produced satisfactory clearance for the loadings, and two subfactors were extracted for each factor.

The thirteen variables in the "Commitment" factor seem to present only one significant factor. Variables which have loadings of as high as .4 and over are Q1, Q19, Q30, Q33, and Q66. The second factor has only one variable which loaded as high as .51 and none shows any significance. Table 14 shows the thirteen variables and their factor loadings. Table 13, however, indicates that variables in "Commitment" factor seem to be loaded highly in Factors I and III.

The "Belief" factor (Factor I) seems to be divided into two parts: one is the Belief in Counselor and Counseling in the variables of Q34, Q75, and Q51; and the other is the Belief in Self in the variables of Q20 and Q52. Table 15
<table>
<thead>
<tr>
<th>Factors</th>
<th>Commitment</th>
<th>Belief</th>
<th>Knowledge</th>
<th>Past Experience</th>
<th>Support</th>
<th>Resistance</th>
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<tr>
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<td>4</td>
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<td>0</td>
<td>0</td>
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<tr>
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<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
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<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>IV</td>
<td>.3 (6)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>V</td>
<td>.4 (4)</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>VI</td>
<td>.6 (2)</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Totals (31)</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>6</td>
</tr>
</tbody>
</table>
shows their loadings in each of the two subfactors and communalities. Table 13 indicates that the "Belief" factor significantly relates to Factor I and loads one variable highly on Factors II and V respectively.

The "Knowledge" factor also seems to have two subfactors: One, for Belief in the Benefit of Counseling in the variables of Q25, Q43, and Q69; and, the other, for knowledge of Absolute Benefit of Counseling in Q48 and Q36. Table 16 shows loadings in both subfactors. In relation to the extracted factors, the "Knowledge" factor seems to be divided into Factors I, V, and VI (Table 13).

The "Past Experience" factor loaded highly on both subfactors. Subfactor I has Q32 and Q26 highly loaded and subfactor II has Q17 and Q55 highly loaded. Table 17 shows their loadings in both subfactors. However, it is not clear what contribution these make to the nature of the each subfactor and what are the common concepts, if any. In relation to the extracted factors, the "Past Experience" factor has high loadings on Factors III and V (Table 13).

The "Support" factor seems to separate variables concerning "family" from other general support systems, especially from "friend." Table 18 shows clearly distinctions on factor loadings of both subfactors. Table 13 shows that variables of the "Support" factor are highly loaded only on Factor IV.

The "Resistance" factor seems to be divided into two subfactors: the first has five variables of Q10, Q18, Q61,
Q57, and Q67 loaded over .4, and these pertain to the Resistant Feelings and the second has four variables of Q54, Q56, Q57, and Q70 loaded as high as .4 and they pertain to Resistance in Problems (Table 19). However, variables of the "Resistance" factor seem to load highly on Factors II and III (Table 13). Tables 14, 15, 16, 17, 18, and 19 basically indicate that each factor may contain more than one dimension.
### TABLE 14
QUARTIMAX ROTATED FACTOR MATRIX: FACTOR I

<table>
<thead>
<tr>
<th>Q1</th>
<th>FACTOR 1</th>
<th>FACTOR 2</th>
<th>COMMUNALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.47112</td>
<td>-0.00693</td>
<td>0.22200</td>
<td></td>
</tr>
<tr>
<td>-0.15286</td>
<td>-0.33971</td>
<td>0.13877</td>
<td></td>
</tr>
<tr>
<td>0.08975</td>
<td>0.32016</td>
<td>0.11056</td>
<td></td>
</tr>
<tr>
<td>-0.43297</td>
<td>-0.13451</td>
<td>0.20556</td>
<td></td>
</tr>
<tr>
<td>0.53712</td>
<td>0.21943</td>
<td>0.33665</td>
<td></td>
</tr>
<tr>
<td>0.45667</td>
<td>-0.01797</td>
<td>0.20887</td>
<td></td>
</tr>
<tr>
<td>0.45858</td>
<td>0.04949</td>
<td>0.21274</td>
<td></td>
</tr>
<tr>
<td>0.15304</td>
<td>0.29307</td>
<td>0.10931</td>
<td></td>
</tr>
<tr>
<td>0.24321</td>
<td>0.51523</td>
<td>0.32461</td>
<td></td>
</tr>
<tr>
<td>-0.08006</td>
<td>0.24438</td>
<td>0.06613</td>
<td></td>
</tr>
<tr>
<td>0.38097</td>
<td>0.29511</td>
<td>0.23223</td>
<td></td>
</tr>
<tr>
<td>-0.53702</td>
<td>0.11179</td>
<td>0.30089</td>
<td></td>
</tr>
<tr>
<td>-0.22483</td>
<td>0.44846</td>
<td>0.25166</td>
<td></td>
</tr>
</tbody>
</table>

Eigenvalue 1.72124 0.99874

### TABLE 15
QUARTIMAX ROTATED FACTOR MATRIX: FACTOR II

<table>
<thead>
<tr>
<th>Q4</th>
<th>FACTOR 1</th>
<th>FACTOR 2</th>
<th>COMMUNALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.02200</td>
<td>0.61714</td>
<td>0.38135</td>
<td></td>
</tr>
<tr>
<td>0.57948</td>
<td>-0.09299</td>
<td>0.34444</td>
<td></td>
</tr>
<tr>
<td>-0.21920</td>
<td>0.34707</td>
<td>0.16850</td>
<td></td>
</tr>
<tr>
<td>0.05083</td>
<td>0.57629</td>
<td>0.33470</td>
<td></td>
</tr>
<tr>
<td>0.02427</td>
<td>0.31202</td>
<td>0.09795</td>
<td></td>
</tr>
<tr>
<td>-0.65766</td>
<td>0.02581</td>
<td>0.43318</td>
<td></td>
</tr>
<tr>
<td>-0.26297</td>
<td>-0.01583</td>
<td>0.06940</td>
<td></td>
</tr>
<tr>
<td>0.31009</td>
<td>-0.00932</td>
<td>0.09624</td>
<td></td>
</tr>
<tr>
<td>0.68499</td>
<td>-0.01770</td>
<td>0.46229</td>
<td></td>
</tr>
<tr>
<td>0.19640</td>
<td>-0.47189</td>
<td>0.26125</td>
<td></td>
</tr>
<tr>
<td>-0.12028</td>
<td>0.15106</td>
<td>0.03729</td>
<td></td>
</tr>
<tr>
<td>-0.25592</td>
<td>0.07001</td>
<td>0.07039</td>
<td></td>
</tr>
<tr>
<td>0.73845</td>
<td>-0.01715</td>
<td>0.54560</td>
<td></td>
</tr>
</tbody>
</table>

Eigenvalue 2.11838 1.19144
### Table 16

**Quartimax Rotated Factor Matrix: Factor III**

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q11</td>
<td>-0.45192</td>
<td>0.16903</td>
<td>0.23280</td>
</tr>
<tr>
<td>Q13</td>
<td>0.42194</td>
<td>0.18846</td>
<td>0.21355</td>
</tr>
<tr>
<td>Q25</td>
<td>-0.56144</td>
<td>-0.07825</td>
<td>0.32134</td>
</tr>
<tr>
<td>Q27</td>
<td>0.41940</td>
<td>0.23679</td>
<td>0.23197</td>
</tr>
<tr>
<td>Q29</td>
<td>-0.43370</td>
<td>0.03099</td>
<td>0.18905</td>
</tr>
<tr>
<td>Q36</td>
<td>0.13306</td>
<td>0.80338</td>
<td>0.66313</td>
</tr>
<tr>
<td>Q40</td>
<td>0.37877</td>
<td>0.39460</td>
<td>0.29918</td>
</tr>
<tr>
<td>Q43</td>
<td>-0.54055</td>
<td>-0.01736</td>
<td>0.29249</td>
</tr>
<tr>
<td>Q48</td>
<td>0.14754</td>
<td>0.66371</td>
<td>0.46229</td>
</tr>
<tr>
<td>Q49</td>
<td>0.08138</td>
<td>0.23680</td>
<td>0.06270</td>
</tr>
<tr>
<td>Q68</td>
<td>0.04643</td>
<td>0.02513</td>
<td>0.00279</td>
</tr>
<tr>
<td>Q69</td>
<td>0.65367</td>
<td>0.30349</td>
<td>0.51938</td>
</tr>
<tr>
<td>Q76</td>
<td>-0.18690</td>
<td>0.12235</td>
<td>0.04990</td>
</tr>
</tbody>
</table>

Eigenvalue

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2.00760</td>
<td>1.53296</td>
<td></td>
</tr>
</tbody>
</table>

### Table 17

**Quartimax Rotated Factor Matrix: Factor IV**

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2</td>
<td>0.05645</td>
<td>-0.47275</td>
<td>0.22668</td>
</tr>
<tr>
<td>Q17</td>
<td>-0.12408</td>
<td>0.70415</td>
<td>0.51123</td>
</tr>
<tr>
<td>Q22</td>
<td>-0.43889</td>
<td>0.06790</td>
<td>0.19723</td>
</tr>
<tr>
<td>Q26</td>
<td>-0.67860</td>
<td>0.18502</td>
<td>0.49474</td>
</tr>
<tr>
<td>Q32</td>
<td>0.69076</td>
<td>0.06160</td>
<td>0.48094</td>
</tr>
<tr>
<td>Q38</td>
<td>-0.08375</td>
<td>-0.17580</td>
<td>0.03792</td>
</tr>
<tr>
<td>Q42</td>
<td>0.46172</td>
<td>0.00614</td>
<td>0.21322</td>
</tr>
<tr>
<td>Q44</td>
<td>0.28805</td>
<td>-0.06293</td>
<td>0.08694</td>
</tr>
<tr>
<td>Q45</td>
<td>-0.17159</td>
<td>0.34204</td>
<td>0.14643</td>
</tr>
<tr>
<td>Q55</td>
<td>0.01160</td>
<td>-0.59663</td>
<td>0.35610</td>
</tr>
<tr>
<td>Q59</td>
<td>-0.14521</td>
<td>0.43375</td>
<td>0.20922</td>
</tr>
<tr>
<td>Q74</td>
<td>0.26365</td>
<td>-0.12299</td>
<td>0.08464</td>
</tr>
<tr>
<td>Q78</td>
<td>0.21874</td>
<td>0.14992</td>
<td>0.07032</td>
</tr>
</tbody>
</table>

Eigenvalue

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.62005</td>
<td>1.49556</td>
<td></td>
</tr>
</tbody>
</table>
### Table 18

**Quartimax Rotated Factor Matrix: Factor V**

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q5</td>
<td>-0.17270</td>
<td>0.00407</td>
<td>0.02984</td>
</tr>
<tr>
<td>Q8</td>
<td>-0.23613</td>
<td>0.12658</td>
<td>0.07178</td>
</tr>
<tr>
<td>Q12</td>
<td>-0.52797</td>
<td>0.17339</td>
<td>0.30881</td>
</tr>
<tr>
<td>Q16</td>
<td>0.32328</td>
<td>0.37956</td>
<td>0.24858</td>
</tr>
<tr>
<td>Q21</td>
<td>-0.20866</td>
<td>-0.02573</td>
<td>0.04420</td>
</tr>
<tr>
<td>Q23</td>
<td>0.24312</td>
<td>-0.47295</td>
<td>0.28279</td>
</tr>
<tr>
<td>Q28</td>
<td>0.35378</td>
<td>-0.29372</td>
<td>0.21143</td>
</tr>
<tr>
<td>Q35</td>
<td>0.67955</td>
<td>-0.05035</td>
<td>0.46433</td>
</tr>
<tr>
<td>Q39</td>
<td>0.00480</td>
<td>0.27602</td>
<td>0.07621</td>
</tr>
<tr>
<td>Q47</td>
<td>0.49998</td>
<td>0.30394</td>
<td>0.34236</td>
</tr>
<tr>
<td>Q58</td>
<td>0.79336</td>
<td>0.09668</td>
<td>0.63876</td>
</tr>
<tr>
<td>Q64</td>
<td>-0.34703</td>
<td>-0.03330</td>
<td>0.12154</td>
</tr>
<tr>
<td>Q77</td>
<td>0.76051</td>
<td>-0.01273</td>
<td>0.57853</td>
</tr>
</tbody>
</table>

Eigenvalue: 2.73669

### Table 19

**Quartimax Rotated Factor Matrix: Factor VI**

<table>
<thead>
<tr>
<th></th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q6</td>
<td>0.05497</td>
<td>0.00362</td>
<td>0.00303</td>
</tr>
<tr>
<td>Q10</td>
<td>0.53541</td>
<td>0.00797</td>
<td>0.28672</td>
</tr>
<tr>
<td>Q14</td>
<td>0.39546</td>
<td>-0.00689</td>
<td>0.15643</td>
</tr>
<tr>
<td>Q18</td>
<td>0.59773</td>
<td>0.04000</td>
<td>0.35888</td>
</tr>
<tr>
<td>Q37</td>
<td>0.61231</td>
<td>-0.02248</td>
<td>0.37542</td>
</tr>
<tr>
<td>Q54</td>
<td>0.28703</td>
<td>0.46501</td>
<td>0.29862</td>
</tr>
<tr>
<td>Q56</td>
<td>0.03485</td>
<td>-0.43106</td>
<td>0.18703</td>
</tr>
<tr>
<td>Q57</td>
<td>-0.43217</td>
<td>0.44546</td>
<td>0.38520</td>
</tr>
<tr>
<td>Q62</td>
<td>0.03357</td>
<td>-0.04037</td>
<td>0.00276</td>
</tr>
<tr>
<td>Q63</td>
<td>-0.10093</td>
<td>-0.26107</td>
<td>0.07835</td>
</tr>
<tr>
<td>Q67</td>
<td>0.68218</td>
<td>-0.11313</td>
<td>0.47816</td>
</tr>
<tr>
<td>Q70</td>
<td>-0.39272</td>
<td>0.47064</td>
<td>0.37573</td>
</tr>
<tr>
<td>Q73</td>
<td>0.15395</td>
<td>-0.30239</td>
<td>0.11514</td>
</tr>
</tbody>
</table>

Eigenvalue: 2.10326
Summary of Findings from Factor Analysis

Six factors were extracted from the Rao's canonical factor analysis of the 78 item variable matrix. The variables were rotated using Varimax rotation. The extracted factors seem to identify important aspects of readiness in counseling services.

Of the originally hypothesized six factors, the "Support" factor has demonstrated significant effects. All the variables loaded .3 and over on the fourth factor belong to this "Support" factor, and they are the six of the thirteen variables (items) in the "Support" factor.

The "Belief" factor also seemed to be significant as it was imposed upon the first extracted factor of "Belief"; four of the eight variables were highly loaded on this factor.

The original "Resistance" factor was also demonstrated to be significant as it loaded highly on the four extracted factors, and the concept of resistance can be found both in Factors II and V.

The underlying concepts of the originally hypothesized factors of "Commitment," "Past Experience," and "Knowledge" seemed to be intertwined, and new concepts appeared to be composed. Based upon the above analysis, \( H_{01} \) was basically rejected as findings indicate that there are different factors such as "Support," "Belief," and "Resistance" factors underlying the Readiness for Social Work Services.
The six newly extracted factors are "Belief in Counseling" (Factor I), "Feeling for Counseling" (Factor II), "Awareness of Change & Problems" (Factor III), "Family Support" (Factor IV), "Denial" due to poor knowledge (Factor V), and "Sense of Need for Counseling" (Factor VI).

The variables of these newly extracted factors are rearranged in terms of their significant values of loadings. Table 20 lists the factors with their highly loaded variables in the order of their eigenvalues.

**TABLE 20**

Extracted Factors and their highly loading Variables

<table>
<thead>
<tr>
<th>Factors</th>
<th>Items (Variables)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I (8)</td>
<td>Q07 Q31 Q34 Q40 Q51 Q57 Q69 Q75</td>
</tr>
<tr>
<td>II (4)</td>
<td>Q09 Q18 Q37 Q67</td>
</tr>
<tr>
<td>III (7)</td>
<td>Q02 Q03 Q17 Q53 Q56 Q59 Q63</td>
</tr>
<tr>
<td>IV (6)</td>
<td>Q12 Q28 Q35 Q47 Q58 Q77</td>
</tr>
<tr>
<td>V (4)</td>
<td>Q06 Q11 Q22 Q60</td>
</tr>
<tr>
<td>VI (2)</td>
<td>Q36 Q48</td>
</tr>
</tbody>
</table>

Following are the key words of the instrument items in the Table 20.

**Factor I: "Belief in Counseling"**
- Q07: confidence in counseling
- Q31: follow counselor's suggestions
- Q40: trust counselors
- Q40: problem can be solved through counseling
- Q51: counseling will help
- Q57: feel good talk to counselor
- Q69: with counseling lead better life
- Q75: faith in the counseling

**Factor II: "Feeling for Counseling"**
- Q09: hesitant meeting counselor
- Q18: counseling makes me feel terrible
- Q37: embarrassed by counseling
Q67: comfortable telling problem

Factor III: "Awareness of Change & Problems"
Q02: change easily
Q03: problem bothers me
Q17: dropped out of counseling
Q53: problem is too serious
Q56: worried about problem
Q59: change has been difficult
Q63: easy to change

Factor IV "Family Support"
Q12: family takes problem seriously
Q28: have people for emotional support
Q35: family very supportive
Q47: with counseling contribute more to family
Q58: family helps me follow counseling
Q77: to solve problem, family helps

Factor V: "Denial"
Q06: too set to change
Q11: not gain anything by changing
Q22: counseling has not helped, why now
Q60: unable to do anything

Factor VI: "Need for Counseling"
Q36: problem can be solved through counseling
Q48: counseling the only way to solve problem

The order of the factors in Table 20 may or may not be the order of the strength of the factors in accounting for the client readiness. Hypothesis II ought to be tested to examine the strength and order of each factor in relation to the criterion variable of client readiness.
Findings on the Hypothesis II

H<sub>r2</sub>: Among the variables which are found to exist in underlying client readiness, some factors contribute more to client readiness for social work services.

H<sub>02</sub>: The factors which are found to exist contribute equally to client readiness for social work services.

Multiple Regression in SPSS was used for testing H<sub>r2</sub>, but some clarification seems to be necessary before discussing the statistical procedure. The criterion variable, in this case "Client Readiness for Social Work Services," is defined here in the limited sense of the clients' mental states which were identified by six factors generated by the factor analysis in the process of testing Hypothesis I. In other words, "Client Readiness" is measured by the variables (items) highly loaded on the six factors which were extracted by factor analysis in view of testing Hypothesis I.

The six factors which are found to exist are identified as the predictor variables; in this case they are 1) "Belief," 2) "Feeling toward Counseling," 3) "Awareness of Change and Problems," 4) "Family Support," 5) "Denial," and 6) "Need." The variables (items) which have relatively high loading on each factor were identified as a component of the criterion (Table 20) and were included in the computation.

Multiple regression with a stepwise inclusion was used to analyze the relationship between a criterion, "Client Readiness" and a set of predictor variables, the six extracted factors.
With stepwise inclusion, "independent variables are entered only if they meet certain statistical criteria. The order of inclusion is determined by the respective contribution of each variable to explained variance." This means that the factor that explains the greatest amount of variance in the "Client Readiness" enters first into the regression equation; the factor that explains the next greatest amount of variance in conjunction with the first factor enters second, and so on.

The option of listwise deletion of missing data was used. With this option, any cases with missing values are automatically eliminated from all calculations. Therefore listwise deletion has the effect of reducing the number of cases upon which the regression coefficients are computed. However, this option produces the maximum confidence in regression statistics.

Data analysis from the multiple regression in SPSS identified Factor I as the factor which explains most of the variance in "Client Readiness." Table 21 shows the result of the analysis. The Factor I \( (x_1) \) in relation with the criterion variable of Client Readiness \( (Y) \) can be explained in terms of the regression equation.

\[
Y = 10.59 + 1.67x_1
\]

where \( Y \) = Criterion Variable--Client Readiness
10.59 = Constant (Table 21)
1.67 = B--unstandardized regression coefficient
\( x_1 \) = raw score

The criterion variable of Client Readiness is explained for 56 percent of its variance by Factor I which has been named "Belief in Counseling."

The factor entered on the second step was identified as Factor IV, "Family Support." The linear equation of Factor IV \((x_2)\) in conjunction with Factor I \((x_1)\) in relation to the criterion variable is:

\[
Y = 7.61 + 1.34x_1 + 1.11x_2
\]

Both Factors I and IV together account for 73 percent of the total variance of client readiness, and Factor IV alone accounts for 17 percent. Table 21 shows this analysis.

On the third step, Factor II called "Feeling toward Counseling," entered as the next most important factor in addition to the Factors I and IV. Together they account for 85 percent of the criterion variable of Client Readiness; Factor II alone explains 12 percent of its variance. The linear relationship between the criterion variable \((Y)\) and the predictors: Factor I \((x_1)\), Factor IV \((x_2)\) and Factor II \((x_3)\) is:

\[
Y = 5.43 + 1.78x_1 + 1.03x_2 + 1.22x_3
\]

Table 21 shows the regression analysis.

In conjunction with Factors I, IV, and II, Factor III - "Change" is next in accounting for the criterion variance. Together, they account for 92 percent of the total variance of the criterion, and this factor alone accounts for eight percent. The regression equation for these factors in relation with the criterion is:
\[ Y = 2.68 + 1.24x_1 + 1.04x_2 + 1.01x_3 + 0.93x_4 \]

Table 21 explains the analysis.

Factor VI, "Need", entered into the regression equation on the fifth step. This factor \(x_5\) in conjunction with Factor I \(x_1\), Factor IV \(x_2\), Factor II \(x_3\), and Factor III \(x_4\) accounts for 96 percent of the criterion variance and alone accounts for three percent. The regression equation of these factors in relation with the criterion is:

\[ Y = 2.55 + 1.12x_1 + 1.03x_2 + 1.07x_3 + 0.97x_4 + 0.89x_5 \]

Table 21 shows the fifth step of regression analysis.

The last factor entered in the regression equation is Factor V - "Denial." This factor contributes the least in explaining the total variance of the criterion and it explains alone only four percent of total variance. The regression equation containing all six factors was omitted here because the equation reached to the maximum level of explaining the criterion (Table 21). Predicting the criterion-- "Client Readiness" can be reached to the maximum level, because the criterion \(Y\) in this study has been identified as consisting of only those six factors \(Xs\).
Summary of Findings from Multiple Regression Analysis

Multiple regression with stepwise inclusion in SPSS was utilized to find out the relationship among the six extracted factors in relation to the criterion variable -- "Client Readiness." Table 22 shows the predictors (six extracted factors) in the order of their entrance to the regression analysis calculation and the percentage each factor accounts for.

<table>
<thead>
<tr>
<th>Table 22</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Factors</th>
<th>percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Belief in Counseling</td>
<td>56</td>
</tr>
<tr>
<td>IV Family Support</td>
<td>17</td>
</tr>
<tr>
<td>II Feeling towards Counseling</td>
<td>12</td>
</tr>
<tr>
<td>III Awareness of Change &amp; Problems</td>
<td>8</td>
</tr>
<tr>
<td>VI Need for Counseling</td>
<td>3</td>
</tr>
<tr>
<td>V Denial</td>
<td>4</td>
</tr>
</tbody>
</table>

As shown in Table 22, Factor I is significant as it alone accounts for more than half of the criterion. The Factors I, IV, and II together account for the most of the total variance. Factors III, VI, and V contribute insignificantly to the criterion -- Client Readiness.

Thus far, findings of the multiple regression analysis indicate that \( H_{02} \) can be rejected as the strength and order of the predictor variables is different; Factors of I, IV, and II are more significant in accounting for the criterion than Factors of III, V, and VI. However the order of the
significant factors accounting for the "Client Readiness" came out somewhat differently than originally hypothesized. For instance, the factor of "Family Support" which explains the second greatest amount was derived from original Factor IV - "Support."
Chapter V
SUMMARY, CONCLUSIONS, RECOMMENDATIONS

This chapter provides a summary of the study; discusses the findings and concludes the study; and ends with recommendations for further studies.

Summary

Social work is a helping profession engaged in helping individuals to adjust to newness or changes. The effectiveness of this profession would be enhanced if the social worker fully understood the social work client's attitude—especially readiness for change.

This study was conducted primarily to find out the factors underlying client readiness for social work services. It asks what are these factors and how do these affect client readiness?

The procedures of the study were the following: (1) developing an instrument, (2) testing validity and reliability of the developed instrument, (3) selecting subjects and collecting data using the instrument, (4) testing Hypothesis I by utilizing factor analysis in SPSS and Hypothesis II through multiple regression.

The findings of this study relate to three main areas: the instrument, the subjects, and the hypotheses. The instrument was developed by incorporating theories and findings in social work fields. An existing instrument called "Medical Treatment Readiness Questionnaire" was also modified. The instrument is a questionnaire which consisted
of six different domains underlying "client readiness." The six domains are represented by thirteen sampled test items. Each item was comprised of a short declarative sentence requiring true or false answer.

The developed instrument was examined by analyzing its validity and reliability. For the examination of the validity of instrument, content and construct validity were scrutinized. "Experts" in the social work theory and field were consulted for the content and the format of the items of the questionnaire, and suggestions were incorporated into the development of the instrument.

Construct validation was tested in the process of testing Hypothesis I \( (H_{r1}) \). The results of analysis was viewed from the angle of construct validation.

Briefly the following procedures were followed. First, through the process of content validation, six domains were identified as the main underlying factors of client readiness. Then, it was decided to utilize factor analysis with Rao's canonical method in SPSS. Six factors were extracted as the instrument was designed to measure six domains. The factors were rotated (varimax) and examined in the light of factor loadings and communalities.

Cronbach mentions that "Construct validation aims more at comprehension than a numerical result."\textsuperscript{111} As Cronbach's statement indicates, the factor analysis generated no single index for construct validation. However, the outcomes from

\textsuperscript{111}Cronbach, "Test Validation," p. 465.
the factor analysis show that there are substantial interrelationships between the constructs resulting from the analysis and the nature of the phenomena which the instrument attempts to measure.

The reliability of the instrument was examined utilizing LERTAP. It was found to be .85 by Hoyt's reliability coefficient, which is a satisfactory level by the Guidelines for Test Use.

The subjects of this study were adult residents of the substance abuse treatment centers which are under the auspices of the Wayne County Department of Social Services and Office of Substance Abuse Services in Mental Health Department. The data for this study were collected from 313 residents of twelve such centers and Henry Ford Hospital during Summer of 1983.

From the data collected, it was found that 313 residents were in different counseling programs: Some receive counseling everyday while others receive it once a week. However, the majority of the subjects (over 70 percent) have a high expectation of the results of counseling.

Hypothesis I ($H_{r1}$) was tested by utilizing factor analysis. The procedures of testing this hypothesis is the same as testing validity of the instrument. Briefly repeating the procedure: Six factors were extracted by Rao's canonical factoring and the extracted factors were rotated by varimax rotation. From the six extracted factors, the
Factor I - "Belief," Factor IV - "Family Support," and Factor V - "Denial" can be traced from the originally hypothesized factors. The Factor II - "Feelings toward Counseling," Factor III - "Awareness," and Factor VI - "Need" seem to be constructed from a mixture of the original factors.

The variables highly loaded on each factor were selected and examined to test Hypothesis II ($H_{r2}$). Multiple Regression in SPSS was called upon to test Hypothesis II ($H_{r2}$) in order to test the strength and order of each factor in relation to the "Client Readiness."

Factor I was found to be the most substantial factor in predicting "Client Readiness." This factor accounts largely for the criterion variance. The next most important factor is Factor IV - "Family Support." Factor II - "Feelings toward Counseling" is next in order. Factor III - "Awareness," Factor V - "Need," and Factor VI - "Denial" contribute the criterion variance, but the order and the strength of those factors appear to be interchangeable.
Conclusions

In this study, the factor analysis provided a means of confirmation and reduction of the theory set forth in Hypothesis I.

The regression analysis employed to support Hypothesis II, the secondary objective, must be viewed as somewhat exploratory and incomplete pending revision of the basic instrument. However, certain valuable supporting information was obtained.

The findings of this study could facilitate social work practice in its initial counseling process in two ways. First, the findings provide the workers with a notion of what to look for in order to have a better understanding of a client with a problem. Six factors were found to present the important facets of the client's attitudinal stances with respect to problems and also with perceptions of social work services. For the substance abuse clients tested, they are: "Belief in Counseling," "Family Support," "Feeling toward Counseling," "Awareness of Change and Problems," "Need for Counseling," and "Denial."

Second, the findings of this study also provide the worker with concrete information as to how to work with the client in order to have a better treatment plan. For the substance abuse clients, "Belief in Counseling," "Family Support," and "Feeling toward Counseling" were found to be more relevant and contributing factors to explain client readiness. Overall, the findings of this study provide
workers with a tool to assess client readiness for change and to identify the areas in need of strengthening, e.g., family support.

In addition to the two findings of this study, introducing an instrument into social work practice is another contribution of this study. The instrument can be used as an assessment device. Workers in counseling services can utilize this device to have a better understanding of clients in their motivation, capacity, and opportunity. This device can be added to the traditional face-to-face interview method of obtaining information on clients.

From the analysis of data, it is concluded that client readiness can be factored and measured. A quantifiable approach for social work can be formulated and tested for practical usage.

Throughout this study, an endeavor was made to bring the knowledge from theories and findings into the action field, and to utilize that knowledge in social work practice. The aim was to enrich the understandings of the nature of social work clients, in this study, the substance abuse clients. Thus it will facilitate the practice of social work.
Recommendations

The findings of the study will initiate gains in understanding the social work client. However, the magnitude of the problem of understanding the nature of the social work client is such that a variety of approaches must be followed to achieve fuller comprehension of the client. The following recommendations can be made to expand what has been commenced in this study.

**Recommendation I:** Construct validation was carried out to examine the underlying construct and the nature of the instrument. However, as Cronbach states construct validation is "ever-extending inquiry into the processes," more validation studies on the instrument are needed for the same nature subjects.

**Recommendation II:** The predictors of this study were limited to six by ignoring the multidimensional aspects of each factors. Further study is recommended to ascertain whether other factors can be located by utilizing more predictors or different predictors for client readiness, and more test items for each predictor variable.

**Recommendation III:** The developed instrument can be utilized in two ways: First, the instrument can be used to obtain information on client readiness. Follow-up studies are needed to modify the instrument which is

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applicable to social work clienteles other than substance abuse subjects.

Second, the instrument developed can be further utilized as a predictive instrument to infer the success of the social work services by measuring client readiness. More studies are recommended to develop a instrument as a screening device to differentiate clients who are more likely to complete the therapeutic process from those less likely, so that the worker can formulate treatment plans that take into account these differences in readiness for social work services.
QUESTIONNAIRE

Client Readiness for
Accepting Social Work Services

Wayne State University
School of Education
Evaluation and Research

This questionnaire is adapted from the Medical Treatment Readiness Questionnaire developed by the Program Evaluation Resource Center in Minneapolis, Minnesota.
Please answer the following questions about yourself. Mark X in the ( ) using either pencil or pen.

1. Age: 1( ) under 18  
   2( ) 18 - 30  
   3( ) 31 - 45  
   4( ) over  

3. Race: 1( ) black 2( ) white 3( ) Spanish 4( ) other(9)  
2. Sex: 1( ) male 2( ) female  

4. Marital status: 1( ) single  
   2( ) married  
   3( ) separated  
   4( ) divorced  
   5( ) widowed  

5. Years of Education: (12, 13)  
   (Please circle the last year you completed.)  
   (1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,over)  

6. Do you receive counseling now? 1( ) Yes. 2( ) No. (14)  

7. If yes, a) how often do you see the counselor? (15)  
   1( ) once a month.  
   2( ) twice a month.  
   3( ) once a week.  
   4( ) twice a week.  
   5( ) everyday.  
   b) how long have you been seeing the counselor? (16)  
   1( ) for a week.  
   2( ) for a month.  
   3( ) for more than a month.  
   4( ) for more than 6 months.  
   c) how much do you expect to be helped? (17)  
   1( ) none. 2( ) a little. 3( ) a lot.  

8. If no, are you planning to see any counselor soon? (18)  
   1( ) Yes. 2( ) No.  
   a) If yes, how much do you expect to be helped? (19)  
   1( ) none. 2( ) a little. 3( ) a lot.
Please read each question and mark your answer (True or False) in the space provided. Use either pencil or pen.

1. I am willing to do just about anything my counselor says. True_1 False_2
2. I have always been able to change easily. True_1 False_2
3. My problem does not bother me. True_1 False_2
4. I do not even trust myself. True_1 False_2
5. People who know that I receive counseling avoid me. True_1 False_2
6. I am too set in my ways to change. True_1 False_2
7. I have a lot of confidence in professional counseling. True_1 False_2
8. Nobody seems to care what happens to me. True_1 False_2
9. I often feel hesitant about meeting a counselor. True_1 False_2
10. The counseling takes away my privacy. True_1 False_2
11. I will not gain anything by changing in the way the counselor suggests. True_1 False_2
12. My family doesn't take my problem seriously. True_1 False_2
13. With the counseling I expect to solve my problem. True_1 False_2
14. The counselor demands too much from me. True_1 False_2
15. I feel some change in me is necessary. True_1 False_2
Please read each question and mark your answer (True or False) in the space provided. Use either pencil or pen.

16. My problem has been a burden to my family. True 1 False 2

17. I have dropped out of counseling before. True 1 False 2

18. Going through counseling makes me feel terrible. True 1 False 2

19. I have no interest in further counseling. True 1 False 2

20. I often hate myself. True 1 False 2

21. I see the counselor because others want me to do so. True 1 False 2

22. Counseling has not helped me before, so I do not know why it should now. True 1 False 2

23. My friends are there when I need them. True 1 False 2

24. I wish someone would make decisions for me. True 1 False 2

25. I doubt that counseling would help me. True 1 False 2

26. When I have had problems before, counseling has not helped me very much. True 1 False 2

27. I know a good counselor can help me with my problem. True 1 False 2

28. I have people to turn to for emotional support. True 1 False 2

29. Counselors often do more harm than good. True 1 False 2

30. I will try anything if that helps me to solve my problem. True 1 False 2

31. I am going to follow my counselor's suggestions. True 1 False 2
Please read each question and mark your answer (True or False) in the space provided. Use either pencil or pen.

32. In the past, counseling has helped me.  
   Keypunch Code Card Column
   True_1 (51) False_2

33. I would give up my favorite thing in life in order to solve my problem.  
   Keypunch Code Card Column
   True_1 (52) False_2

34. I don't trust counselors.  
   Keypunch Code Card Column
   True_1 (53) False_2

35. My family is very supportive of me.  
   Keypunch Code Card Column
   True_1 (54) False_2

36. My problem can only be solved through counseling.  
   Keypunch Code Card Column
   True_1 (55) False_2

37. I am embarrassed by the counseling.  
   Keypunch Code Card Column
   True_1 (56) False_2

38. When I have had problems, things have cleared up on their own.  
   Keypunch Code Card Column
   True_1 (57) False_2

39. I feel obligated to have counseling.  
   Keypunch Code Card Column
   True_1 (58) False_2

40. I have learned that my kind of problem can be solved through counseling.  
   Keypunch Code Card Column
   True_1 (59) False_2

41. Counselors are no good.  
   Keypunch Code Card Column
   True_1 (60) False_2

42. I have followed the counselor's direction with good results.  
   Keypunch Code Card Column
   True_1 (61) False_2

43. I do not see the benefit of the counseling.  
   Keypunch Code Card Column
   True_1 (62) False_2

44. I have made many adjustments in the way I live.  
   Keypunch Code Card Column
   True_1 (63) False_2

45. I had a bad experience with a counselor before.  
   Keypunch Code Card Column
   True_1 (64) False_2

46. My problem has to be solved soon.  
   Keypunch Code Card Column
   True_1 (65) False_2

47. With counseling I can contribute more to my family.  
   Keypunch Code Card Column
   True_1 (66) False_2
Please read each question and mark your answer (True or False) in the space provided. Use either pencil or pen.

48. Having counseling is the only way to solve my problem.
   True_1 (67)
   False_2

49. I do not know enough about my problem.
   True_1 (68)
   False_2

50. Basically I am a good person.
   True_1 (69)
   False_2

51. I am very confident that counseling will help me.
   True_1 (70)
   False_2

52. I have great confidence in myself.
   True_1 (71)
   False_2

53. My problem is too serious to ignore.
   True_1 (72)
   False_2

54. I am angry that I have a problem.
   True_1 (73)
   False_2

55. I have no past experience with a counselor.
   True_1 (74)
   False_2

56. I am not very worried about my problem.
   True_1 (75)
   False_2

57. I feel good when I talk to a counselor.
   True_1 (76)
   False_2

58. My family will help me to follow counseling.
   True_1 (77)
   False_2

59. In the past, change has been very difficult for me.
   True_1 (78)
   False_2

60. I am unable to do anything for myself.
   True_1 (79)
   False_2

61. There are some parts of my life that I don't have the will to change.
   True_1 (80)
   False_2

62. I would not let anyone interfere with me or my life.
   True_1 (21)
   False_2

63. It is easy for me to change.
   True_1 (22)
   False_2
Please read each question and mark your answer (True or False) in the space provided. Use either pencil or pen.

64. I have no one in the world who really cares for me. True 1 False 2

65. My problem is so big that I would accept any counseling to solve it. True 1 False 2

66. There are other things in my life that seem more important than having counseling. True 1 False 2

67. I don't feel comfortable telling my problem to the counselor. True 1 False 2

68. I have questions about my counseling. True 1 False 2

69. With the counseling I will be able to lead a better life. True 1 False 2

70. I look forward to seeing the counselor. True 1 False 2

71. I will have trouble following my counseling plan. True 1 False 2

72. A person who has problems is not worth much. True 1 False 2

73. I don't need counseling since I can help my own problem. True 1 False 2

74. There is a good past record of success in solving my problem. True 1 False 2

75. I have faith in the counselor. True 1 False 2

76. No one has told me what is wrong with me. True 1 False 2

77. If I need to make changes in my life to solve my problem, my family will help. True 1 False 2

78. I have changed something in my life before. True 1 False 2

Thank you for completing this questionnaire. Your responses will be used only for the study of the Readiness for Social Work Services. Confidentiality and anonymity are guaranteed.


Hill, Marjorie; Havelock, Mary; and Havelock, Ronald. "Phases Orientation to New Knowledge." Ed. by Ronald Havelock. Planning for Innovation through Dissemination


Hoyt, Cyril L. "Test Reliability Estimated by Analysis of Variance." Psychometrika, 1941, 6, 153-160.


Perlman, Helen Harris. "Intake and Some Role Considerations." Social Casework, April, 1960, 1, 171-177.


Ripple, Lilian; Alexander, Ernestina; and Polemis, Bernice W. Motivation, Capacity, and Opportunity. Chicago; School of Social Service Administration, University of Chicago, 1964.


Theories of Social Casework. Chicago: The University of Chicago, 1974, 77-128.


Stark, Frances B. "Barriers to Client - Worker Communication at Intake." Social Casework, April, 1959, 40, 177-183.


ABSTRACT

CLIENT READINESS FOR ACCEPTING SOCIAL WORK SERVICES IN SUBSTANCE ABUSE

BY
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May, 1984

Adviser: Dr. Claire Irwin
Major: Educational Evaluation and Research
Degree: Doctor of Philosophy

Problems: In social work practice, understanding client attitude -- especially client readiness plays a major role in devising a treatment plan; such plans vary depending upon client readiness for accepting social work services.

It assumed that certain factors can be identified to measure client readiness. This study examined these affecting factors underlying client readiness by testing two hypotheses. Hypothesis I was tested to identify these factors and Hypothesis II was treated as an exploratory means of checking the strength and order of these factors as related to client readiness.

Procedures and Findings: For the purpose of this study, an instrument of "Client Readiness" was developed by incorporating theories and findings from various studies. The instrument was evaluated by examining its validity and reliability. In establishing validity, content and construct validities were thoroughly examined. A Reliability Coefficient found to be 0.85 by Hoyt's algorithm.
The subjects of this study are adult residents who are receiving therapeutic counseling at the substance abuse treatment centers in Wayne County. Data on 313 cases from 12 such centers were collected during Summer of 1983.

Hypothesis I was tested by utilizing factor analysis (Rao's canonical method with Varimax rotation.) Six factors were extracted. Factors -- "Belief in Counseling," "Family Support," and "Denial" could be easily traced from the originally hypothesized factors; while factors -- "Awareness of Change and Problems," "Feeling towards Counseling," and "Need for Counseling" were found to be embedded scattered in all factors. Hypothesis II was tested by utilizing multiple regression. Factors -- "Belief in Counseling," "Family Support," and "Feeling towards Counseling" were found to contribute the most to client readiness.

Conclusions: From the analysis of data, it appears that client readiness can be factored and measured. A quantifiable approach for social work can be formulated and tested for practical usage. The findings of this study provide workers with specific factors and directions to have a better understanding of client's attitude.

Recommendations:

(1) More validation studies are recommended for substance abuse clients.

(2) A follow-up study is needed to ascertain whether other factors can be located.

(3) The instrument can be further developed as a screening device in general use for social work practice.
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