GUTTMAN FACET
ANALYSIS OF ATTITUDE - BEHAVIOR OF
PSYCHIATRIC PATIENTS AND NORMALS TOWARD
THE MENTALLY ILL : CONTENT,
STRUCTURE AND DETERMINANTS

Thesis for the Degree of Ph. D.
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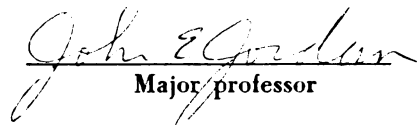This is to certify that the

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ABSTRACT

GUTTMAN FACET ANALYSIS OF ATTITUDE-BEHAVIOR OF
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Problem

Very little systematic attention has been given to
how either psychiatric patients or "normals" view mentally
ill persons or what impact they might have on one another.

In spite of the importance of intergroup attitudes
in predicting, understanding, and controlling human rela-
tions, the interdependent nature of attitude formation and
expression on the part of one psychiatric patient for
another has been all but overlooked. The importance of
non-psychiatric as well as psychiatric patients' attitudes
insofar as they relate to social structures, conceptualiza-
tions of mental illness, development of treatment programs,
and the development of training and educational programs
for mental health workers has also been overlooked.

The purpose of the present research was to conduct a
comprehensive investigation of attitudes toward mentally

ill persons, as well as to assess the predictive validity
of certain hypothesized determinants of attitudes, with
selected groups of psychiatric and non-psychiatric persons.

Methodology

The Attitude Behavior Scale-Mental Illness (ABS-MI)
was administered to three samples of hospitalized psychi-
atric patients, i.e., schizophrenics, alcoholics, and
elderly persons, and to a sample of "normal" subjects.
The ABS-MI was used to compare the attitudes of these
samples to four classes of hypothesized determinants and/or
predictors of attitudes: (a) contact, (b) knowledge, (c)
values, and (d) demographic factors.

Guttman's facet theory of attitude structure and his
definition of attitude as "a delimited totality of behavior
with respect to something," guided the construction of
the ABS-MI. Facet theory specifies that the structure of
an attitude universe is multidimensional and that it can
be sub-structured into attitude levels which are system-
atically related according to the number of identical con-
ceptual elements they hold in common. The relationship
among the various attitude levels is one in which the atti-
tude levels closest to each other in the semantic scale of
their definitions will also be closest statistically and
the resulting matrix of attitude level inter-correlations
will assume a simplex ordering.

The ABS-MI measures six levels of attitude interaction with the mentally ill. Each level contains one more strong element than its predecessor on an abstract-impersonal to concrete-personal action continuum. They were labeled (a) Societal Stereotype, (b) Societal Interactive Norm, (c) Personal Moral Evaluation, (d) Personal Hypothetical Action, (e) Personal Feelings, and (f) Personal Action.

Kuder-Richardson-type reliability estimates obtained for the ABS-MI were on a par with other attitude scales. Its ability to differentiate groups chosen on the basis of presumed differences in attitudes toward the mentally ill provided support for concurrent validity. Moreover, simplex approximations, predicted by facet theory, were obtained for each group of subjects which provided additional support for the construct validity of the research instrument.

Results

Combining ABS-MI content and intensity scores enhanced reliability estimates. Reliabilities were generally highest on the more abstract-impersonal attitude levels for the psychiatric subjects while they were highest for the normals on the concrete-personal action continuum.

The relationship between several independent variables and attitudes toward the mentally ill varied across samples and the six levels of the ABS-MI. Enjoyment of contact provided the most consistent positive relationship with attitudes across samples and levels. In addition, some

independent variables, most notably education, change ori-
entation, efficacy, and amount of contact, were negatively
related to the subject's perceptions of others' attitudes
toward the mentally ill and positively to perceptions of
their own attitudes.

The attitudes of the normal sample tended to be most
positive, while those of the elderly subjects were the
least positive.

The pattern of the relationships between the indepen-
dent variables and attitudes toward the mentally ill re-
peatedly demonstrated the multidimensional nature of the
ABS-MI attitude levels. The simplex approximations which
were obtained, as predicted by facet theory, also sub-
stantiated attitude multidimensionality.

A number of limitations of the present study[1] and
recommendations for further research were presented.

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[1]The present study is related to a larger international
study of attitude toward physical, mental, and racial-ethnic
differences under the direction of John E. Jordan, College
of Education, Michigan State University, East Lansing, Michi-
gan 48823.

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ii

TABLE OF CONTENTS

LIST OF TABLES

ix

LIST OF FIGURES

CHAPTER I

INTRODUCTION

To date, agreement on the definition of the concept
of attitude does not exist. The sense in which this general
term will be used in the present research follows the gen-
eral orientation provided by Guttman (1950, p. 51) who
defines an attitude as a "delimited totality of behavior
with respect to something." For example, the attitude of
a person toward the mentally ill could be said to be the
totality of acts that a person has performed with respect
to the mentally ill. Guttman's behavioral definition is
used herein as it is more operational and lends itself to
a facet theory analysis of the content, structure, and
determinants of attitudes.

Nature of the Problem

·   The importance of attitudinal research is such that
at present it occupies a central position in social psy-
chology. Practically every textbook related to social
psychology contains sections devoted to attitudes and their
measurement. According to Newcomb (1954), there are two
general kinds of reasons for measuring attitudes. First,

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measurement contributes to our social psychological theo-
retical understanding. We can test our hypotheses about
the conditions under which attitudes arise, persist, and
change if we have measurements which can be related to
the hypothetical conditions. Secondly, there are many
practical applications of attitude measurements. We may
want to know, for example, whether the attitudes of an
individual or of a group are changing; or we may want to
know how one person or one group compares with another.
Without measurements, we should have to rely on estimates,
guesses, or indirect evidence.

Other authors have discussed pertinent reasons for
studying the attitudes of institutionalized groups such
as hospitalized mental patients. One group of authors
(Reznikoff, Brady, & Zeller, 1959) write that recently
there has been a growing awareness that the behavior and
clinical course of the hospitalized psychiatric patient
depends greatly on the intramural social forces with which
he interacts. Greater recognition of the hospital as a
therapeutic force has led to many innovations in psychi-
atric hospital treatment--ranging from the prescription of
specific attitudes that personnel should entertain toward
patients to meet their needs, to the designing and utilizing
of the social structure of the hospital itself as the main
therapeutic force to bear upon the course of the patient's
disorder. The latter approach has given rise to the concept
of the hospital as a therapeutic community.

Guttman and Foa (1951) have recognized that there is an increasing awareness of the part played by intergroup attitudes in controlling human relations. Studies on attitudes towards minorities, toward the mentally ill, and the like, are made in an effort to understand and perhaps to indicate how to influence the interplay between groups.

The above authors conclude that the possibility of influencing an intergroup situation depends on the one hand upon the existing attitudes, and on the other upon changing the intergroup attitudes in the desired direction.

Cohen and Struening (1962) conclude that despite the manifest importance of the area, there has been little systematic research directed toward the finding of relationships between attitudes toward the mentally ill and such variables as symptom reduction, successful rehabilitation of former patients, hospital discharge rates, etc. The authors point out that research of this kind depends upon the adequate conception and objective measurement of attitudes toward mental illness and the mentally ill.

Social psychology and allied disciplines employ a myriad of techniques for the measurement of attitudes, but by far the most widely used and most carefully designed and tested technique is the attitude scale. Even though a disproportionate amount of energy has been spent in research with attitude scales, much effort has been wasted because of the lack of suitable instruments for the measurement of attitudes and behavior.

The present research is principally concerned with the theoretical orientation and methods of attitude measurement developed by Guttman (1959, 1961, 1966). His most recent contributions in the area of attitude scaling are entitled facet design and nonmetric analysis. In these approaches, Guttman has moved from the unidimensional realm of scaling into the multidimensional realm. This type of approach is advantageous in that it allows the researcher to examine many variables and their interrelationships simultaneously.

Further elaboration of Guttman's provocative theory and research, as well as that of Jordan who has been instrumental in stimulating both additional research and theoretical underpinnings of attitude measurement, will be presented in Chapter II.

A thorough assessment and evaluation of attitudes toward the mentally ill constitutes a worthwhile undertaking inasmuch as mental illness is a crucial problem confronting the people of the United States and others of the world. Prevailing attitudes toward the mentally ill affects the perspective they have of themselves and others as well as how they are viewed by other people. And in turn, the extent and quality of interpersonal relationships are affected (Farina & Ring, 1965; Swanson & Spitzer, 1970) as are social structures (Caudill, Redlich, Gilmore, & Brody, 1952).

An examination of the literature reveals that considerable discrepancy exists regarding how psychiatric patients and normals view persons who are mentally ill (Crumpton, Weinstein, Acker, & Annis, 1967; Giovannoni & Ullman, 1963; Manis, Houts, & Blake, 1963). Also, research in the area of attitudes related to the mentally ill has tended to consider the subject primarily in terms of how parents, lay public, and professional mental health workers view and/or influence those who are mentally ill--the reverse has not been subjected to extensive examination. While this focus has helped to expand knowledge concerning attitudes toward the mentally ill of certain segments of the population, it has tended to ignore the existence of attitudes held by one of the mental patients' most intimate associates--psychiatric patients. Little systematic attention has been given to how psychiatric patients view mentally ill persons. The reality of the truly interdependent nature of attitude formation and expression on the part of one psychiatric patient for another has been, with an occasional exception (Caudill, et al., 1952), all but overlooked in the research literature. Consequently, the attitudes of the mentally ill are far from clear and are in need of research designed to illuminate their structure, content, determinants, and relationships.

Despite the importance of psychiatric patient attitudes in terms of interpersonal relationships, social

structures, conceptualizations of mental illness, development of treatment programs, and the development of training and educational programs for mental health workers, very little systematic research has been directed toward identifying factors which are instrumental in the development of attitudes toward the mentally ill.

Generally, it is not known what importance can be attributed for different attitudinal levels to: (a) the amount of contact a person has had with the mentally ill, (b) the value orientation of the person, (c) the amount of factual knowledge about mental illness he possesses and (d) the demographic characteristics of the subject. In addition, the literature is barren of research that utilizes a facetized design (Guttman, 1959) to measure and analyze psychiatric patient attitudes toward the mentally ill.

Moreover, it has been found that most attitude research is inconclusive or contradictory with reference to predictor variables. The reason, it has been suggested (Jordan, 1968), might be attributed to the fact that various measures of attitudes such as attitude scales were composed of items seemingly derived from different structures; i.e., from different levels of Guttman's sub-universes (Guttman, 1959), for example. Lack of control over the various attitudinal levels being measured seems likely to continue to produce inconsistent, contradictory, and non-comparable findings in attitude research unless an appropriate measure of attitudes is developed and employed.

The present research is one in a series, jointly designed by several investigators. Common usage was made of instrumentation and theoretical material, as well as technical and analysis procedures. The authors, therefore, collaborated in many aspects although the data were different in each study (Erb, 1969; Gottlieb, 1970; Hamersma, 1969; Harrelson, 1970; Maierle, 1969; Morin, 1969) as well as certain design, procedural and analyses methods. The interpretations of the data in each study are those of the author.

Statement of the Problem

Of the studies referred to above, Maierle's is most pertinent to this one. It had the following major purposes: (a) to propose a reformulation of the Guttman (1955) and Jordan (1968) theories and to make a preliminary test of that reformulation; (b) to construct, according to the formulations of Guttman, Jordan, and new formulations proposed by Maierle, an attitude scale with the emotionally disturbed as attitude object.

The results of Maierle's completed research supported his formulations as well as those of Guttman and Jordan. He concluded that Guttman facet design provides a workable approach to attitude-scale construction; particular extensions suggested within the study are useful interpretations of the Guttman-Jordan approach; and that additional research is needed.

The primary emphasis of Maierle's research was methodological, however, and did not encompass substantive aspects. Also, undergraduate students enrolled in an introductory psychology course or an introductory education course served as subjects. Left unanswered, when psychiatric patients serve as subjects, are questions about the feasibility of his attitude scales; the validity of Guttman's contiguity hypothesis; and the predictive validity of certain hypothesized determinants of attitudes toward the emotionally disturbed/mentally ill. Truly, as Maierle and the research literature suggests, a need exists for additional attitudinal research of the kind designed to promote knowledge of both substantive and methodological aspects.

Therefore, the major purposes of the present research are as follows:

1. To construct, according to the formulations of Guttman, Jordan, and new formulations proposed by Maierle, an attitude scale with the mentally ill acting as the attitude object.

2. To measure and determine predominate value orientations and attitudes toward the mentally ill of the following interest groups: (a) Schizophrenics, (b) Geriatrics, (c) Alcoholics, and (d) Normals.

3. To assess, in each interest group listed above, the predictive validity of the following hypothesized determinants of attitudes toward the mentally ill:

(a) Demographic, (b) Valuational, (c) Contactual, and (d) Knowledge.

4. To compare a group of normals and <u>selected groups</u> of hospitalized psychiatric patients (schizophrenics, geriatrics, and alcoholics) on the basis of: (a) their attitudes toward the mentally ill, (b) demographic, valuational, contactual and knowledge variables, and (c) the relationships between a and b.

5. To replicate the six-level adaptation by Jordan of Guttman's four levels or types of attitudes, using Guttman facet design and analysis on a population comprised of normals and hospitalized psychiatric patients. This procedure serves to test Guttman's hypothesis that, according to his principle of contiguity, the matrix of level-by-level correlations will approximate a simplex (Guttman, 1959, 1966) which will be maintained across a group of non-psychiatric persons as well as groups of psychiatric patients.

6. To determine the effects of order of attitude scale levels on simplex approximations and the correspondence between a hypothesized order of administration of scale levels and a "best" order for the following groups: Schizophrenics, geriatrics, alcoholics, and normals.

Knowledge attained through fulfillment of the purposes stated above may ultimately permit greater understanding and prediction of the kinds of attitudes,

experiences, and situations which promote relatively nega-
tive or positive behaviors of individuals and groups toward
the mentally ill. In addition, knowledge gained through
measurement of attitudes and their concomitants hopefully
will provide a more solid theoretical and scientific founda-
tion upon which to build prudent, efficacious programs
designed to modify and expand the range of attitudes and
behaviors that individuals and groups exhibit toward men-
tally ill persons.

CHAPTER II

REVIEW OF RESEARCH AND THEORY

Nunnally (1961) investigated the opinions and attitudes that normal subjects held concerning mental health and mental illness. He found that "the information held by the public is not really 'bad' in the sense that the public is not grossly misinformed but the attitudes held by the public are as 'bad' as is generally suspected."

Schizophrenics and Normals

In order to determine whether mental patients themselves shared in the general public's negative attitudes, Giovannoni & Ullman (1963) compared the opinions and attitudes of hospitalized male psychiatric patients concerning mental illness with the opinions and attitudes of normal subjects presented by Nunnally (1961). The investigators concluded that hospitalized mental patients were found to be no better informed than normals about mental health. The patient attitudes toward the mentally ill were found to be as extremely negative as normals' attitudes toward the same group of individuals.

Manis, Houts, & Blake (1963) sought to compare hospitalized psychiatric and a control group of medical and surgical nonpsychiatric patients in terms of their beliefs about mental illness. The results of the study indicated that at admission to the Ann Arbor Veterans Administration Hospital the psychiatric patients' beliefs about mental illness were no more deviant when compared to expert opinion (staff members in the fields of psychiatry, psychology and psychiatric social work) than were the beliefs of the controls. It was noted, however, that very severely disturbed psychiatric patients tend to view mental illness in more moralistic terms than do normals.

The results of another study (Crumpton, Weinstein, Acker, & Annis, 1967) indicated that on the whole, the mental patient was described by hospitalized psychiatric patients and normals in unfavorable terms as excitable, foolish, unsuccessful, unusual, slow, untimely, active, cruel, weak, and ugly. However, patients differed significantly from normals on ratings of ten out of twenty semantic differential scales, giving in every case a more favorable rating. Also, ratings of "mental patient" were somewhat more likely to resemble ratings of "sick person" and "dangerous person" when made by normals and to resemble ratings of "criminal" and "sinner" when made by patients.

The above authors conclude that their results support previous findings (Crumpton & Wine, 1965) which reflected

a similar picture and which showed that there are distinct differences between normal and patient views of mental illness. The findings of the latter study by Crumpton and Wine suggests that normal adults see the typical mental patient as sick but moral, and as a peculiar, different sort of person to be both pitied and feared. On the other hand, schizophrenic patients consider the typical mental patient as immoral rather than sick, safe but inconsequential.

According to Crumpton, et al. (1967), the image of the mental patient as seen by both patients and normals "is to say the least unflattering." But they believe that an unflattering image does not reflect "the extreme negativism and antagonism that other studies have shown." On the other hand, the findings of Manis, et al. (1963) tend to be somewhat contrary to those of other authors. Thus, the status of attitudes toward the mentally ill and mental illness is left in doubt.

The review of the following related research literature concerns attitudes of psychiatric patients toward mental hospitals, psychiatrists, treatment, and the relationship between attitudes toward mental illness and demographic variables.

The main purpose of a study by Gynther, Reznikoff, and Fishman (1963) was to compare attitudes of patients toward treatment, psychiatrists and hospitals. A secondary

purpose was to determine if attitudes were related to demo-
graphic variables such as marital status and age. The
major findings from the data were that most patients ex-
press relatively favorable attitudes toward psychiatrists,
hospitals, and treatment upon admission. The least favor-
able, although still positive attitudes, appear to be toward
treatment. In addition, the data indicated that married
patients have more positive feelings about treatment, psy-
chiatrists, and hospitals than do patients who are not
married. Older patients, furthermore, tend to perceive
the psychiatric milieu more favorably than younger patients.

In contrast to the findings of the above investiga-
tors, Brady, Zeller, and Reznikoff (1959) found that favor-
ableness of attitude toward treatment, psychiatrists and
mental hospitals is unrelated to age, educational level,
occupation, religion, duration of illness, or history of
previous hospitalization.

Gynther and Brilliant (1964) assessed the relation-
ships among attitudes toward mental illness and demographic
variables such as sex, age, education, marital status, and
admission status. The results of this research showed
that attitudes toward mental illness were not related to
either sex or admission status; however, they were signi-
ficantly related to age, education, and marital status.
The data also indicated that older, married and less edu-
cated patients are more custodial in their orientation

toward mental illness than the younger, unmarried, and better educated patients.

Other investigators (Clark & Binks, 1966) have found that low age and high education are related to a liberal attitude toward mental illness.

Alcoholics

Advances toward finding solutions to the problem of alcoholism and its treatment and prevention can be best achieved through an understanding of the attitudes held by society, including other alcoholics, toward the alcoholic and treatment practices with alcoholics, as well as under-standing the disorder itself and the way in which these elements influence one another. Blane (1966) contends that the attitudes toward the alcoholic are largely hos-tile; treatment practices are used where least effective and our understanding of the disorder is limited. Further, these factors exert an unsalutary effect on each other.

The research literature concerning attitudes toward the alcoholic is limited in both number and scope. What exists can be divided into three primary categories: (a) lay public, (b) caretaker groups such as physicians, psy-chiatrists, psychologists, social workers, and various other hospital personnel, and (c) alcoholics themselves.

Lay Public

Traditionally, alcoholism, like mental illness, has been negatively viewed by the general public. In recent years, however, increasing public awareness and toleration of emotional factors in human behavior have fostered the emergence of an increasingly enlightened attitude toward alcoholism. A number of public opinion surveys undertaken in recent years have shown an apparently high acceptance of alcoholics as persons with an illness (Blane, 1966).

A study by Mulford and Miller (1964) addressed itself to a somewhat more intensive examination of attitudes toward alcoholics than had been evidenced in previous studies. Their findings, representing the attitudes of adults in Iowa, show that approximately one-quarter of the population unqualifiedly accepted the alcoholic as an individual, but that the remaining three-quarters view the alcoholic in moralistic terms, although they may simultaneously see him as ill. One of every three adults in Iowa defines the alcoholic in moralistic terms as either "weak-willed" or "morally weak." Evidently, the notion of the alcoholic as a "sick" person has made some headway, but for the most part people continue to cling to the old stereotypes even while partially accepting a more contemporary point of view. Additionally, it was found that those intimately associated with an alcoholic were only slightly more inclined to accept a purely medical view, but were significantly less inclined to accept a purely moralistic view.

In another context, Freed (1964) studied the opinions expressed by psychiatric hospital personnel and college students toward people who are alcoholic, physically disabled, or mentally ill. He found that both groups were significantly more accepting of physical disability than of the other two illnesses. The students were slightly, and the hospital personnel were significantly more accepting of alcoholics than of mentally ill people. However, the mean scores of both groups on measures of expressed opinions concerning alcoholics and the mentally ill were still within the non-accepting range. Freed concludes that his data support reports in the literature of generally negative attitudes toward the alcoholic.

Attitudes toward alcohol of undergraduate college students were correlated with scores obtained from measures of social maturity and impulse expression (Strassburger & Strassburger, 1965). The data demonstrated relationships betwen alcohol attitudes and the two personality variables. In general, students who were favorably inclined toward the use of alcohol and to treatment (rather than punishment) of the alcoholic scored higher than those opposed to alcohol on measures of social maturity and impulse expression.

The studies cited in this section show two elements of the popular view of alcoholics and alcoholism. First, alcoholics are viewed as morally weak or weak-willed and

second, that attitudes toward them are generally negative.
Possibly, as has been suggested (Blane, 1966), people re-
gard the alcoholic, like the criminal and the mentally ill
person, as dangerous and incurable.

Caretaking Groups

What of caretaking groups such as physicians, psy-
chiatrists, social workers, and nurses? Do they share the
popular view?

Chafetz and Demone (1962) maintain that among all
caretaking professions, an ignorant, moralistic, and puni-
tive attitude is rampant and continues to thrive. The
investigators state that society despises the alcoholic
while the medical profession shuns him.

Commenting on the attitudes of social workers,
Sapir (1958) concludes that in general they tend to avoid
involvement with alcoholics. They are viewed as either too
difficult to work with or too hopeless to help.

Such comments strongly suggest that members of care-
taking groups by and large perceive alcoholics much as the
general public does. Much of the research in this area
has been directed toward physicians, but there have also
been occasional studies of public health nurses, psychia-
trists, and psychiatric hospital personnel. Until recently,
studies of medical attitudes have utilized survey methods
rather than attempts to scrutinize attitudes in depth. The
findings of these studies are nevertheless in agreement on

one major point in that attitudes of physicians toward alcoholics are largely negative.

One of the early studies of physicians' activities and attitudes was by Riley and Marden (1946) who interviewed a sample of physicains. Almost one-half considered their alcoholic patients as uncooperative and over one-quarter of the physicians considered them as a nuisance and unmanageable, as well as creating specific annoyances. Further evidence of negative feelings expressed by physicians is provided by Straus (1952). His work reveals attitudes on the part of physicians that range from frank rejection of the alcoholic patient to more covert attitudes of rejection expressed as discouragement. Physicians in Straus's study indicated that they did not like to treat alcoholics and found them disgusting. Alcoholics were descirbed as having no motivation for help and unwilling to assume responsibility. In addition, it was thought that they deprive psychiatric patients of care by consuming the physician's time in fruitless efforts.

An outspoken picture of physicians' attitudes is painted by Abrams and McCourt (1964). These authors admit that they were not immune to some of the attitudes they attributed to physicians in emergency wards. Feelings of hopelessness, anger, and disgust were not uncommon in themselves in dealing with homeless, jobless, and uncooperative alcoholics.

The attitudes of some psychiatrists parallel those of a number of physicians. Hayman (1956) reports that even among psychiatrists, negative feelings toward treating alcoholics can be found.

The attitudes of caretaking groups other than physicians and psychiatrists have been infrequently investigated. One of the few efforts in this direction is a study of public health nurses undertaken by Blane and Hill (1964). A notable finding is that nurses are generally more accepting of alcoholics than physicians seem to be. Like physicians, nurses define and identify alcoholism in terms of severe physical, psychological, and social deterioration, and many nurses are discouraged about rehabilitation efforts. Nearly half, however, find work with alcoholic patients challenging and the results of their efforts rewarding.

Examination of the literature on attitudes of the general public and of caretaking groups toward alcoholics and alcoholism reveals considerable negativism. Alcoholism is ambiguously viewed as an illness and as a moral affliction while alcoholics are seen as ill, morally weak, disgusting, and irresponsible. No doubt these attitudes affect the behavior of the general public and caretakers in their interactions with the alcoholic, often to his detriment.

Alcoholics

Attitudes of alcoholics themselves have been directed
toward alcoholism, self concept, and rehabilitation.
Mindlin (1964) measured the attitudes of three groups of
non-psychotic, hospitalized alcoholics toward drinking and
alcoholism as well as self-esteem. The three groups con-
sisted of those who had previous experience with psycho-
therapy, those who had previous exposure to Alcoholics
Anonymous, and those who had not previously sought help
of any kind. The experimenter found that alcoholics in
the third group had the poorest attitude toward treatment
and the highest self-esteem of the three groups. Self-
esteem was lowest in the group which had been exposed to
psychotherapy.

Attitudes of two alcoholic groups toward rehabilita-
tion were compared by Mechanic (1961). The sample for this
study consisted of patients consecutively admitted to two
rehabilitation centers. One center was a voluntary hospital
with open doors and a general therapeutic milieu, while
the other was a locked ward with no treatment or informa-
tional program. Mechanic's findings suggest that a thera-
peutic milieu has a favorable effect on attitudes of alco-
holics toward rehabilitation. However, as a consequence of
a likely selection differential of subjects for the study,
the validity of the results is somewhat questionable.

In another study (Wolfensberger, 1958) a group of committed alcoholics and a group of non-alcoholic patients were compared on the basis of their attitudes toward the mental hospital. The findings from the study revealed that the mental patients as a group had much more critical attitudes toward the hospital than did the alcoholic patients. Not unexpectedly, alcoholic patients who later escaped from the hospital had more critical attitudes than those who remained. Age, education, and incidence of previous hospitalization were found to be unrelated to the attitudes of alcoholics.

Geriatrics

Psychiatric problems and attitudes of aged persons present complex considerations for many segments of society. A comprehensive discussion of them, particularly with reference to the possibility of promoting mental health and preventing or mitigating mental illness requires that these problems and attitudes be viewed in their social and psychological contexts.

Professional people of various persuasions are becoming increasingly concerned with the mental health problems and attitudes of the aged as a whole--those resident in the community and those who come to psychiatric attention in hospitals or other treatment facilities. A particular problem is the planning and provision of facilities

and services for this important and growing segment of the population.

The magnitude of the problem of mental illness in the aged is very great indeed. There were over 300,000 such patients aged 65 years or older in long-stay facilities in 1963. Almost one-half of these patients had been diagnosed as manifesting a functional psychosis. The other one-half were diagnosed as having brain syndromes (Simon, 1968).

How older people view the mentally ill is of interest because their attitudes are likely to influence their interactions with those who are mentally ill, and likely also to influence the individual's own adjustment as he joins their ranks.

But despite the size and importance of mental illness in the aged, as well as current expressions of interest in geriatric patients, there is a surprising lack of attempts to evaluate attitudes of aged patients toward mental illness or the mentally ill. However, attitudes of elderly individuals, young people, and psychiatric patients toward the aged and aging have been examined in a variety of studies.

Aged Persons

Many studies contained within the research literature indicate that there is a substantial acceptance of stereotypes about the aged individual in American society and

that the older one becomes, the more stereotyped these attitudes tend to be.

Tuckman and Lorge (1952) compared the attitudes of three groups of older age subjects: a group living in the community, a group living in the traditional type of institution for the aged, and an intermediate group living in an apartment house specially designed to house elderly people. Data gained by the investigators supported the hypothesis that as individuals become less able to function independently in the community, they subscribe to a greater degree to the misconceptions and stereotypes about old age. The apartment house group subscribed more to these misconceptions than the community group, while the institutional population subscribed more than the apartment house group.

Other studies (Merrill & Gunter, 1969; Tuckman, Lorge, & Spooner, 1953) support the finding that older subjects tend toward acceptance of stereotypes about the aged. Merrill and Gunter made a study of attitudes toward older people and preference for age of roommate in 100 patients hospitalized in double rooms. Their results are as follows: (a) more of the patients over 65 years of age preferred roomates under 65, (b) persons 65 years of age and older had more stereotyped responses toward old people than did either young or middle-aged groups, and (c) those over 65 years of age with only a grade school education had more stereotypic attitudes towards old people than did those with either a high school or college background.

The relationship between the beliefs of parents and those of their children toward old people has been investigated (Tuckman, et al., 1953). The correspondence in attitudes between parents and children is far from perfect. Parents subscribe more to the beliefs, misconceptions, and stereotypes about old people than do their children.

Carp (1967) studied the attitudes of old persons toward themselves and toward others. He found that a negative attitude toward the self characterized the inscrutable and those who lacked self-possession. A positive attitude toward the self tended to occur among those who expressed their feelings openly and those not easily put off balance or embarrassed. An additional finding was that attitudes, either positive or negative, toward other people were well established and resistant to change, even when the social context of life was drastically altered.

Young Persons

Much of the empirical work conducted in the area of how young people view old age and the processes of aging points toward two general conclusions: (a) old age is regarded as a period of life that is markedly different from earlier years, and (b) the differences are seen as predominantly, but not entirely, negative.

Tuckman and Lorge (1953) investigated the attitudes of a young adult group of graduate students toward old age. The results indicate substantial acceptance of misconceptions

and stereotypes about old people. Graduate students in-
volved in this study look upon old age as a period charac-
terized by loneliness, resistance to change, and failing
mental powers. Tuckman and Lorge speculate that these
results are a reflection of the cultural expectations re-
garding the activities, personality characteristics, and
adjustment of older people. Certainly, the data compiled
in the study indicate that old people are living in a social
climate which is not conducive to feelings of adequacy,
usefulness, security, and to good adjustment in their later
years.

Results similar to those of Tuckman and Lorge (1953)
were obtained by Kastenbaum and Durkee (1964). They found
that although students did not express harsh sentiments
toward elderly persons and did express some highly posi-
tive sentiments, nevertheless, the general impression was
that of a bias against the aged. According to the investi-
gators, younger individuals, perceiving that older persons
resent them, attempt to avoid interpersonal contact and
partially justify such avoidance by suggesting that older
individuals are really more interested in their families
and are preoccupied with death. On a more positive note,
they were regarded as wise and kind. The writers conclude
that evidence exists which indicates a predominantly nega-
tive appraisal of older people as well as a tendency for
young adults not to take the later years of their own lives
into consideration.

Some investigators (Drake, 1957; Tuckman & Lorge, 1954, 1958) have found little or no relationship between contact with the elderly and stereotypic attitudes toward them. An exception is provided by Rosencranz (1969). He found that young people who had close grandparent contact judged aged individuals more favorably than those having little or no contact with grandparents. Likewise, young people who had meaningful associational contact with at least one older person exhibited more favorable attitudes toward aged people.

Psychiatric Patients

One study (Feifel, 1954) in the research literature had as its focus: (a) to determine the general attitudes of the mentally ill toward aging; (b) to examine the relationship between level of adjustment and attitudes toward aging; and (c) to compare these with the reported findings on normal subjects.

Psychiatric, hospitalized male patients served as subjects. Their mean age was approximately 35; average educational level completed was the eleventh grade; and average IQ level was slightly above 100.

The findings of the study indicated that the psychiatric patients generally view old age in a gloomy manner. The degree of mental disturbance in the patients had little seeming effect on their overall gloomy attitude toward old age. It may be, as the investigators conjecture,

that attitudes toward old age are heavily determined by a widespread social attitude or ideology, rather than by idiosyncratic experiences.

In conclusion, it now seems appropriate to briefly consider some points of comparison between the views of elderly people that are held by young, elderly, and psychiatric persons. Findings described in this section suggest that all three groups tend to have a rather negative appraisal of older people and that tne young tend not to think ahead to the later years of their own lives. Furthermore, elderly people are regarded as being bound to the past, an orientation shared by very few young adults.

Facet Theory and Methodology

The following section of the present chapter comprises a summary of both Guttman's original formulations and subsequent adaptations proposed by Jordan and Maierle. Also related projects are presented.

Guttman Four-level Theory

Guttman defined attitude as "a delimited totality of behavior with respect to something" (1950, p. 51). Within the limits of such a definition, both verbal responses and overt behaviors can be construed as attitudes. If the particular response to an attitude item constituted an expression of attitude, then individual items could be analyzed to see what makes any kind of ordering possible.

One way to order responses is to examine the various seman-
tic factors involved in a particular response to a parti-
cular item. For Guttman, the crucial point in the measure-
ment of attitudes was the possibility of ordering a series
of specific responses to instrument items and from that,
ordering to make predictions.

In a reading of an article written by Bastide and
van den Berghe (1957), Guttman (1959) distinguished three
semantic factors, or "facets," involved in a particular
attitude response: the subject's behavior (belief or overt
action), the referent (the subject's group or the subject
himself), and the referent's intergroup behavior (compara-
tive or interactive). Each facet contains more than one
option or "element." Guttman distinguished between what
he called "weak" elements and "strong" elements. The first
of the two elements of each facet was designated as the
weaker one. Any particular attitude item, then, was as
strong as the number of strong elements which appeared.

Guttman arranges the facets for a particular project
in what he calls a facet definition. The definition then
contains the various facets and their elements in such a
way that it reads like a sentence. Such an arrangement is
then entitled a "mapping sentence."

According to the rationale of Guttman, if an attitude
item can be distinguished semantically in terms of three
facets, then an individual item could have none, one, two,

or three strong elements--a total of four combinations.
Although eight combinations of elements or semantic pro-
files are conceivable, i.e., (1) a_1 b_1 c_1, (2) a_1 b_1 c_2
. . . (8) a_2 b_2 c_2, Guttman indicated a logical reason for
considering only four permutations of strong-weak elements.
If elements are correctly ordered within facets and facets
are correctly ordered with respect to each other, a seman-
tic analysis of attitude items according to n dichotomous
facets will reveal n + 1 types of attitude items. Guttman
called these types "levels." The levels have an inherent
order where each level has one more strong element than
the level immediately preceding, and one less strong element
than the level immediately following.

Figures 1 and 2 are adapted from Guttman (1959).
Figure 1 contains the three facets originally identified
by Guttman and the elements identified within those facets.

Facets

(A) Subject's Behavior	(B) Referent	(C) Referent's Intergroup Behavior
a_1 belief	b_1 subject's group	c_1 comparative
a_2 overt action	b_2 subject himself	c_2 interactive

Fig. 1.--Basic facets used to analyze semantic struc-
ture of an attitude item.

Figure 2 contains the four permutations of strong-
weak elements which Guttman identified and the descriptive
names which he attached to each of those permutations. The

more subscript "2" elements a profile contains, the greater the strength of the attitude.

Level	Profile	Descriptive Label
1	$a_1b_1c_1$	Stereotype
2	$a_1b_1c_2$	Norm
3	$a_1b_2c_2$	Hypothetical Interaction
4	$a_2b_2c_2$	Personal Interaction

Fig. 2.--Level, profile composition, and labels for four types of attitude item.

If items are written to correspond to each of the four levels, Guttman (1966) hypothesized that levels closest to each other should be more similar and thus should correlate more highly with each other than more distant levels. Therefore, the levels having the largest number of common elements should be most closely related. Thus level 1 responses should be more similar to level 2 responses than to responses of any other level. Guttman called his hypothesis the "principle of contiguity." In essence, it implies that if the structure of certain items are close semantically, they should also be close statistically.

The hypothesized relationship of levels is ascertained statistically by what Guttman calls a "simplex." A simplex consists of a matrix of level-by-level correlations in which the order of the correlations is determined but not the exact magnitudes. A simplex thus defined,

would have a distinctive appearance. It would exhibit the characteristics of: (a) ascending correlations starting from the zero point (where the two coordinates meet) to the end points of either axes, and (b) closer correlations between adjacent levels than correlations separated by several levels. According to Guttman, if attitude items are correctly written, the matrix of level-by-level correlations should approximate a simplex. Guttman's hypotheses have been supported by his own research (Guttman, 1961) as well as that by Foa (1958, 1963) and Jordan (1968).

What Guttman proposes to achieve by facet design and analysis is to construct the content of a scale by a semantic, logical, a priori technique and to predict the order structure resulting from empirical data. Guttman's theory and methodology is the reverse of what in reality factor analysis accomplishes. Factor analysis is designed to try to make sense out of what already has been done by a mathematical process of forming correlational clusters and then naming them, i.e., calling them factors. As opposed to this approach, facet design, in essence, names the facets before one begins. Hypotheses can next be tested empirically by determining whether certain Cartesian products occur with the usual frequency and order expected, as shown by the relations among the features in the matrix of level-by-level correlations or simplex. Thus, according to Guttman facet theory, it is possible to establish an

ordering principle so that the attitude structure can be "ordered" with some explicit a priori semantic meaning rather than attempting to a postori evolve the meaning by some procedure such as factor analysis.

Jordan's Six-level Adaptation

Guttman's paradigm, i.e., facet design and analysis, for attitude item construction allows for three facets and hence four levels. Theorizing that there might be other pertinent facets, but accepting those that Guttman identified as appropriate, Jordan (1968) expanded facet analysis for attitude items dealing with specified groups to include five facets and hence six levels. Figure 3 indicates the facets and their elements identified by Jordan.

(A)	(B)	(C)	(D)	(E)
Referent	Referent Behavior	Actor	Actor's Intergroup Behavior	Domain of Actor's Behavior
a_1 others	b_1 belief	c_1 others	d_1 comparison	e_1 symbolic
a_2 self	b_2 overt action	c_2 self	d_2 inter-action	e_2 opera-tional

Fig. 3.--Basic facets used to determine conjoint struction of an attitude universe.

The product of the five/two-element/facets of Figure 3 yield 32 combinations of elements or profiles. Not all combinations are logical because of semantic considerations and the selection of the "best" set of components from the

32 possible is partly a matter of judgement. As shown in Figure 4, six of these profiles were chosen as psychologically relevant, potentially capable of instrumentation, and possessing a specific relationship between themselves-- a simplex one.

As B qualifies A's behavior in Figure 3, so E qualifies C's behavior. Frequently, but not necessarily, A and C are identical. In such cases, B and E must be "consistent,' i.e., some combinations seem illogical; B_1E_2. It should be noted that sometimes the subject filling out the questionnaire is identical with either referent or actor or both, but not necessarily so: i.e., in level 1 and 2 referent and actor are identical, the subject is asked to report about them; in level 3 the subject is identical with the referent, but not with the actor; in level 4, 5, 6, subject, referent, and actor are identical.

Joint struction in Figure 3 is operationally defined as the ordered sets of these five facets from low to high across all five facets simultaneously. The more subscript "2" elements a set contains, the greater the "strength" of the attitude. It should also be noted that not all combinations are logical. The selection of a "best" group of sets is still partly a matter of judgment. Two continua run through the facets: other-self and verbal-action.

Figure 4 shows levels of attitude strength, the element composition of the selected profiles, and a descriptive

term for each profile or level. Each successive level changes on only one facet so that the profiles have a simplex ordering.

Type-Level	Facet Profile	Descriptive Name
1	$a_1b_1c_1d_1e_1$	Societal Stereotype
2	$a_1b_1c_1d_2e_1$	Societal Norm
3	$a_2b_1c_1d_2e_1$	Personal Moral Evaluation
4	$a_2b_1c_2d_2e_1$	Personal Hypothetical Action
5	$a_2b_2c_2d_2e_1$	Personal Feelings
6	$a_2b_2c_2d_2e_2$	Personal Action

Fig. 4.--Attitude level, profile compositions, and descriptive names for six level attitude universe.

Joint[1] struction applied to Figure 4 refers to the differences between levels on facets A through E. It is that part of the semantic structure of attitude item construction which can be determined independently of specific response situations or attitude objects. Figure 5, as presented by Harrelson (1970), incorporates the data presented in Figures 3 and 4 and shows how the semantic structure of the six attitudinal levels of Jordan's Attitude Behavior Scale-MR (ABS-MR) (1967) is specified by the element composition or facet profile of each level.

The counterpart to joint struction, which specifies attitude level, is "lateral" struction.   The latter deals

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[1]Previously labeled conjoint and disjoint by Jordan (1968).

Level	Facet Profile	Definitional Statements	Descriptive Name
1	$d_1a_1c_1b_1e_1$	Others$_{a_1}$ believe$_{b_1}$ others$_{c_1}$ hypothetically$_{e_1}$ compared$_{d_1}$ to the mentally retarded.	Societal Stereotype
2	$d_2a_1c_1b_1e_1$	Others$_{a_1}$ believe$_{b_1}$ others$_{c_1}$ hypothetically$_{e_1}$ (should) interact$_{d_2}$ with the retarded.	Societal Norm
3	$d_2a_2c_1b_1e_1$	I$_{a_2}$ believe$_{b_1}$ others$_{c_1}$ hypothetically (should)$_{e_1}$ interact$_{d_2}$ with the retarded.	Personal Moral Evaluation
4	$d_2a_2c_2b_1e_1$	I$_{a_2}$ believe$_{b_1}$ I$_{c_1}$ hypothetically (would)$_{e_1}$ interact$_{d_2}$ with the retarded.	Personal Hypothetical Behavior
5	$d_2a_2c_2b_2e_1$	I$_{a_2}$ experience (affect)$_{b_2}$ when I$_{c_2}$ hypothetically$_{e_1}$ interact$_{d_2}$ with (think about) the retarded.	Personal Feelings
6	$d_2a_2c_2b_2e_2$	I$_{a_2}$ have experience$_{b_2}$ myself$_{c_2}$ in operationally (actually)$_{e_2}$ inter-acting$_{d_2}$ with the retarded.	Personal Action

Fig. 5. A definitional system for the joint struction of the Attitude Behavior Scale-Mental Retardation.

with the content of the item and is dependent upon a specific situation and attitude object. It specifies and differentiates the content of the items of the ABS-MR through five additional facets, F through J. Figure 6 adapted from Harrelson (1970) consists of a mapping sentence showing the five additional facets specifying item content, or lateral struction, as well as the relationship between joint and lateral struction on the ABS-MR. In addition, facets K and L in Figure 6 illustrate the "response mode struction" of the scales which is the degree of favorableness and intensity with which the subject responds to the items structured by facets A through J.

The ABS-MR is an instrument designed to measure attitudes toward mentally retarded persons and to contain six hypothesized attitudinal levels (Jordan, 1968). It represents what is believed to be the first attitude scale constructed on a priori basis according to facet theory. Data obtained through the use of this instrument supports the hypotheses of Jordan and Guttman (Harrelson, 1970; Jordan, 1969; Morin, 1969).

Maierle's New Theory Formulation

Maierle (1969) noted that Jordan did not examine fully (a) his choice of specific facet permutatons for each attitude level; (b) the effect of order of administration on relative size of correlations among levels; and (c) the effect of invariant directionality in answer foils.

38

JOINT STRUCTION

(A) Referent	(B) Referent Behavior	(C) Actor	(D) Actor's Intergroup Behavior	(E) Domain of Actor's Behavior
(Subject attributes to) a_1 others a_2 self	(the) b_1 belief b_2 experience (that the)	c_1 others c_2 self	d_1 compare (s) d_2 interact (s)	e_1 hypothetically e_2 operationally (their)

LATERAL STRUCTION

(F) Life Situations	(G) Importance	(H) Evaluation Process
(with the mentally retarded in) f_1 personal traits f_2 primary group relations f_3 recreation f_4 education f_5 employment f_6 health, welfare and legislation f_7 sex and family f_8 secondary group relations (involving)	g_1 high g_2 medium g_3 low (level of importance)	h_1 with respect to h_2 because of h_3 despite

RESPONSE MODE STRUCTION

(I) Trait Type	(J) Trait Level	(K) Valence	(L) Intensity
i_1 cognitive i_2 affective i_3 physical-behavioral	j_1 attributed handicap j_2 actual disability (with)	k_1 negative k_2 neutral k_3 positive (valence and)	l_1 low l_2 medium l_3 high (intensity)

Fig. 6. A mapping sentence of the joint, lateral, and response mode struction facets used to structure the Attitude Behavior Scale—Mental Retardation.

Moreover, he pointed out that several related problems
therefore remained: (a) identification of all possible
facet permutations; (b) examination of effects from order
of administration and from item directionality; and (c)
application of appropriate statistical tests.

Maierle's study was designed to resolve the problems
mentioned above. He analyzed the 32 permutations of five
dichotomized facets and found that only 12 appeared seman-
tically possible--Jordan's six and an additional six.
These 12 level members were hypothesized to be ordered
within seven semantic paths, or ordered sets of level-
member items. Each path comprised six or four of the 12
level members.

Next a set of experimental instruments was developed
which dealt with the emotionally disturbed rather than the
mentally retarded. The instrument consisted of two for
each of the semantic paths (one instrument with the level
members in a random order and one instrument with the level
members in the hypothesized order). Items were written so
that while content of answer foils remained identical,
directionality of foils and grammatical emphasis within
items varied randomly. Directions for items of each level
member were simplified and phrased in parallel form; all
items were phrased so that all sets of answer foils were
identical.

The 14 varying scales were administered in random order, one to a subject, to 825 undergraduate students. Kaiser's Q^2 procedure (Kaiser, 1962), which evaluates individual correlation matrices and orders the variables with matrices, was used to analyze the data obtained from the 14 sub-groups. A Q^2 value was determined for the hypothesized and best orderings of level members within each semantic path; for the random-order administrations of semantic paths, the Q^2 value was also determined for the particular random order of administration.

The results of Maierle's study indicated that for six of the seven paths analyzed, the Q^2 value for the randomly administered, randomly ordered matrix was less than the Q^2 value for the randomly administered, hypothetically ordered matrix. In no case--either of random administration or of hypothetically ordered administration--did the hypothesized ordering of correlations generate the best simplex approximation.

The hypothesized ordering principle (from no strong facets to all strong facets in succeeding level members) generally produced a better-than-random order, but never the best order. On the other hand, no general ordering principle which would improve on the hypothesized ordering principle was immediately obvious. Many of the best orders appeared to involve few reversals from the hypothesized order. Order of administration was apparently not of primary importance in simplex approximation.

Maierle concluded that the lack of an ordering prin-
ciple obviously better than the hypothesized one and the
generally close correspondence between hypothesized and
best orders, suggested that the hypothesized ordering prin-
ciple, the level members identified, and the orders hypoth-
esized among those level members, are useful extensions of
the Guttman-Jordan formulations.

Related Projects

As noted in the Introduction, the present proposal
is related to several studies. Jordan (1968) reported on
an 11-nation study of attitudes toward education and physi-
cal disability. Jordan's Attitude Behavior Scale-MR
(ABS-MR) (1967) is the principal instrument in the studies
of Gottlieb (1970), Harrelson (1970), and Morin (1969).
Hamersma and Jordan's scale (1969), a refinement of the
Jordan and Hamersma scale (Jordan and Hamersma, 1969),
dealing with attitudes toward Negroes and Whites, has been
developed from the work of Jordan (1968) and Hamersma (1969).
The original version of the scale also appears in the work
of Erb (1969), who investigated racial prejudice and em-
pathy. Maierle (1969) conducted a methodological study
concerned with an application of Guttman facet analysis to
attitude scale construction.

The work of Jordan and of Hamersma is of two types,
attitude-scale construction and substantive research. The

work of Erb, Gottlieb, Harrelson, and Morin is primarily substantive research. Maierle's study is one of attitude-measurement theory.

CHAPTER III

INSTRUMENTATION AND VARIABLES

This study employs a new instrument--the <u>Attitude</u>
<u>Behavior Scale-Mental Illness</u> (ABS-MI) - (Maierle, Jordan,
& Whitman, 1970). The construction of the ABS-MI was
evolved by a Guttman facet theory rationale which makes
it possible to construct items by a systematic <u>a priori</u>
design instead of by the method of intuition or by the use
of judges. Also, facet theory enables the specification
of object-subject relationships as well as situation con-
tent in each attitude scale item.

The six attitude levels of the ABS-MI (Appendix A)
are: (a) Societal Stereotype; (b) Societal Norm; (c)
Personal Moral Evaluation; (d) Personal Hypothetical Be-
havior; (e) Personal Feelings; and (f) Personal Action.
Each level member has one more strong element than the
immediately preceding level member and one less strong ele-
ment than the immediately following level members. No
element becomes weak once it has been changed from weak to
strong (see Figures 4, 5, and 6--Chapter II).

The six levels of the ABS-MI correspond to the set
of level members first identified by Jordan (1967) and

used in his original scale. Also, the levels correspond
to what Maierle (1969) designated as semantic path "C" in
his research. Although other attitudinal levels and seman-
tic paths exist, those which comprise the ABS-MI were
selected for the following reasons: (a) they have been
employed by researchers who developed scales to measure
attitudes toward the mentally retarded (Gottlieb, 1970;
Harrelson, 1970; Morin, 1969) and by researchers who mea-
sured attitudes of Negroes and Whites toward each other
(Erb, 1969; Hamersma, 1969); (b) the theoretical and struc-
tural aspects of the attitudinal levels and their rela-
tionship to other semantic paths and levels, have been
examined extensively in a methodological study by Maierle
(1969) who found a lack of an ordering principle obviously
better than the hypothesized one and a generally close
correspondence between hypothesized and best orders; (c)
although selection of a "best" set of components from those
possible is still partly a matter of judgment, from a
clinical frame of reference, they appear to have relevance
for both normal and psychiatric subjects and, therefore,
seem particularly fruitful.

All items in the six sub-scales of the ABS-MI evolved
directly from the facet design illustrated in Figure 5 and
correspond to the definitional statements for each atti-
tudinal level. From the complete facet design illustrated
in Figure 6, eight content items, each with a corresponding

measure of intensity (described in the following section),
were selected for each of the six levels of the instrument
so that the final attitude scale consisted of 96 items.
In other words, each one of eight attitude items and a
corresponding measure of intensity was repeated across all
six levels or sub-scales with the items, only, being al-
tered to conform to the facet structure of the different
levels. Consequently, the item content or "lateral struc-
tion" was held constant so that the attitude structure or
"joint struction" could be more easily assessed.

The ABS-MI was developed to measure the attitudes of
selected groups of psychiatric patients and "normal" per-
sons toward the mentally ill in the following eight scale
areas: (a) Marriage-to; (b) Intelligence-of; (c) Under-
standing-of; (d) Invitations-to; (e) Friends-with; (f)
Eating-with; (g) Helpfulness-of; and (h) Loans-to. These
are areas in which people in general as well as psychiatric
patients are likely to have strong, definite attitudes to-
ward the mentally ill. Additionally, other researchers
(Crumpton, et al., 1967; Giovannoni & Ullman, 1963;
Maierle, 1969) have included some of these areas in their
research which dealt with attitudes toward the mentally
ill.

The choices within each set of answer foils are
identical in phrasing--"agree," "uncertain," "disagree."
Directionality of foils is dependent upon the phrasing of

each individual item. For computational purposes, "un-
certain" is always scored "2" while the favorable response
(either "agree" or "disagree," depending on item phrasing)
is scored "3" and the unfavorable response is scored "1."
The higher an individual scores within a given level or
across levels, therefore, the more favorable or positive
are his attitudes.

As indicated above, all items on all levels contained
within the ABS-MI were written so that the choices within
all foils were the same for all items. One objection to
such an approach to item formulation is that of the danger
of response set or response bias, or the tendency to answer
all questions with identical foils in a similar fashion,
independently of the content of a specific item. In an
attempt to overcome the objection stated above, Maierle
(1969) controlled, by randomization, the directionality
and grammatical emphasis of the items included in his
scales. All level members were presented in one of four
variant item phrasings. Selection of the specific phrasing
for each item was by random assignment. This procedure
was employed to control for the effect of various types of
phrasing--in particular, the possible effect of response
bias in an instrument where answer foils are uniform through-
out. Maierle recognized that in spite of his procedures
and innovations, the effects of response bias and analogous
pressures, such as social desirability, were not necessarily
eliminated.

In the present study, the following procedures were incorporated in an effort to reduce the possible response bias of subjects: (a) each attitude item was followed by a question about intensity; (b) the order of the choices within answer foils were reversed or alternated on two levels of the scale; (c) someone was present to provide assistance or to answer questions while the subjects were completing the instrument; (d) all psychiatric patients were observed while they were responding to the scale and, although they were allowed to finish, those who were ob- viously responding in a set manner and/or not reading the items, had their data withheld from any further analysis; and (e) all subjects were given assurance that their re- sponses were confidential and anonymous. Hopefully, these procedures operated to reduce the number and extent of response sets. That they have been eliminated altogether is questionable, for attitude items such as those contained within the ABS-MI are verbalizations of behavior, or verbal expressions of a set of behaviors. Such verbal attitude items are open, to some degree, to the criticisms leveled at all questionnaire-type instruments.

Questions concerning the effect of the order of scale level administration upon the resulting correlation matrix could be answered following completion of Maierle's (1969) research. In all of the previous research in this area, all of the data had been obtained from administration of

various level member subtests in the same order, i.e.,
all items of level 1 were presented first, all items of
level 2 were presented second, and so forth. Maierle ad-
ministered the scale levels of a new Guttman type facet
attitude scale in a randomly varied order and in a level-
by-level order to a large group of subjects. He found that
the matrix generated by listing correlations according to
the hypothesized (level-by-level) order was a better sim-
plex approximation than that generated from the random
order of administration. Maierle concluded that order of
administration was apparently not of primary importance
in simplex approximation and that he did not find an
ordering principle obviously better than the hypothesized
one, thus lending further support to the theoretical assump-
tions involved.

In view of Maierle's findings and conclusions, the
ABS-MI was administered to all subjects in the hypothesized,
or level-by-level order.

The level names and choices of permutations of ele-
ments, as well as the choice of item content, specific
direction, and item formulations to match particular levels
which have been included in this study, are not assumed to
be the only possible ways in which such levels of attitude
may be expressed. They are, however, consistent with the
semantic implications of Guttman facet analysis. Therefore,
the system of verbalizations that is presented is not

assumed to be all inclusive, but rather a convenient way to classify and relate variaties of behavior within a "delimited totality of behavior."

<div align="center">Measurement</div>

Intensity

Guttman and Foa (1951) have emphasized the importance of intensity measures in attitude scales, particularly with regard to the contact variable.

Suchman (1950) has suggested that intensity of attitudes may be ascertained by asking a question about intensity immediately following a content question. This latter procedure was adopted by Jordan (1968) to measure intensity of attitudes on the ABS-MR. On levels 1-5, the three alternatives "not sure," "fairly sure," and "sure" are presented to the question, "How sure are you of this answer?" for each item. A variation of this procedure was used on level 6 to ascertain whether a reported experience with the retarded was "unpleasant," "in between," or "pleasant."

Both the Jordan system of facet analysis and the intensity dimension were employed in the construction of the ABS-MR Scale. The Scale has been administered to varying groups of subjects and in most cases, the expected empirical simplex which was predicted from the contiguity hypothesis (Guttman, 1959) was approximated.

Research by Maierle (1969) was primarily methodological and did not concern intensity measures. As Guttman

and Foa (1951) point out, however, the use of single ques-
tions for the study of effect, change, or comparison is not
advisable in that single questions ordinarily cannot dis-
tinguish between changes due to intensity and those due to
direction. In light of their observations, plus substantial
research conducted by Jordan and his students (referred to
in Chapter II), all of whom employed a measure of intensity
and found it a useful addition, an intensity measure was
used in the present research. Measurement of the intensity
of attitudes on all levels of the ABS-MI was similar to or
identical to the procedure used by Jordan (1968) on levels
1-5 of the ABS-MR. Responses to questions regarding in-
tensity of attitudes require a separate analysis and pro-
vide a wealth of information not ascertainable by other
means.

Combining Content and
Intensity Scores

(a) ABS-MI.--In spite of the admonition of Guttman and
Foa (1951) that it is inadvisable to ignore attitude in-
tensity in comparing the attitudes of groups, of those who
have used both content and intensity measures to date, such
as Maierle (1969), Morin (1969), Gottlieb (1970), and
Harrelson (1970), only the latter paid heed to their warn-
ing. The data reported in the research of the former in-
vestigators referred to subject responses to either the
content or intensity of each attitude item but not to the

two combined. Consequently, a weakly felt positive atti-
tude response was given the same weight as a strongly felt
positive response. Accordingly, strongly and weakly felt
neutral responses, as well as strongly and weakly felt
negative responses, were weighted equally.

Harrelson (1970) proposed that the content and in-
tensity responses be combined into one score for each item
to eliminate the seemingly inappropriate response weights
described above. Acting on his own proposal, he developed
a rationale and scoring procedure for combining content
and intensity responses which differentially weights each
combination of these two variables for each item. This
procedure is presented in Figure 7.

The combined scoring procedure has the effect of
increasing the range of possible scores for each item from
1-3 (negative to positive) to 1-9 (strongly negative to
strongly positive). Theoretically, the reliability of each
item should be enhanced, which in turn should further mag-
nify group differences and relationships between the pre-
dictor variables and the ABS-MI.

The effectiveness of the combining procedure was
tested and the results revealed that the ABS-MR reliabili-
ties were elevated as predicted--particularly levels 1, 2,
3, and 5. Although the reliabilities increased on levels 4
and 6, their magnitude was of a lesser degree than the
other ABS-MR levels. Additionally, the average item-to-
scale level coefficients increased consequent to combining

SCORING PROCEDURE

Content Alternatives

0--no response
1--negative attitude
2--neutral attitude
3--positive attitude

Intensity Alternatives

0--no response
1--weak intensity
2--medium intensity
3--strong intensity

Combined Scores

Content	Intensity	Combined	Rationale
0	1	0	Delete from analysis
0	2	0	because attitude direction
0	3	0	is indeterminable
1	0	2	Intensity error assumed
2	0	5	and neutral intensity
3	0	8	score of 2 assigned
1	3	1	Strong negative attitude
1	2	2	Medium negative attitude
1	1	3	Weak negative attitude
2	1	4	Weak neutral attitude
2	2	5	Medium neutral attitude
2	3	6	Strong neutral attitude
3	1	7	Weak positive attitude
3	2	8	Medium positive attitude
3	3	9	Strong positive attitude

Fig. 7.--Combined content-intensity scoring procedure for ABS-MI levels 1-6.

content and intensity into one score. These results support the ability of this procedure to improve individual item reliability.

In view of the advice rendered by Guttman and Foa (1951) and the pioneering research conducted by Harrelson (1970), and the results that he obtained, it was decided to combine the content and intensity scores gathered from subjects who completed the ABS-MI. The results that are presented in this dissertation are based on data which consist of combined content and intensity scores unless otherwise specifically indicated.

(b) Efficacy.--Prior research of Morin (1969), Gottlieb (1970), and Harrelson (1970), consisted, in part, of investigating the relationship between attitudes and a predictor variable labeled efficacy or life situations. Their data refers to subject responses to the content of each efficacy item and omits any reference to the intensity with which these items are responded to, although the efficacy scale (Appendix A) contains an intensity statement following each content item. Thus, a response to an efficacy item that was weak in intensity was given the same weight as a response that was strong in intensity and vice versa. Therefore, a scoring procedure and rationale was developed for combining content and intensity responses which differentially weights each combination of these two variables for each efficacy item. This procedure is presented in Figure 8.

SCORING PROCEDURE

Content Alternatives

    1--Strong negative response
    2--Negative response
    3--Positive response
    4--Strong positive response

Intensity Alternatives

    1--Minimum intensity
    2--Mild intensity
    3--Moderate intensity
    4--Maximum intensity

Combined Scores

Content	Intensity	Combined	Rationale
1	4	1	Maximum strong negative response
1	3	2	Moderate strong negative response
1	2	3	Mild strong negative response
1	1	4	Minimum strong negative response
2	4	5	Maximum negative response
2	3	6	Moderate negative response
2	2	7	Mild negative response
2	1	8	Minimum negative response
3	1	9	Minimum positive response
3	2	10	Mild positive response
3	3	11	Moderate positive response
3	4	12	Maximum positive response
4	1	13	Minimum strong positive response
4	2	14	Mild strong positive response
4	3	15	Moderate strong positive response
4	4	16	Maximum strong positive response

Fig. 8.--Combined content-intensity scoring procedure
for Efficacy-Life Situations Scale.

The procedure in which content and intensity scores
are combined has the effect of increasing the range of pos-
sible scores for each item from 1-4 to 1-16. As in the
case involving the attitudinal items and levels of the
ABS-MI, the wider range of scores should, if anything, in-
crease the reliability of each item and further differ-
entiate group differences and relationships between the
efficacy variable and those associated with the ABS-MI.

Validity of Attitude Behavior
Scale Type Instruments

Many attitude studies are conducted for the stated
purpose of systematically exploring verbally reported
attitudes (Anastasi, 1961). In actual practice, what too
often happens is that investigators resort to a super-
ficial kind of content validity based upon a cursory ex-
amination and classification of the more stereotypic, com-
parative, abstract and hypothetical aspects of topics to
be covered. Most attitude scales do not contain content
related to verbalizations about affective experiences and
concrete, overt behavior. The inclusion of level 5 (per-
sonal feeling) and level 6 (personal action) in attitude
behavior scale type instruments (Harrelson, 1970; Maierle,
1969; Morin, 1969) has the advantage of providing the op-
portunity to predict and analyze which of the other levels
correlate highest with "personal feeling" and "personal
action" levels.

Guttman's facet theory (Guttman, 1959, 1961), which is fully described in Chapter II, specifies that the attitude universe represented by the item content can be sub-structured into components which are systematically related according to the number of identical conceptual elements they hold in common. The sub-structuring of an attitude universe into components or elements facilitates a sampling of items within each of the derived components, and also enables the prediction of relationships between various components of the attitude universe.

The method of selecting item content on a systematic basis through the use of facet theory and a mapping sentence, as was done in the case of attitude behavior type instruments, appears far superior to other methods. It assures that a representative sample of the different behavior domains is selected and that adequate content validity of attitudinal levels is maintained.

All items in the sub-scales of attitude behavior scale type instruments, as well as those included in the ABS-MI (Appendix A), evolved directly through use of facet analysis and a mapping sentence and correspond to specified definitional statements for each attitude level.

Guttman (1959), analyzing the structure of attitude items, identified different levels, or types, generated from permutations of facets within each item. He hypothesized that, according to his principle of contiguity, the

matrix of level-by-level correlations would decrease in
relation to the number of steps the levels were removed
from one another and that they would approximate a simplex.
Subsequently, Guttman's hypotheses have been supported by
data obtained by a number of independent researchers
(Gottlieb, 1970; Harrelson, 1970; Jordan, 1970; Maierle,
1969; Morin, 1969), who have administered attitude behavior
scale instruments to a variety of subject groups (univer-
sity students, teachers, parents, and employers or manager
executives) in a number of different countries (United
States, Germany, Colombia, and British Honduras). Corre-
lation matrices contained in the research of the investi-
gators cited above, formed approximate simplexes as pre-
dicted by Guttman's facet theory and his contiguity hypoth-
esis. These results provide evidence of construct validity
for the attitude behavior scales that were used and are
generally supportive of facet theory as well as the utility
and fruitfulness of the facet approach to attitude scale
construction.

Attitude scales can be validated sometimes through
the use of contrasted groups as a special instance of con-
current validation. Such an approach was taken by Jordan
(1970), who chose subject groups on the basis of presumed
differences in age, education, knowledge and experience
regarding mental retardation, and cultural orientation.
It was assumed that special education-rehabilitation

graduate students would have more positive attitudes toward the mentally retarded than education sophomores and Belize (British Honduras) teachers, and that differences reflected on the attitude behavior scale instrument could be interpreted as providing concurrent validation data.

Analysis of variance results for the three sample groups revealed that the special education-rehabilitation graduate students did in fact obtain a significantly higher total content score than either the education sophomores or the Belize teachers which provides some support for concurrent validity of the attitude behavior scale that was used.

Finally, data gathered by researchers (Gottlieb, 1970; Harrelson, 1970; Jordan, 1970; Morin, 1969) on a number of predictor variables and the relationships between them and measures of attitudes obtained through the administration of attitude behavior scale instruments offer considerable "correlational" evidence of validity in that groups with known characteristics have tended to respond as predicted.

Reliability of Attitude Behavior
Scale Type Instruments

The reliability of attitude behavior scales has been estimated by obtaining a measure of internal consistency for each individual scale level by computing a Kuder-Richardson type reliability coefficient for each scale

level (Harrelson, 1970; Jordan, 1970). In actuality, a variation of the Hoyt (1966) method, allowing for a difference between the method of scoring the attitude behavior scales and the scoring method used in the Hoyt and Kuder and Richardson data was used to estimate the reliability of the scales. This method uses analysis of variance as described by Winer (1962) to provide a reliability coefficient equivalent to the Kuder-Richardson measure of internal consistency.

Harrelson, 1970, obtained combined score reliabilities which ranged from .60 to .92 and were consistently higher than the content-only reliabilities which ranged from .55 to .90. Average item-to-scale level correlations also increased through the combining procedure. The reliability estimates, and a pattern in which the lowest coefficients of reliability appeared on scale levels 1, 3, and 6 obtained by Harrelson, were strikingly similar to those of the groups used by Jordan, 1970. Thus, two separate researchers have used an attitude behavior scale instrument (ABS-MR) and have obtained similar reliability coefficients and a similar pattern of these coefficients in the United States, Federal Republic of Germany, and British Honduras, and in three different languages, i.e., English, German, and Spanish. These results suggest that various dimensions of attitudes in different countries were measured with approximately a similar degree of reliability.

Reliability estimates on a large number of various

types of attitude scales have been reported by Shaw and

Wright (1967). The figures they present compare favorably

with the majority reported for attitude behavior scales

that have been developed in accordance with Guttman's facet

theory and analysis. In addition, the reliabilities of

such instruments compare quite favorably to those of many

tests used for individual diagnosis, evaluation, and selec-

tion described by Anastasi (1961). Therefore, the reli-

ability of particular attitude behavior scales would cer-

tainly appear adequate for research involving groups.

Personal Questionnaire (Independent Variables)

A comprehensive reivew of the literature (Jordan,

1968) on attitude studies indicated that four classes of

variables seem to be important determinants, correlates,

and/or predictors of attitudes: (a) demographic factors

such as age, sex, and income; (b) socio-psychological

factors such as one's value orientation; (c) contact fac-

tors such as amount, nature, perceived voluntariness, and

enjoyment of the contact; and (d) the knowledge factor,

i.e., the amount of factual information one has about the

attitude object.

The instrument labeled Personal Questionnaire was

designed to operationalize several of the variables men-

tioned above. Many of the items in this questionnaire were

used in the international study of attitudes toward disabled

persons conducted by Jordan (1968) and subsequently by a

number of Jordan's students (Gottlieb, 1970; Harrelson,

1970; Morin, 1969). Also, it has been revised and adapted

for use by Erb (1969) and by Hamersma (1969) in their re-

search. It was further revised and adapted to meet the

needs and purposes of the present research. It is included

in Appendix A and consists of the various sections that

follow.

Demographic Variables

Eight demographic items are included in the question-

naire which from a theoretical standpoint might correlate

with or predict, the criterion: age, amount of education,

perceived importance of and adherence to religion, length

of hospitalization, marital status, religious preference,

and type of major therapy experience.

Change Orientation

A measure of change orientation was included to mea-

sure attitudes toward change in the following areas: self

change, child rearing practices, and birth control.

Chronicity

Ludwig and Farrelly (1966) maintain that the behavior

of many psychiatric patients is governed by a code of

chronicity. The code is characterized by the patient's

desire for: (a) minimal involvement and thought, (b) lack

of responsibility for their own or other's actions, and

(c) greatest amount of privileges and fewest restrictions without corresponding obligations.

Three items were included in the questionnaire to measure opinions with regard to the following areas: responsibility for self, involvement in activities, and the degree to which privileges should be earned.

Contact with the Attitude Object

Four items were designed to operationalize variables involved in personal contact between the respondents and the attitude object. The items included are conceptually distinct. They report the following: the frequency of contact; the ease with which the contact might have been avoided; the amount of enjoyment experienced in the contact with the attitude object; and the availability of alternatives to associating with the mentally ill.

Efficacy

Attitude items which appear in the questionnaire under the heading "Life Situations" (Appendix A) were adapted from a Guttman Scale reported by Wolf (1967). Measures of intensity or answer "certainty" were added to the original items. In addition, four levels of intensity of agreement-disagreement with the items replace the original "agree-disagree" dichotomy used by Wolf.

The scale introduced above is designed to measure attitudes toward man and his environment and attempts to

determine the respondent's view of this relationship. This variable has been termed "Efficacy" by Jordan (1968) since the scale purports to measure attitudes towards man's effectiveness in the face of his natural environment.

Knowledge About the Mentally Ill

Nunnally (1957) constructed a 50 item Information Questionnaire which was administered to "laymen" groups consisting of 200 respondents in Knoxville, Tennessee, and 151 subjects in Eugene, Oregon. Also, the questionnaire was administered to an "expert" sample made up of 90 psychiatrists drawn from the Group for the Advancement of Psychiatry and 86 psychologists who were members of the American Psychological Association.

The results of Nunnally's study indicate that, for the laymen groups or general public, amount of knowledge about the mentally ill, and education, correlate positively while age and knowledge correlate negatively. Additionally, through the use of partial correlation analysis, it was found that younger persons and older persons with the same number of years of education differ with regard to the amount of knowledge possessed, and that the difference favors younger persons.

The average responses by psychiatrists and psychologists were very similar. In no case was the difference between the means of the two groups of any significance. The item variances for the experts were in all cases lower

than those for the general public and were less than one-half as large on the average. As indicated in Nunnally's data, the psychiatrists and psychologists tended to agree on the relatively simple and truncated kinds of information that the public at large deals with.

Outside of the older age groups and the low education group (more than 50 years of age and less than a high school education), the laymen responses were not markedly divergent from what the experts advocate in Nunnally's study. The public disagrees most with the experts on the same issues in which the experts disagreed most among themselves, regarding techniques for maintaining and restoring personal adjustments.

In the present research a 17 item knoweldge scale on mental illness (Appendix A) was extracted from the larger Information Questionnaire of Nunnally (1957). These 17 items were selected because they were specifically designed to measure the amount of factual knowledge possessed by the respondent regarding various aspects of mental illness. Also, the mean rating of each item by both experts and the general public were used as a basis of selecting the items. An item was accepted if both groups tended to rate the item above 4.5 (agree with the item) or below 3.5 (disagree) on a seven point rating scale. A number of the seven items with which the two groups agreed were given a mean rating of 5 or above while some of the ten items with which the groups disagreed were given a mean rating of 3 or below.

To offset possible response tendencies, the direction of each item was determined on the basis of a table of random numbers (Nunnally, 1957). A table of random numbers (Lindquist, 1953) also was used to determine the order of appearance of each of the 17 items on the knowledge scale. This procedure insured that items of a true or false nature would be distributed throughout the scale on a random basis and would not be lumped together.

All items on the information scale were in the form of declarative statements. The respondents indicated their agreement with each statement on a four point, Likert-type scale, i.e., strongly agree, agree, disagree, and strongly disagree.

Attitude Object

One characteristic of the present formulation is that the analyses involved are independent of a particular attitude object, provided that object is some specifiable group of persons. The attitude object specified in the present study is the "mentally ill" person. Such a person is described as manifesting "a disorder due to psychic causes, whether the symptoms are somatic, psychic, or behavioral" (English & English, 1958). Such a specification rested in part on the assumption that the term "mentally ill" possessed a large enough commonality of meaning as to be susceptible to measurement by verbal report. Two additional reasons for the choice of this particular

attitude object was (a) the lack of research of the type proposed by Guttman and Jordan on attitudes toward the mentally ill, and (b) the lack of research regarding the attitudes of psychiatric patients, especially their attitudes toward other mentally ill persons.

CHAPTER IV

DESIGN AND ANALYSIS PROCEDURES

The design of this research calls for the administra-
tion of the Attitude Behavior Scale-Mental Illness (ABS-MI)
and an accompanying Personal Questionnaire to samples of
hospitalized psychiatric patients as well as to a group of
subjects who were not hospitalized and "normal" psycholo-
gically. Procedures designed to analyze the raw data were
selected which would permit testing the relationships
specified in the hypothesis.

Samples

The ABS-MI was administered to three samples of re-
spondents at the Battle Creek Veterans Administration Hos-
pital, Battle Creek, Michigan, and to a group of graduate
students at Michigan State University. A description of
the subject groups is presented below.

(a) 117 Schizophrenics.--All of the subjects in this
group were hospitalized Caucasian males who had been diag-
nosed as having schizophrenia. They resided on open, un-
locked wards located throughout the hospital. Their mean
age was 41.42 years, with a range of 21-59 years and a
standard deviation of 9.59 years. The educational level

of the group ranged from 4 to 19 years of school completed, with a mean of 11.32 years and a standard deviation of 2.45 years. The length of time spent in a psychiatric institution amounted to a mean of 9.02 years, with a standard deviation of 7.21 years and a range of one month to 27 years.

(b) <u>51 Geriatrics</u>.--The psychiatric subjects in this group were comprised of hospitalized, elderly Caucasian male veterans, all of whom resided on open wards. They had a mean age of 68.78 years with a standard deviation of 7.42 years and a range of 60-91 years. One of the subjects had acquired only 4 years of schooling while another, a former dentist, had accumulated 21 years. As a group, the average educational level was 9.25 years, while the standard deviation was 3.46 years. Psychiatric institutionalization ranged from a low of about one year to a high of 46 years with a mean of 14.86 years and a standard deviation of 13.34 years.

(c) <u>58 Alcoholics</u>.--All of these subjects were Caucasian male veterans who had a history of using alcoholic beverages excessively and who, consequently, were housed on the alcoholic rehabilitation unit at the hospital. They presented a mean age of 44.71 years with a standard deviation of 7.87 years and a range of 24-59 years. School attendance ranged from 6 to 17 years with a mean of 10.48 years and a standard deviation of 2.24 years.

When compared with the geriatric and the schizophrenic subjects as a whole, the alcoholic group had been hospitalized for a relatively short time. Length of hospitalization amounted to a mean of 20.76 weeks; a standard deviation of 32.65 weeks; and a range of 1-156 weeks.

(d) 55 Normals.--The subjects in this group consisted of both male and female graduate students who were enrolled in either a course in principles of guidance and personnel services or a seminar in rehabilitation counseling. Due to the method of data collection which was designed to facilitate computer analysis, exact (vs. coded) information with respect to the demographic variables of age, education, religious affiliation and marital status could not be obtained. However, in a general sense, the sample can be described as follows: under 30 years of age; graduate of a college or university; Protestant in religious orientation; and either married or single.

Originally, it had been planned to analyze the data separately for male and female students as well as for those students enrolled in the two different courses. Three factors led to the consolidation of the two samples. First, the number of male and female students in each class (particularly the principles of guidance and personnel services class) was rather small and even their combined numbers in each class could not be considered large. Second, for the content scores as well as the combined content and intensity

scores for each level of the ABS-MI, no significant dif-
ferences at the .05 level resulted when an F test was
applied to test the significance of the ratio of the two
variances (Guilford, 1956, p. 224) for each of the following
student groups: (a) combined male rehabilitation and
guidance--combined female rehabilitation and guidance;
(b) male rehabilitation--female rehabilitation; (c) male
guidance--female guidance; (d) male rehabilitation--female
guidance; male guidance--female rehabilitation; (e) male
rehabilitation--male guidance; and (f) female rehabilita-
tion--female guidance. In addition, when the F test was
applied to the scores on the change orientation items (101,
102, 103), chronicity orientation items (105, 106, 107),
and the contact items (108, 109, 110, 111) for each of the
above groups (a, b, c, d, e, and f), only one (item 108;
male guidance--female guidance group) of a total of 70 dif-
ferent F tests was significant at the .05 level.

Third, the comparison of schizophrenic, geriatric,
and alcoholic patient attitudes toward the mentally ill
with those of normal subjects and vice versa, on a number
of dimensions, constitutes one of the primary purposes of
the present research endeavor. While a comparison of the
attitudes of various groups of subjects who are not hospi-
talized in a psychiatric institution with one another
would be both of value and interest, it is beyond the pur-
poses and scope of this dissertation.

In view of the three points outlined above, the various groups of Michigan State graduate students were combined into one group of normal subjects and their data were treated and analyzed as such in order to diminish the influence of chance factors and to increase the reliability and validity of the results. All of the points listed, especially the second, would seem to lend support and justification to the procedure adopted.

Pretesting of the Instrument

It is essential that every new instrument be pretested before initiating the full-scale field operation (Festinger & Katz, 1953; Kahn & Cannel, 1957). Pretesting has at least three purposes: (a) to develop the procedures for applying the research instrument so that, for example, the instrument can be used effectively with respect to the time it takes to administer; (b) to test the wording of questions so that they are suited to the comprehension of the respondents; and (c) to ensure, as far as is practical, that the specific questions or observations are really getting at the variable for which a measure is needed.

According to the authors cited above, in the pretesting of instruments and procedures, it is not essential to obtain a representative sample of subjects. It is important, however, to try to include some of the main types of people who will be included in the final study. Therefore, in the present study, the ABS-MI was pretested on 5 schizophrenic and 5 geriatric subjects.

Pretesting revealed that the schizophrenic subjects
generally were able to follow the instructions on the ABS-MI,
understand the items, and complete the entire instrument in
a reasonable period of time. The fact that these subjects,
like most all of those patients who eventually participated
in the study, resided on unlocked open wards, were not
overtly hallucinating, and were in contact with reality,
may account for their ability to comprehend and perform
the task with a minimum of difficulty.

Pretesting of the geriatric subjects disclosed a
number of significant findings that had important implica-
tions for the administration of the instrument. First,
geriatric patients who had visual and auditory impairments
and/or limitations of strength and movement in their upper
extremities were generally unable to independently complete
the instrument satisfactorily or at all. Second, the
auditory comprehension of the subjects was superior to
their visual comprehension. They tended to be slow and
inaccurate readers and either did not comprehend the writ-
ten material at all or misunderstood what they read. How-
ever, they demonstrated an ability to respond appropriately
to the directions and questions when they were read aloud
by the examiner. Third, patients exhibiting moderate to
severe manifestations of an organic brain syndrome were
unable to perform adequately regardless of how the instru-
ment was administered. Those who displayed mild disorienta-
tion for time and place relationships and mild limitations

of their memory were able to complete the instrument ade-
quately providing that the directions and items were pre-
sented verbally and providing that sufficient interest
and motivation could be maintained. Fourth, the geriatric
patients questioned extensively and repeatedly the purpose
of the instrument and the use to be made of their responses.
They tended to request or demand assurance and support and
required rather close supervision and guidance in order to
resolve preoccupations with individual items and to main-
tain an orientation toward the task at hand. In addition,
their interest in and motivation to complete the instru-
ment appeared to depend to a large extent on the quality
of the rapport that was established between the examiner
and the patient.

Pretesting revealed that the geriatric subjects
performed best when the instrument was administered indi-
vidually and when the instructions and items were read
aloud directly to them. Moreover, the observations re-
ported above, made it apparent that group administration
of the instrument to the geriatric subjects would be ill-
advised, impractical, and unfeasible. Therefore, following
pretesting of the instrument, the decision was made to
administer it individually to each geriatric subject al-
though previously it had been thought possible to administer
the ABS-MI to them in groups.

The instrument was not pretested on normal or alcoholic subjects. Since a number of the items had been administered to a sample of normal subjects by Maierle (1969) and in view of the results obtained from pretesting schizophrenic subjects, it was not believed to be a necessary measure. Subsequent experience verified this decision.

Administration

The ABS-MI was designed for group administration, but it can also be administered individually. The instructions and items are relatively simple and straightforward and the scale as a whole is comparable to the ABS-MR which requires about a fifth grade reading level.

The instrument was administered to the schizophrenics in a testing room where extraneous noise and distractions could be held to a minimum. It was given to the alcoholics in an enclosed conference room that was located within the confines of the building in which they reside. The geriatric patients completed the instrument in the privacy of a quiet room or an office. Students at Michigan State University who were enrolled during the 1970 spring term in a course in either principles of guidance and personnel services or a seminar in rehabilitation placement, responded to the instrument as a part of their normal working class period.

Schizophrenics

The ABS-MI was administered between January 16, 1970 and February 4, 1970 to a total of 126 Caucasian male schizophrenic patients who resided on open unlocked wards. Various ward psychologists, nurses and nursing assistants believed that all of the 126 patients would be capable of responding appropriately and adequately to the items on the ABS-MI. The performance of only 9 subjects proved to be obviously invalid. Two subjects answered the items in accordance with a blatant position set; two were uncooperative and responded to the items in a random fashion; two were unable to comprehend the instructions; two were overtly hallucinating; and four patients refused either to participate at all or to continue to be involved in the testing. Consequently, the results obtained from 117 subjects were used for the final statistical analyses.

The average length of time required to complete the instrument was approximately 50 minutes and most of the schizophrenic patients finished it within an hour.

Geriatrics

The names of 73 Caucasian male patients who were 60 years of age or older (born in 1909 or before) and who resided on an open ward were obtained from the medical administration department. Between December 9, 1969 and January 6, 1970 the ABS-MI was administered individually to these subjects, of which 51 completed it. The remainder

were unable to respond appropriately to the scale because

of mental confusion, lack of comprehension, or lack of

adequate contact with reality. The length of time taken

to complete the scale ranged from 45 to 90 minutes. Most

of the geriatric patients took between 55 and 65 minutes

to finish the scale while the average length of time re-

quired was approximately one hour.

Alcoholics

Between January 5, 1970 and February 18, 1970 the

ABS-MI was completed by 58 Caucasian male subjects who had

a diagnosis indicative of excessive abuse of alcohol and

who had been admitted to the alcoholic rehabilitation unit

at the hospital. Although a number of the patients had

one or more diagnoses denoting the presence of a physical

afflication, only two had been diagnosed as having a

psychiatric disorder other than that related to alcoholism.

One had a diagnosis of schizophrenia, latent type, while

the other's diagnosis was schizophrenia, chronic undif-

ferentiated type. All patients admitted to the alcoholic

rehabilitation unit have free access to hospital ground

privileges and they intermingle with one another as well as

with other patients in both an incidental and planned

fashion.

The instrument was administered to the subjects in

small groups ranging from 3 to 8 members in number. One

patient was openly hostile and negative about being tested

and, inasmuch as he purposely omitted data and was generally uncooperative with respect to both behavior and attitude, his ABS-MI was invalidated and excluded from statistical analyses. One other potential subject could not be tested because he was not available due to his being on a pass, ill, etc., whenever a group of alcoholic subjects was tested.

All but one of the alcoholic patients completed the entire instrument in one hour or less. A few finished in 30 minutes. The mean period of time needed to finish was approximately 45 minutes.

Normals

On April 30, 1970 the ABS-MI was completed by two groups of graduate students at Michigan State University. One group consisted of 21 male and 17 female rehabilitation counseling students enrolled in a seminar in rehabilitation placement. One student did not finish the entire instrument and, consequently, was eliminated as a subject.

The remaining group of students was comprised of 8 male and 9 female students enrolled in a course in principles of guidance and personnel services. One student discontinued after responding to 36 items.

Research Hypotheses

A number of variables employed in this study were intercorrelated to enable examination of relationships for content and intensity scores of the criterion (ABS-MI)

across each of six attitudinal levels with several inde-
pendent variables. This procedure permitted testing of
the research hypotheses.

Research hypotheses that relate attitudes to variables
concerning demographic factors (age and education), value
orientations, contact factors, and a knowledge factor were
derived from previous research (Jordan, 1968) related to
the attitudes of various groups in eleven nations toward
the physically handicapped and toward education. In the
present study, hypotheses were formulated to further expli-
cate the relationship between attitudes of four subject
groups toward the mentally ill and the four categories of
predictor variables.

Hypotheses pertaining to the relationship between
attitudes and length of hospitalization as well as atti-
tudes and group membership stemmed from the work of prior
researchers (Brady, Zeller, & Reznikoff, 1969; Manis, Houts,
& Blake, 1963; Swanson & Spitzer, 1970) who found that
persons hospitalized for a lengthy period of time held
less favorable attitudes toward the mentally ill, psychi-
atric treatment, psychiatrists, and mental hospitals than
did persons hospitalized for a short time or those not
hospitalized at all.

The hypothesis relating attitudes toward the mentally
ill and chronicity orientation (see Chapter III) is based
on the work reported by Ludwig and Farrelly (1966) who

delineated the characteristics of a code of chronicity and its ramifications prevalent among psychiatric patients.

The research hypothesis which deals with attitudes and multidimensionality stems directly from facet theory and the research of Guttman (1959, 1961), Jordan (1968), and Maierle (1969). Their research was discussed in Chapter II.

All of the thirteen research hypotheses contained within this study are presented below.

Relating Attitudes and Demographic Variables

H-1.--Persons who score high on age will score low on positive attitudes toward the mentally ill.

H-2.--Amount of education will be positively related to favorable attitudes toward the mentally ill.

H-3.--Persons who have experienced a relatively short period of hospitalization wil score higher on positive attitudes toward the mentally ill than will persons who have experienced a relatively long period of hospitalization.

Relating Attitudes and Religiosity

H-4.--Persons who score high on stated importance of religion will score low on positive attitudes toward the mentally ill.

H-5.--Persons who score high on stated adherence to religion will score low on positive attitudes toward the mentally ill.

Relating Attitudes and
Change Orientation

H-6.--Persons who score high on change orientation will score high on positive attitudes toward the mentally ill.

Relating Attitudes and
Chronicity Orientation

H-7.--Persons who score high on chronicity orientation will score high on positive attitudes toward the mentally ill.

Relating Attitudes and Contact

H-8.--The more frequent the contact with mentally ill persons, the higher will be the intensity scores on the ABS-MI, regardless of the direction (positiveness or negativeness) of attitude.

H-9.--High frequency of contact with mentally ill persons will be associated with favorable attitudes toward the mentally ill if high frequency is concurrent with (a) alternative rewarding opportunities, (b) ease of avoidance of the contact, and (c) enjoyment of the contact.

Relating Attitudes and Efficacy

H-10.--Persons who score high in efficacy will score high in positive attitudes toward the mentally ill.

Relating Attitudes and Knowledge

H-11.--Persons who score <u>high</u> in knowledge about mental illness will score <u>high</u> in positive attitudes toward the mentally ill.

Relating Attitudes and Group Membership

H-12.--The groups will assume the following order with respect to favorable attitudes toward the mentally ill: Normals>Alcoholics>Schizophrenics>Geriatrics.

Relating Attitudes and Multidimensionality

H-13.--The ABS-MI scale levels or attitude sub-universes will form a Guttman simplex for each of the sample groups.

Analysis Procedures

Control Data Corporation Computers (CDC 3600 and 6500) at Michigan State University were used to analyze the data.

Correlational Statistics

Considerable data can be employed in one analysis through the use of the CDC 3600 MD-STAT program (Ruble & After, 1966). Separate analysis can be done for the total group and for any number of sub-groups, or partitionings of the data. A number of statistics can be requested for each specified group. Those used for each partitioning in this research were means and standard deviations for each

variable and the matrix of simple correlations between all variables.

Partial and multiple correlations are outputs of the general multiple regression model used in the CDC 3600 program (Ruble, Kiel & Rafter, 1966a). The multiple correlation program yields the following statistics: the beta weights of all predictor variables, a test of significance for each beta weight, and the partial correlations between each predictor and the criterion.

One benefit of the use of multiple correlation is that a number of variables which are assumed to have some relationship to a criterion, or dependent variable, can be examined simultaneously. When a series of Pearsonian product-moment r's are computed between a criterion and a set of variables considered to be predictors of the criterion, spurious conclusions may be obtained because the predictor variables are themselves inter-related rather than directly predictive of the criterion. In a partial correlation of each variable with the criterion, the effects of all but one variable are held constant.

Analysis of Variance

One-way analysis of variance statistics was calculated by means of the UNEQ1 routine (Ruble, Kiel, & Rafter, 1966b). This program is designed to deal with unequal frequencies that occur in the various categories.

A two-way analysis of variance design for unequal n's (Ruble, Paulson & Rafter, 1966) was used to analyze group-sex interaction which could occur only for the normal group and the total sample since they were the only ones that contained both males and females. Since none of the samples were equal in size and some were not equal in sex ratio within groups (normal and total sample), all F tests were based on the adjusted means. Thus, the variance in the size of the group samples was equalized or accounted for by the coefficients on which the adjusted means were based. Where it was applicable, the F statistic was used to test all of the mean differences.

Several multiple means tests have been proposed for determining the differences between treatment means (Winer, 1962) when three or more means are involved. In the present research, the F test for group comparisons was used to test for differences between adjusted means for pairs of groups equal to a two-tailed t test while also fully accounting for the other experimental factor.

Simplex Approximation Test

In Chapter II, a simplex was described as exhibiting the characteristics of descending absolute correlation coefficients moving from top to bottom in columns and ascending coefficients moving from left to right in rows.

Kaiser (1962) has formulated a procedure for scaling the variables of a Guttman simplex. His procedure orders the variables and suggests a measure of the goodness of fit of the scale to the obtained data.

The approach developed by Kaiser may be seen as performing two functions: (a) a "sorting" of virtually all possible arrangements of data so as to generate the "best" empirically possible simplex approximation; and (b) an assignment of a descriptive statistic, "$\underline{Q}^2$," to specified matrices. The index $\underline{Q}^2$ is a descriptive one, with a range of 0.00 to 1.00.

A computer program has been developed at Michigan State University which (a) re-orders the level member correlations of each ABS-MI matrix by Kaiser's procedures, so as to generate the best empirically possible simplex approximation; and (b) calculates $\underline{Q}^2$ for the hypothesized (theoretical) ordering and for the empirically best ordering of each matrix.

Kaiser's simplex approximation test has two rather serious limitations for which viable alternative procedures do not presently exist. First, the value $\underline{Q}^2$ is a descriptive statistic that has no test of significance available to evaluate how well a simplex has been approximated. Second, neither Kaiser's test nor the simplex model, which is based on Guttman's (1959) Contiguity Hypothesis, accounts for negative correlations.

As mentioned previously, there presently is no significance test available for Q^2 values. The maximum number of order reversals that a 6 x 6 matrix could contain and still be accepted as approximating a simplex was set at six by Hamersma (1969). By this criterion, it was found that a Q^2 value of .60 was minimal and that to consider a correlation matrix as approximating a simplex, a value of .70 should be used. As a result of Hamersma's findings and recommendations, a Q^2 value of .70 or above will be used to consider a matrix as approximating a simplex in this research.

CHAPTER V

ANALYSIS OF THE DATA

The data were analyzed by computer at Michigan State
University and the various analysis procedures used were
described in Chapter III.

ABS-MI Reliability

The ABS-MI content and intensity scores were com-
bined into one score for each subject on each item according
to the procedure indicated in Chapter III. It may be re-
called that the combining procedure resulted in increasing
the range of scores possible for each item from 1-3 (nega-
tive to positive) to 1-9 (strongly negative to strongly
positive). The purpose of increasing the range of scores
was to add to the discriminative ability as well as the
reliability of each item and, thereby, effect an increase
in the reliabilities of the various ABS-MI scale levels.

The effects of combining ABS-MI content and inten-
sity scores were tested by obtaining reliability estimates
for the psychiatric and normal samples on content scores
alone and on combined content-intensity scores by the
Hoyt (1966) method discussed in Chapter III. The reliability
estimates which resulted are presented in Table 1.

TABLE 1.--ABS-MI Hoyt reliabilities for content and combined content-intensity scores for psychiatric and normal samples.

Group		Scale Level Reliability Coefficients					
		1	2	3	4	5	6
117 Schizophrenics	Content	.74	.76	.71	.77	.54	.64
	Combined	.77	.77	.71	.78	.55	.64
51 Geriatrics	Content	.64	.81	.78	.82	.68	.73
	Combined	.69	.82	.78	.83	.73	.73
58 Alcoholics	Content	.55	.79	.70	.70	.59	.66
	Combined	.61	.82	.73	.73	.58	.69
55 Normals	Content	.60	.65	.71	.84	.67	.81
	Combined	.64	.67	.73	.86	.71	.82

Reference to Table 1 reveals that, in most cases, the ABS-MI reliabilities for the combined content-intensity scores are greater than those for the content scores. The increases vary in size and tend to be small in some instances; however, they do occur across groups and across ABS-MI scales. The combining procedure produced consistently larger reliabilities on stereotypic level 1 across groups as well as consistent increments across scales for the group of normals. The reliability estimates often increased for the other five ABS-MI levels and for the psychiatric samples, but not to the extent of level 1 and the normals.

The reliability estimates in Table 1 present a fairly clear contrasting pattern for the psychiatric patients and normals. The reliabilities on the more impersonal levels (1-3) obtained by the psychiatric patients tended to be higher than those that evolved for the normals. Just the reverse pattern occurred on the more concrete, action oriented, and personal levels 4-6 where the magnitude of the reliabilities were generally greater for the normal sample.

The reliability coefficients present in Table 1 for both the normals and psychiatric patients are comparable to the majority of those reported by Shaw and Wright (1967) for a variety of attitude scales. Therefore, they are considered adequate for the type of group research that is characteristic of the present study.

Research Hypotheses

An analysis of the data as it relates to the research
hypotheses forms the remainder of Chapter V. The analysis
follows the order in which the thirteen hypotheses were
presented in Chapter IV.

For the readers convenience, the means and standard
deviations of the content, intensity, and predictor vari-
ables, for the psychiatric persons and normals, are pre-
sented in Table 18 while Table 19 contains the means and
standard deviations of the ABS-MI and Efficacy scale com-
bined content-intensity scores. Adjusted means and F
tests for the ABS-MI combined content and intensity scores
can be found in Table 20. These tables are presented in
Appendix B.

Relating Attitudes and Demographic Variables

H-1.--Persons who score high on age will score low
on positive attitudes toward the mentally ill.

Hypothesis 1 was tested by correlating the ABS-MI
and the age of subjects as measured by question 97 in the
Personal Questionnaire section of the instrument. Ascend-
ing values on question 97 reflect ascending years of age.
Therefore, H-1 predicts a negative relationship between
age and attitudes toward the mentally ill.

Table 2 contains the correlational data. The values
obtained on levels 1 and 3-5 for the total sample strongly

TABLE 2.--ABS-MI-age correlations for psychiatric and normal samples.

Group	ABS-MI Scale Level Correlations					
	1	2	3	4	5	6
117 Schizophrenics	-.07	-.12	-.24**	-.23**	-.16	-.07
51 Geriatrics	-.39**	-.04	.10	.17	.12	.10
58 Alcoholics	.29*	.27*	.17	.11	.18	.01
55 Normals	.09	-.24	-.28*	-.27*	-.20	-.14
281 Total Sample	-.24**	.04	-.27**	-.16**	-.15**	-.04

*P.<.05.

**P.<.01.

support Hypothesis 1; however, it is not supported on normative level 2 or personal action level 6. Thus, compared to younger persons, older persons in the total sample expressed more negative attitudes toward mentally ill persons on a stereotypic, moral evaluation, hypothetical action, and personal feeling level as predicted. They did not do so, however, on a normative or personal action level.

Turning to the separate groups, one can determine that the statistically significant negative values obtained on levels 3 and 4 for the schizophrenic and normal groups of subjects lend support to Hypothesis 1 for these groups, but it is not supported by the data shown for the other ABS-MI levels. On a moral evaluation level and a hypothetic action level, older schizophrenics and normals exhibit more negative attitudes toward the mentally ill than do those who are younger.

The results for the geriatric group indicate that those who are older do not tend to manifest negative attitudes, as measured by the ABS-MI, any more than do those who are younger. The one exception occurs on stereotypic level 1 where a significant negative value of -.39 indicates that the more aged sample attributed more negative attitudes toward the mentally ill to others than did less aged subjects.

Resulting significant measures on levels 1 and 2 for the alcoholic group are in the converse direction of that predicted by Hypothesis 1. They suggest that alcoholics who are older attribute more favorable attitudes toward the mentally ill to other people, on levels 1 and 2, than do younger alcoholics.

In summary, the data are largely supportive of Hypothesis 1 for the total sample, but less so for individual groups. It is supported only on ABS-MI levels 3-4 for both schizophrenics and normals, as well as only on level 1 for the geriatric group of subjects. None of the data for the alcoholics are supportive of the hypothesis, and the data for levels 1 and 2 are the opposite of what was predicted.

H-2.-- Amount of education will be positively related to favorable attitudes toward the mentally ill.

Hypothesis 2 was tested by correlating the ABS-MI with item 98 in the questionnaire which pertains to the amount of education acquired. The resultant product-moment correlations, for the total sample and the four separate samples, are provided in Table 3.

The measures in Table 3 reveal significant positive relationships between education and ABS-MI levels 3-6 for the total sample which is in direct support of Hypothesis 2. It is not supported for level 1 or for level 2 where a significant negative figure of -.15 is in the direction

TABLE 3.--ABS-MI-amount of education correlations for psychiatric and normal samples.

Group	ABS-MI Scale Level Correlations					
	1	2	3	4	5	6
117 Schizophrenics	-.21*	.04	-.01	-.08	.01	-.06
51 Geriatrics	.03	-.14	.07	.17	-.03	.14
58 Alcoholics	-.01	-.07	.09	.10	.10	.20
55 Normals	.01	.00	.32*	.28*	.04	.25*
281 Total Sample	.03	-.15**	.22**	.19**	.12*	.16**

*P.<.05.

**P.<.01.

opposite to what was predicted. Comparison of the data for level 2 and 3-6, for the total sample, suggests that persons who have more education rate others as having an unfavorable attitude toward the mentally ill, while they assess their own attitudes as being favorable.

Looking at the individual groups, it can be seen that there is a complete lack of a significant relationship between attitudes and amount of education for the geriatric and alcoholic groups, as well as for levels 2-6 for the schizophrenics. The one exception for the latter occurs on stereotypic level 1 where a statistically significant figure of -.19 was obtained. Such a relationship suggests that the better educated schizophrenics consider other persons to have negative attitudes toward the mentally ill and to compare them unfavorably.

Significant positive correlations on moral evaluation level 3, hypothetical action level 4, and personal action level 6, for the normal group, comprise data which are in direct support of Hypothesis 2. Compared to the other groups (schizophrenic, geriatric and alcoholic), it indicates that the relationship between amount of education and the ABS-MI is greater in the predicted direction on more attitudinal levels for the normal group.

To summarize, the data in Table 3 support Hypothesis 2 on levels 3-6 for the subjects combined. It indicates that those who are better educated believe, more

often than those less educated, they should (moral evalua-
tion level 3), would (hypothetical action level 4), and do
(personal action level 6) enter into positive relationships
with mentally ill persons, and that they actually feel
(personal feeling level 5) more positive about such rela-
tionships. However, the results also indicate that, as a
group, the better educated subjects see other people as
thinking that "persons who are like themselves" (normative
level 2) tend to hold more negative attitudes toward the
mentally ill.

H-3.--Persons who have experienced a relatively short
period of hospitalization will score higher on positive
attitudes toward the mentally ill than will persons who
have experienced a relatively long period of hospitaliza-
tion.

Hypothesis 3 was tested by correlating the ABS-MI
with responses to item 104 in the questionnaire which asked
the subject to report the length of his hospitalization in
a mental hospital. It should be mentioned at this point
that the arrangement of choices in the answer foil for
item 104 is such that the highest numbered choice is asso-
ciated with the shortest period of hospitalization. Con-
sequently, positive correlations between the ABS-MI and
item 104 indicate a positive relationship between attitudes
and shortness of hospitalization, while negative correla-
tions indicate the converse.

The correlation figures in Table 4 show that significant positive correlations on ABS-MI levels 3-4 and 6 resulted for the total sample, which is commensurate with Hypothesis 3. In other words, persons who have been hospitalized for a shorter period of time are inclined to think that they or others should, they would, and they have or do associate positively with the mentally ill in a variety of circumstances. Interestingly, as indicated by a significant negative value on normative level 2, they do not think that other people have very positive attitudes toward the mentally ill. In addition to level 2, the data presented on levels 1 and 5 do not support the hypothesized relationship between attitudes and length of hospitalization for the combined samples.

Looking at the groups separately, it can be seen that Hypothesis 3 is not confirmed by the data on any of the attitudinal levels for the geriatric and alcoholic groups. For these groups, there is not a strong relationship between duration of hospitalization and favorable attitudes toward the mentally ill.

Examination of the correlations given in Table 4 for the schizophrenics, reveals a strong positive relationship between attitudes and shortness of hospitalization on moral evaluation level 3 and hypothetical action level 4, which is supportive of Hypothesis 3. However, a significant relationship was not maintained for the remaining attitudinal levels. Therefore, it appears that schizophrenics

TABLE 4.--ABS-MI-length of hospitalization correlations for psychiatric and normal samples.

Group	ABS-MI Scale Level Correlations					
	1	2	3	4	5	6
117 Schizophrenics	.05	-.01	.31**	.29**	.08	.16
51 Geriatrics	.18	-.24	-.24	-.25	-.16	-.13
58 Alcoholics	.06	.06	.04	-.01	-.07	-.05
55 Normals	-.02	-.01	.38**	.43**	.41**	.11
281 Total Sample	-.07	-.26**	.21**	.17**	-.03	.20**

*P.<.05.

**P.<.01.

who have been hospitalized for a comparatively short period believe, on an abstract and hypothetical level, that they should and would enter into positive relationships with other mentally ill persons. But the data on levels 5 and 6 suggest that they do not express significant positive feelings about interacting with the mentally ill, nor do they indicate a willingness to maintain personal relationships on a behavioral level with them.

The data in Table 4 show significantly positive values on levels 3-5 for the normal group and, with considerable qualification, suggest that those who have been hospitalized for only a short time express more positive attitudes than do those who have been hospitalized longer.

In summary, the data partially confirm Hypothesis 3 for the total group of subjects, schizophrenics, and normals, but not for the geriatric and alcoholic groups. However, since the normal sample may have inadvertently provided erroneous responses to the item concerned with length of hospitalization, their results and those of the total sample should be given cautious and conservative consideration.

It should be pointed out that originally item 104 in the questionnaire, concerning length of hospitalization, was designed primarily for use with psychiatric patients and refers to length of hospitalization in a psychiatric oriented institution. Normal subjects may have considered

their physically and/or medically related experiences when answering the item. Consequently, since their frame of reference when responding to the item is unclear, their results, together with those for the total sample, may be somewhat specious and open to other alternative explanations.

Relating Attitudes and Religiosity

H-4.--Persons who score high on stated importance of religion will score low on positive attitudes toward the mentally ill.

Hypothesis 4 was tested by correlating the six levels of the ABS-MI with responses to item 99 in the questionnaire which requests that the subject indicate the importance of religion to him in his daily life. As it is stated, the hypothesis suggests a negative relationship between the criterion and stated importance of religion.

The results obtained from product-moment correlations are presented in Table 5. It can easily be seen that not one of the values is statistically significant at even the .05 level for any of the subject groups or sample totals on any of the ABS-MI levels. It is safe to conclude that the data demonstrate a remarkable lack of support for Hypothesis 4.

H-5.--Persons who score high on stated adherence to religion will score low on positive attitudes toward the mentally ill.

TABLE 5.--ABS-MI-stated importance of religion correlations for psychiatric and normal samples.

Group	ABS-MI Scale Level Correlations					
	1	2	3	4	5	6
117 Schizophrenics	-.05	.04	.06	.05	.05	.14
51 Geriatrics	-.05	.01	-.10	.00	-.09	-.13
58 Alcoholics	-.20	.01	-.15	-.14	-.15	.05
55 Normals	-.19	-.12	-.04	-.18	-.20	-.03
281 Total Sample	-.04	.06	-.05	-.09	-.07	-.03

*P.<.05.

**P.<.01.

Hypothesis 5 was tested by correlating the ABS-MI with item 100 in the questionnaire section which deals with how often one observes the rules and regulations of his religion.

Examination of the results in Table 6 reveals a rather general lack of support for Hypothesis 5, with two exceptions. Statistically significant negative relationships occur on level 1 (stereotypic) for the schizophrenic group and for the total sample. On the other hand, statistically significant (.05 level) positive correlations resulted on levels 3, 4, and 6 for the schizophrenics which is directly opposite to the predicted relationship. None of the many remaining correlations between religious adherence and the ABS-MI were significant.

It is apparent, as indicated by the results in Table 6, that the hypothesis is largely unsupported.

Relating Attitudes and
Change Orientation

H-6.--Persons who score high on change orientation will score high on positive attitudes toward the mentally ill.

A multiple correlation program was used to test Hypothesis 6. This program produced a multiple correlation coefficient between responses to three change orientation items and each of six attitudinal levels of the ABS-MI for the total sample and each of the four sample groups

TABLE 6.--ABS-MI-stated adherence to religion correlations for psychiatric and normal samples.

Group	ABS-MI Scale Level Correlations					
	1	2	3	4	5	6
117 Schizophrenics	-.25**	.05	.23*	.18*	.12	.22*
51 Geriatrics	.05	.16	.09	.13	-.06	-.03
58 Alcoholics	.03	-.05	-.08	-.10	-.02	.06
55 Normals	-.13	-.03	-.07	-.22	-.25	.10
281 Total Sample	-.12*	.09	.04	-.01	-.02	.07

*P.<.05.

**P.<.01.

involved in the present research. The change orientation
items pertained to self change (item 101), child rearing
(item 102), and birth control (item 103).

Results obtained from the multiple regression analy-
ses are presented in Table 7. They lend general support
to Hypothesis 6 for the total sample as well as for the
geriatric, alcoholic, and normal groups of subjects, but
not for the schizophrenic group. Specifically, multiple
correlation data supports the hypothesis on levels 3-6
for the total sample; levels 2-5 for the geriatrics;
levels 3-5 for the normals; and levels 2-6 for the alco-
holics.

The partial correlations presented in Table 7 are
of particular interest since they suggest that after the
effects of the remaining change orientation variables are
"partialled out" or held constant, individual variables
relate differentially to attitudes among subject groups,
and that they make a differential contribution to the
attainment of a statistically significant multiple corre-
lation coefficient. For example, three partial correla-
tion coefficients achieved statistical significance on
only the self change variable for the geriatrics and the
total sample, but none of the coefficients for this vari-
able reached significance at the .05 level for any of the
three remaining groups. On the other hand, three of the
partial correlation coefficients were statistically

TABLE 7.--ABS-MI-change orientation partial and multiple correlations for psychiatric and normal samples.

Group	Change Orientation Variables	ABS-MI Scale Level Correlations					
		1	2	3	4	5	6
117 Schizophrenics	Self Change	.06	.02	.09	.08	.06	.11
	Child Rearing	-.04	.07	.10	.06	.02	.11
	Birth Control	.07	-.20*	.04	-.04	-.04	-.01
	Multiple Correlation	.10	.21*	.15	.11	.08	.16
51 Geriatrics	Self Change	.02	.44**	.28*	.25	.31*	-.04
	Child Rearing	.01	.10	.20	.20	.08	.08
	Birth Control	-.23	-.14	.03	.18	.09	.10
	Multiple Correlation	.23	.48**	.39**	.42**	.37**	.14
58 Alcoholics	Self Change	.03	.18	.20	.22	.05	.07
	Child Rearing	.12	.24	.21	.22	.25	.27*
	Birth Control	-.03	-.08	-.10	-.06	-.09	-.04
	Multiple Correlation	.12	.31*	.30*	.32*	.26*	.28*
55 Normals	Self Change	.15	-.16	-.07	.06	.08	.18
	Child Rearing	.00	-.23	-.09	-.14	-.07	-.02
	Birth Control	-.04	-.02	.36**	.42**	.38**	.04
	Multiple Correlation	.17	.31*	.39**	.44**	.38**	.18
281 Total Sample	Self Change	.04	.12*	.13*	.13*	.13*	.07
	Child Rearing	.02	.06	.13*	.10	.07	.10
	Birth Control	.04	-.19**	.12*	.10	.09	.00
	Multiple Correlation	.07	.22**	.24**	.21**	.19**	.13*

*P.<.05.

**P.<.01.

significant on the birth control variable only for the
normal group, while almost none of the coefficients for
this variable reached significance for the other individual
groups. The data for the alcoholic group, unlike that for
the others, indicate that the magnitude of the partial
correlations is greatest for the variable concerning child
rearing. The relationship between attitudes toward the
mentally ill and change orientation variables, as indi-
cated by partial correlation coefficients for the schizo-
phrenic group, is generally low and non differential for
all three variables.

Reference to the product-moment correlations in
Table 8 reveals a pattern similar to that just described
for the partial correlations in Table 7. The product-
moment correlations between ABS-MI attitudinal levels and
the self change variable are the most significant for the
geriatric group, while the correlation between levels and
the birth control variable are higher for the group of
normals. Although only one correlation is significant at
the .05 level of confidence, those of greatest magnitude
occur for the relationship between the criterion and child
rearing for the alcoholic group. All of the change orienta-
tion variables and attitudinal level correlations are low
and lack statistical significance for the schizophrenic
group.

TABLE 8.--ABS-MI-product-moment correlations with change orientation variables for psychiatric and normal samples.

Change Orientation Variables	Group	ABS-MI Scale Level Correlations					
		1	2	3	4	5	6
Self Change	117 Schizophrenics	-.05	.06	.14	.07	.10	.08
	51 Geriatrics	-.02	.45**	.34**	.32*	.35**	-.01
	58 Alcoholics	.04	.20	.22	.24	.08	.09
	55 Normals	.17	-.21	-.14	-.05	-.01	.17
	281 Total Sample	-.03	.11*	.17**	.16**	.15**	.10
Child Rearing	117 Schizophrenics	.05	.02	.09	.07	.04	.16
	51 Geriatrics	-.03	.19	.28*	.29*	.17	.09
	58 Alcoholics	.12	.24	.21	.22	.24	.27*
	55 Normals	.04	-.27*	-.09	-.11	-.05	.02
	281 Total Sample	.04	.02	.17**	.15**	.10	.17**
Birth Control	117 Schizophrenics	-.14	.01	-.08	.13	-.12	.01
	51 Geriatrics	-.23	-.04	.11	.24	.15	.11
	58 Alcoholics	.00	-.02	-.05	-.01	-.02	.13
	55 Normals	-.07	.00	.37**	.42**	.37**	.01
	281 Total Sample	-.13*	-.12*	.12*	.14*	.09	.07

*P.<.05.

**P.<.01.

To summarize, the results of multiple regression
analyses tend to support Hypothesis 6 for all but the
sample of schizophrenics. In addition, results repre-
sented by partial correlation coefficients and product-
moment coefficients indicate that the change orientation
predictor variables relate differentially to attitudes
toward the mentally ill and vary according to subject
group and ABS-MI attitudinal level. The best sample group-
predictor variable combinations are: (a) geriatrics-self
change; (b) normals-birth control; and (c) alcoholics-
child rearing. In view of the data, conceptualization of
a single best predictor variable does not appear practical.

Relating Attitudes and
Chronicity Orientation

H-7.--Persons who score high on chronicity orienta-
tion will score high on positive attitudes toward the
mentally ill.

H-7 needs clarification to convey its proper meaning
and intent. Its present form is dictated by the answer
foils contained within the ABS-MI and the Personal Question-
naire and could easily lead one to think that persons who
maintain a chronic orientation as described in Chapter III
express positive attitudes toward the mentally ill. Actu-
ally, those who receive a high score on questions concerning
chronicity orientation, are low in terms of adopting this
frame of reference. High scores indicate a rejection of a

chronicity orientation, i.e., lack of responsibility, disengagement from work, and a feeling that privileges should be granted automatically and not earned. Thus, a significant positive relationship between the criterion and the chronicity variable would indicate that positive attitudes are associated with low chronicity orientation.

H-7 was tested by multiple correlation analyses which produced multiple and partial correlation coefficients between the various ABS-MI levels and three chronicity orientation variables. The chronicity orientation questions in the Personal Questionnaire dealt with self responsibility (item 105), work involvement (item 106), and earning privileges (item 107). The results are presented in Table 9.

The multiple correlation data in Table 9 generally are supportive of Hypothesis 7 for all but the alcoholic group of subjects. Thus, when the weighted composites of the three chronicity variables are considered, they serve as significant predictors of attitudes for most of the ABS-MI attitudinal levels for the total sample as well as for the schizophrenic, geriatric, and normal group of subjects.

The partial correlation coefficients in Table 9 disclose that when the effects of two of the chronicity variables (responsibility and earned privileges) are nullified or held constant, the variable which deals with work involvement accounts for most of the variance within the largest

TABLE 9.--ABS-MI-chronicity orientation partial and multiple correlations for psychiatric and normal samples.

Group	Chronicity Variables	ABS-MI Scale Level Correlations					
		1	2	3	4	5	6
117 Schizophrenics	Responsibility	-.19*	-.04	.18*	.00	.04	.00
	Work Involvement	-.01	.00	.17	.34**	.24**	.25**
	Privileges	-.19	.13	.14	.01	.00	-.03
	Multiple Correlation	.23*	.13	.35***	.37***	.27***	.26***
51 Geriatrics	Responsibility	-.33*	-.19	-.14	-.08	-.02	.04
	Work Involvement	-.05	.19	.30*	.34**	.26	.11
	Privileges	.03	.00	-.04	-.10	.01	-.02
	Multiple Correlation	.39***	.23	.31*	.35*	.30*	.15
58 Alcoholics	Responsibility	-.14	-.23	.02	-.02	-.09	-.06
	Work Involvement	-.13	.01	.07	.10	-.01	.18
	Privileges	.10	.24	.21	.08	.19	.04
	Multiple Correlation	.22	.31*	.25	.14	.20	.19
55 Normals	Responsibility	.03	.16	.47**	.51**	.24	-.07
	Work Involvement	.06	-.23	-.22	-.14	.08	.00
	Privileges	-.30	.07	.07	-.08	-.04	.01
	Multiple Correlation	.31*	.25	.48***	.51***	.31**	.08
281 Total Sample	Responsibility	-.16**	-.09	.13*	.07	.06	-.01
	Work Involvement	.00	-.02	.16**	.24**	.19**	.15
	Priveleges	-.16**	.13*	.03	-.05	-.02	.05
	Multiple Correlation	.25**	.16**	.26**	.29**	.24**	.16**

*P.<.05.

**P.<.01.

number of statistically significant multiple correlations for the schizophrenic, geriatric, and total samples. But the variable which deals with responsibility contributes most to the variance in the multiple correlations for the group of normal subjects. None of the partial correlations and only one multiple correlation (level 2) is significant at the .05 level, for the alcoholic subjects, which suggests that the chronicity orientation variables under consideration are not powerful predictors of attitudes toward the mentally ill for this group.

Product-moment correlations which appear in Table 10 tend to mirror the results presented for the partial correlation data. Work involvement is the most powerful and significant predictor of attitudes for schizophrenics, geriatrics and the total sample, while self responsibility relates more powerfully to the criterion for the normal subjects than does the remaining chronicity orientation variables. None of the chronicity variables relate significantly to attitudes toward the mentally ill for the alcoholics.

In summary, the combined chronicity orientation variables relate significantly to ABS-MI levels 2-6 for the total sample; levels 3-6 for the schizophrenics, levels 3-5 for the geriatrics; and levels 3-5 for the normals in a way that is supportive of Hypothesis 7. The single most powerful predictor of attitudes is work involvement for

TABLE 10.--ABS-MI chronicity orientation correlations for psychiatric and normal samples.

Chronicity Variables	Group	ABS-MI Scale Level Correlations					
		1	2	3	4	5	6
Responsibility	117 Schizophrenics	-.04	.11	.16	.12	.16	-.09
	51 Geriatrics	-.39**	-.11	.02	.10	.12	.10
	58 Alcoholics	-.17	-.19	.08	.03	-.07	.00
	55 Normals	-.06	.07	.44**	.48**	.30*	-.08
	281 Total Sample	-.12*	-.04	.16***	.17***	.13*	.01
Work Involvement	117 Schizophrenics	-.01	.09	.41**	.30**	.26**	.06
	51 Geriatrics	-.21	.13	.28*	.34**	.30*	.14
	58 Alcoholics	-.15	-.01	.13	.12	.00	.18
	55 Normals	-.08	-.17	.04	.09	.20	-.04
	281 Total Sample	-.09	-.02	.29***	.26***	.20**	.12*
Privileges	117 Schizophrenics	.05	.16	.16	.08	.04	.01
	51 Geriatrics	-.02	.07	.09	.04	.12	.03
	58 Alcoholics	.05	.21	.23	.10	.18	.07
	55 Normals	-.31*	.01	.15	.06	.09	-.02
	281 Total Sample	-.09	.12*	.07	.02	.02	.01

*P. < .05.

**P. < .01.

the total sample, schizophrenics, and geriatrics, while
responsibility is the most powerful for the normal group.
None of the product-moment or partial correlations is
significant at even the .05 level for the alcoholics; how-
ever, the magnitude of the correlations is highest for
the variable which dealt with earning privileges.

Relating Attitudes and Contact

H-8.--The more frequent the contact with mentally ill
persons the higher will be the intensity scores on the
ABS-MI, regardless of the direction (positiveness or nega-
tiveness) of attitude.

Hypothesis 8 was tested by correlating item 108 in
the questionnaire section, which deals with frequency of
contact with mentally ill persons, and only the intensity
variables of the ABS-MI levels which were separated from
the content responses for this particular analysis.

The results of product-moment correlations are shown
in Table 11. They indicate that, for the four samples as
a whole, frequency of contact is significantly positively
related to ABS-MI intensity on levels 3-6, in direct
support of the hypothesis, but not on levels 1 (stereo-
typic) and 2 (normative).

Hypothesis 8 receives considerable support from the
data for the alcoholic subjects. The relationship between
intensity of attitudes and frequency of contact is strong
and positive on levels 1, 3, 4, and 6. However, the data

TABLE 11.--ABS-MI intensity-amount of contact with mentally ill persons correlations for psychiatric and normal samples.

Group	ABS-MI Scale Level Correlations					
	1	2	3	4	5	6
117 Schizophrenics	-.13	-.09	.04	.06	.15	.01
51 Geriatrics	-.01	.05	.10	.13	.14	.22
58 Alcoholics	.32**	.20	.39**	.37**	.15	.46**
55 Normals	-.11	-.02	.21	.12	.04	.12
281 Total Sample	.04	.09	.13*	.17**	.19**	.13*

*P.<.05.

**P.<.01.

do not support the hypothesis on any of the attitudinal levels for any of the other groups when considered separately.

In conclusion, it would seem that for the subject groups as a whole, the more frequent their contact with the mentally ill, the higher is their intensity of attitudes toward them. Also, this relationship tends to be maintained for the alcoholic group if their results are considered separately, but it does not hold for the other individual groups.

H-9.--High frequency of contact with mentally ill persons will be associated with favorable attitudes toward the mentally ill if high frequency is concurrent with (a) alternative rewarding opportunities, (b) ease of avoidance of the contact, and (c) enjoyment of the contact.

Originally, it had been planned to test Hypothesis 9 by means of a multiple correlation analysis which correlates the ABS-MI scale with the weighted composites of responses to items 108 (frequency), 109 (avoidance), 110 (enjoyment), and 111 (alternative), in the questionnaire section of the instrument. The product of a multiple correlation analysis, the coefficient of multiple correlation, indicates the strength of the relationship between the ABS-MI and the four combined contact variables which served as partial correlates. However, full completion of the original plans was precluded because Hypothesis 9 requires

that statistical significance of the partial correlation coefficients of the alternative, avoidance, and enjoyment variables, for any one attitudinal level, must be achieved in order for it to be supported or unsupported, which are conditions that the statistical data did not meet.

Examination of the coefficients of multiple and partial correlations presented in Table 12 discloses a general lack of concurrency of statistical significance among the contact variables on most all attitudinal levels for all subject groups. In fact, a single example in which all four contact variables were concurrent in terms of achieving significance failed to occur. Moreover, except for the occurrence of concurrency of three contact variables on level 6, for the geriatric group, no more than two contact variables were concurrent for any attitudinal level for any group. Thus, since the necessary variables were not statistically significant concurrently as specified by Hypothesis 9, it could not be tested as planned.

Further inspection of Table 12 reveals at least two important results which, although not a direct test of Hypothesis 9, seem to contribute to increased understanding and knowledge of the relationship between attitudes toward the mentally ill and specific contact variables. First, the multiple correlations generally are statistically significant for most of the attitudinal levels for all groups, indicating that a rather strong relationship exists between

TABLE 12.--ABS-MI-contact partial and multiple correlations for psychiatric and normal samples.

Group	Contact Variables	ABS-MI Scale Level Correlations					
		1	2	3	4	5	6
117 Schizophrenics	Amount	-.01	-.26**	.12	.12	.11	.17
	Avoidance	-.02	.10	.21*	.22**	.26**	.08
	Enjoyment	.01	.07	.39***	.33***	.26***	.19*
	Alternatives	-.04	.02	.07	.09	.10	.00
	Multiple Correlation	.05	.28**	.46***	.41**	.39***	.27**
51 Geriatrics	Amount	.18	-.04	.01	.06	.11	.35**
	Avoidance	.12	-.12	-.26	-.25	-.07	.07
	Enjoyment	-.06	.42***	.58***	.57***	.47***	.31*
	Alternatives	-.17	.07	-.01	-.02	.12	.32*
	Multiple Correlation	.26	.43***	.61***	.61***	.51***	.56***
58 Alcoholics	Amount	-.41**	-.28**	-.14	-.04	.01	.23
	Avoidance	-.05	.15	.09	.14	.13	.17
	Enjoyment	.03	.41**	.40**	.42***	.37**	.21
	Alternatives	.13	.06	.03	.10	.02	.06
	Multiple Correlation	.44**	.53***	.45***	.49***	.42***	.39***
55 Normals	Amount	.05	.18	.12	.15	.04	.31*
	Avoidance	.02	.02	.35**	.29*	.18	.11
	Enjoyment	.07	-.03	.04	-.05	.31*	.19
	Alternatives	-.19	.02	.18	.10	.17	.19
	Multiple Correlation	.22	.20	.35*	.31*	.42*	.48*
281 Total Sample	Amount	-.06	-.05	.01	.09	.11	.27***
	Avoidance	.00	.02	.12*	.11	.13*	.06
	Enjoyment	.08	.14**	.42***	.36***	.35***	.24**
	Alternatives	-.08	-.03	.06	.06	.08	.08
	Multiple Correlation	.13*	.15*	.45*	.40*	.40*	.38*

*P.<.05.

**P.<.01.

attitudes toward the mentally ill and various combined
aspects of contact with them. Exceptions include the
stereotypic attitudinal level for the normal, schizophrenic,
and geriatric groups as well as normative level 2 for the
normal group. Second, when the effects of the alternative,
avoidance, and frequency contact variables are nullified
or held constant, enjoyment of contact with mentally ill
persons is generally strongly related to favorable atti-
tudes toward the mentally ill on all levels except stereo-
typic level 1, and for all groups except that designated
as normal. Notable exceptions to this second observation
include level 2, for the schizophrenic group, and level 6,
for the group of alcoholics which obtained statistically
insignificant partial correlations with enjoyment of con-
tact. Also, none of the partial correlations between enjoy-
ment of contact and the six ABS-MI attitudinal levels is
significant for the normal group of subjects. Such a re-
sult is contrary to that for the other three groups for
which a large majority of the partial correlations for
enjoyment of contact and the ABS-MI scales are significant.

When the effects of the other three contact oriented
variables are nullified, ease of avoidance of the contact
is statistically related to ABS-MI levels 3 (moral evalua-
tion), 4 (hypothetical behavior), and 5 (personal feelings)
for the schizophrenic and levels 2 and 3 for the normal
subject groups. It is not related to any of the other

levels for the latter groups or to any of the attitudinal levels for the geriatric and alcoholic subjects. Partial correlations between amount (frequency) of contact and the ABS-MI levels indicate a significant negative relationship on level 2 for the schizophrenic group and on levels 1 and 2 for the group of alcoholics. The only positive partial correlations between the criterion and frequency of contact occur on level 6 for the geriatric and normal samples. All partial correlations between the various six attitudinal levels and alternative rewarding opportunities lacked statistical significance except for level 6 of the geriatric group. The partial correlation for this lone exception is significant and positive.

Thus, the results presented in Table 12 indicate that when the four contact variables are considered individually, reported enjoyment of contact with mentally ill persons generally accounts for more of the variance contained within the statistically significant multiple correlation coefficients than does any other single contact variable for the schizophrenic (except levels 2 and 6), geriatric (except level 6), and alcoholic (except level 1) samples. Data for the normal subject group indicate that, except for personal action level 6, the contact variable designated as ease of avoidance, most often accounts for more of the variance found in significant multiple correlations (levels 3-5) than does any other single contact variable.

Examination of the multiple correlations in Table 12
for the total sample reveals small but statistically sig-
nificant correlations on levels 1 and 2 as well as compar-
atively larger correlations of greater significance on
levels 4-6. Although these values do not constitute a
test of Hypothesis 9, they do suggest that the combination
of contact variables are indicative of attitudes toward
the mentally ill.

Straightforward correlational analyses of attitudes
toward the mentally ill and the four contact variables
taken separately permit further examination of their re-
lationship from another perspective. While such correla-
tional analyses do not constitute a test of Hypothesis 9,
they do provide important results which contribute to the
advancement of understanding and knowledge relevant to the
relationship between attitudes toward the mentally ill and
contact predictor variables.

The correlations between all six levels of the ABS-MI
and the amount, alternatives, avoidance, and enjoyment
variables are shown in Table 13. One of the most striking
aspects of the data is the generally significant positive
relationship between reported enjoyment of contact with
mentally ill persons and attitudes toward the mentally
ill as reflected by scores on the criterion for all groups
of psychiatric patients. The relationship is significant,
mostly at the .01 level of confidence, for attitudinal

TABLE 13.--ABS-MI-contact correlations for psychiatric and normal samples.

Contact Variables	Group	ABS-MI Scale Level Correlations					
		1	2	3	4	5	6
Amount	117 Schizophrenics	-.17	.02	.18*	.15	.32**	.01
	51 Geriatrics	.14	.09	.19	.22	.23	.41**
	58 Alcoholics	-.42**	-.26*	-.10	.02	.03	.25*
	55 Normals	.07	.20	.10	.10	.17	.41**
	281 Total Sample	.06	.10	.05	.08	.23*	.10
Avoidance	117 Schizophrenics	.03	.11	.18*	.18*	.13	.08
	51 Geriatrics	.10	-.05	-.14	-.14	-.03	-.02
	58 Alcoholics	.15	.31**	.20	.20	.18	.10
	55 Normals	.04	-.03	.31*	.25*	.17	.03
	281 Total Sample	-.02	.01	.14**	.12*	.05	.09
Enjoyment	117 Schizophrenics	.09	.23**	.33***	.32***	.22**	.00
	51 Geriatrics	.02	.41**	.58***	.56***	.48***	.34**
	58 Alcoholics	-.04	.38***	.40***	.46***	.40***	.29*
	55 Normals	.12	.07	.11	.04	.36***	.33**
	281 Total Sample	.07	.19**	.41***	.38***	.33***	.20***
Alternatives	117 Schizophrenics	-.05	.13	.20*	.11	.11	-.10
	51 Geriatrics	-.17	.03	-.04	-.05	.07	.27*
	58 Alcoholics	-.06	.03	.06	.17	.11	.20
	55 Normals	-.19	.03	.12	.07	.11	.16
	281 Total Sample	-.11*	.02	.12*	.09	.09	.10

*P.<.05.

**P.<.01.

levels 2-6 (geriatric, alcoholic, and total sample) and
levels 2-5 for the schizophrenic group. None of the stereo-
typic level 1 correlations achieved statistical signifi-
cance for any group of subjects. Levels 5 (personal feel-
ings) and 6 (personal action) only, reached statistical sig-
nificance for the normal sample. The data in Table 12 and
Table 13 indicate that of all the contact variables con-
sidered, enjoyment of the contact is the most powerful pre-
dictor of psychiatric patient attitudes toward the mentally
ill.

The weakest of the contact predictor variables for
all groups is that which deals with alternative rewarding
opportunities. It fails to achieve significance at the
.05 level on any level for any group except level 6 for
the geriatric sample. In terms of strength of attitude
prediction, variables which are concerned with amount and
avoidance of contact occupy a position intermediate to
alternatives and enjoyment. By themselves, the former
three generally tend to be inconsistent and weak predictors
of psychiatric patient and normal subject attitudes toward
the mentally ill as one can see by looking at Table 13.
Amount of contact constitutes somewhat of a more pronounced
exception to this generalization since it significantly
correlates with the criterion on personal action level 6
for the geriatric, alcoholic, and normal subject groups as
well as for the total sample.

In summary, the data did not meet the concurrency conditions set forth by Hypothesis 9 and, as a consequence, the hypothesis could not be tested directly by means of a multiple correlation analysis as had been planned originally. Nevertheless, multiple correlation analyses and straightforward (product-moment) correlational analyses provided a wealth of related data that contributed immeasurably to a better understanding of the relationship between attitudes toward the mentally ill and predictor variables which dealt with amount, alternatives, avoidance, and enjoyment of contact with mentally ill persons. The results of most significance are:

1. Specific contact variables (alternatives, avoidance, amount, and enjoyment), when combined, are significant predictors of attitudes toward the mentally ill that are held by psychiatric patients and normals.

2. Enjoyment of contact with mentally ill persons was by far the strongest predictor of psychiatric patient attitudes toward the mentally ill and as strong a predictor of attitudes as any considered for the normal group of subjects.

3. The weakest predictor variable was the one which dealt with alternative rewarding opportunities.

Relating Attitudes and Efficacy

H-10.--Persons who score high in efficacy will score high in positive attitudes toward the mentally ill.

Hypothesis 10 was tested by correlating scores on the six levels of the ABS-MI with scores on the Efficacy scale (see Chapter III).

The figures included in Table 14 reveal that how subjects view man's effectiveness in the face of his natural environment (efficacy) is predictive of his attitudes toward the mentally ill on ABS-MI levels 2-5 for the schizophrenic group of subjects and levels 3-4 for the normals and total sample. In other words, the subjects previously identified showed a strong, significant tendency to score high on efficacy and the ABS-MI levels specified as predicted by Hypothesis 10.

The statistically significant negative correlations shown on levels 1-2 for the alcoholics and on level 1 for the geriatrics, normals and total sample, were contrary to expectations. These results indicate that specified groups of subjects who were high on the efficacy variable, attributed less favorable stereotypic and/or normative attitudes to others.

Thus, the data in Table 14 provide support as well as a lack of support for Hypothesis 10. It is generally supported for the schizophrenics; unsupported for the geriatrics and alcoholics; and, both supported and contrary to prediction for the normals and total sample.

TABLE 14.--ABS-MI-efficacy variable correlations for psychiatric and normal samples.

Group	ABS-MI Scale Level Correlations					
	1	2	3	4	5	6
117 Schizophrenics	.10	.26**	.26**	.23**	.24**	.10
51 Geriatrics	-.29*	-.03	.18	.21	.12	.12
58 Alcoholics	-.29*	-.25*	.01	.03	.03	.16
55 Normals	-.31*	-.16	.42**	.41*	.07	-.04
281 Total Sample	-.13*	.02	.16**	.19**	.11	.11

*P.<.05.

**P.<.01.

Relating Attitudes and Knowledge

H-11.--Persons who score high in knowledge about mental illness will score high in positive attitudes toward the mentally ill.

Hypothesis 11 was tested by correlating the ABS-MI with the results of a knowledge about mental illness scale that was discussed in Chapter III.

The correlation measures in Table 15 disclose that knowledge about mental illness is a significant predictor of positive attitudes toward the mentally ill on a number of different attitudinal levels (3-6) for the total sample, schizophrenic group (levels 2-5), and the group of normals (levels 3-5). Knowledge and attitudes also are related in a more concrete fashion on personal action level 6 for the geriatrics and alcoholics. The two are not related on the more intellectually abstract and impersonal levels 1 and 2 except on normative level 2 for the schizophrenics.

The contrast between the schizophrenics and normals on the one hand and the alcoholics and geriatrics on the other is rather marked with respect to the relationship between attitudes and knowledge about mental illness. On a thinking and feeling level, the more knowledgeable members of the former two groups indicate a positive attitude toward the mentally ill, but on an actual interpersonal behavioral level, they do not express positive attitudes to a significant extent. Just the converse holds for the

TABLE 15.--ABS-MI-knowledge variable correlations for psychiatric and normal samples.

Group	ABS-MI Scale Level Correlations					
	1	2	3	4	5	6
117 Schizophrenics	-.08	.23**	.33**	.22**	.28**	-.06
51 Geriatrics	-.04	-.24	.11	.17	.07	.32*
58 Alcoholics	-.09	-.13	.24	.24	.14	.26*
55 Normals	-.19	.10	.39**	.34**	.31**	.06
281 Total Sample	-.08	-.08	.34**	.30**	.22**	.18**

*P.<.05.

**P.<.01.

geriatric and alcoholic group. Their members who are more knowledgeable about mental illness indicate that while they may not possess particularly favorable attitudes on an intellectual and feeling level, they do and have formed close relationships with the mentally ill.

In short, the data in Table 15 suggest that knowledge about mental illness and ABS-MI levels 2-6 are significantly related and positive for the total sample which is in direct support of Hypothesis 11. Also, the hypothesis is supported on levels 2-5 for the schizophrenics; levels 3-5 for the normals, and only level 6 for the geriatrics and alcoholics.

Relating Attitudes and
Group Membership

H-12.--The groups will assume the following order with respect to favorable attitudes toward the mentally ill: Normals>Alcoholics>Schizophrenics>Geriatrics.

Hypothesis 12 was tested by a one-way analysis of variance procedure for each of the samples on each of the ABS-MI scale levels using means adjusted for sample size and sex differences. Also, each mean was tested against every other mean by a multiple means test which generates an F test that produces results equivalent to a two-tailed t test.

For the readers convenience, the sample groups are listed in the hypothesized order in Table 16 where the

TABLE 16.--ABS-MI adjusted means,[1] $\underline{F}$'s, and multiple means test results for psychiatric and normal sample.

ABS-MI Scale Levels	55N[2]	58A[3]	117S[4]	51G[5]	26F[6]	29M[7]	$\underline{F}$	Multiple Means Test*
1. Stereotypic	29.32	24.11	29.12	20.92	28.68	23.09	7.27*	N>A, N>G, S>G, S>A
2. Norm	31.92	34.25	41.52	37.40	36.16	36.38	4.80*	S>A, S>N
3. Moral	55.01	46.26	47.56	42.12	46.50	48.97	5.83*	N>A, N>S, N>G, S>G
4. Hypo. Action	52.06	42.18	46.81	44.23	45.42	47.23	3.30*	N>A, N>G, S>A
5. Feelings	46.97	35.74	39.27	39.34	37.75	42.91	5.34*	N>A, N>S, N>G
6. Personal Action	46.55	40.44	47.80	42.68	44.05	44.69	4.39*	N>A, S>G, S>A

[1] Adjusted for sex and sample size

[2] Normals

[3] Alcoholics

[4] Schizophrenics

[5] Geriatrics

[6] Females

[7] Males

*P.<.05.

analysis of variance results appear. Inspection of the data reveals that the hypothesized order of the four groups was not completely achieved on any level of the ABS-MI. In the sense that no contradictions to the hypothesized order occurred, it was partially achieved on moral evaluation level 3 and personal feeling level 5. However, the differences between the means for all of the groups were not significant on either level 3 or level 5. There were no statistically significant differences between the alcoholics and either the schizophrenics or geriatrics on level 3. On the other hand, there were no significant differences between the alcoholics, schizophrenics and geriatrics on personal feeling level 5. The normals scored significantly higher than other groups on both the former and the latter ABS-MI scales.

Contradictions to the hypothesized order of groups occurred on stereotypic level 1, normative level 2, hypothetical action level 4, and personal action level 6. The fact that the schizophrenic group scored significantly higher than either the alcoholics (levels 1, 2, 4, 6) or normals (level 2), or both (level 2) accounts for the occurrence of the contradictions in all cases.

Few significant differences resulted between either the normals or schizophrenics on the one hand, or the alcoholics and geriatrics on the other. These results, in addition to the contradictions already delineated, precluded greater support for Hypothesis 12.

Consistencies in the data in Table 16 which are sup-
portive of Hypothesis 12, in cases where significant dif-
ferences occurred, include the following: (a) normals
scored higher than alcoholics, geriatrics, and, with one
exception (level 2), schizophrenics, and (b) schizophrenics
scored higher than geriatrics.

Although somewhat unrelated to Hypothesis 12, it
should be pointed out that no statistically significant
differences occurred between the males and females on any
ABS-MI scale. This finding further supports the justifi-
cations listed in Chapter IV for combining the two groups.
It may be recalled from Chapter IV that a different pro-
cedure (Guilford, 1956, p. 224) failed to reveal any sig-
nificant differences between the two sexes on any of the
ABS-MI scales or on a number of other variables.

Returning to Hypothesis 12, it can be concluded that
the hypothesis received the greatest support on ABS-MI
levels 3 and 5, but that it was not confirmed in total for
any scale.

Relating Attitudes and Multidimensionality

H-13.--The ABS-MI scale levels or attitude sub-
universes will form a Guttman Simplex for each of the
sample groups.

Hypothesis 13 was tested by subjecting the combined
content-intensity scale level intercorrelation matrices to

Kaiser's (1962) simplex approximation test. It will be recalled that Kaiser's test produces a goodness of fit value ($\underline{Q}^2$) for the obtained matrices and also rearranges these matrices into a "best" simplex order for which a $\underline{Q}^2$ value is assigned. The obtained and empirically reordered matrices, together with their corresponding $\underline{Q}^2$ values, are included in Table 17 for each of various groups.

The matrices in Table 17 contain from zero to four statistically non-significant negative correlations. Three occur in the matrix for the schizophrenics, four in the geriatrics matrix, none in the alcoholics matrix, one in the normals matrix and two in the matrix for the total sample. Most of the negative correlations occur in the first two columns of the matrices and involve correlations between either ABS-MI scale level 1 or 2 and the other scale levels.

It was pointed out in Chapter IV that presently, no one has devised a wholly satisfactory solution for the problem created by negative correlations. Therefore, it was decided to treat negative correlations as positive values for purposes of computer computation of $\underline{Q}^2$ values and to take this into account in evaluating the results. The figures in Table 17 consist of $\underline{Q}^2$ values with negative correlations treated as positive correlations.

As noted in Chapter IV, Hamersma (1969) alledged that a $\underline{Q}^2$ value of .70 or greater provided acceptable

TABLE 17.--Q^2's for obtained and empirically ordered matrices on six level ABS-MI for psychiatric and normal sample.

			1	2	3	4	5	6
117 Schizophrenics[1]	Obtained Matrices	1	---			$Q^2 = .900$		
		2	.29	---				
		3	.25	.59	---			
		4	.12	.44	.71	---		
		5	.24	.44	.54	.45	---	
		6	-.15	-.06	.06	.21	-.09	---
	Ordered Matrices	1	---			$Q^2 = .916$		
		2	.29	---				
		3	.25	.59	---			
		4	.24	.44	.54	---		
		5	.12	.44	.71	.45	---	
		6	-.15	-.06	.06	-.09	.21	---
51 Geriatrics[2]	Obtained Matrices	1	---			$Q^2 = .845$		
		2	.10	---				
		3	-.06	.61	---			
		4	-.12	.59	.88	---		
		5	-.14	.50	.74	.76	---	
		6	-.12	.23	.52	.54	.58	---
	Ordered Matrices	1	---			$Q^2 = .845$		
		2	.10	---				
		3	-.06	.61	---			
		4	-.12	.59	.88	---		
		5	-.14	.50	.74	.76	---	
		6	-.12	.23	.52	.54	.58	---
58 Alcoholics[3]	Obtained Matrices	1	---			$Q^2 = .960$		
		2	.36	---				
		3	.26	.56	---			
		4	.26	.56	.87	---		
		5	.33	.54	.72	.79	---	
		6	.28	.51	.59	.67	.65	---
	Ordered Matrices	1	---			$Q^2 = .965$		
		2	.36	---				
		3	.33	.54	---			
		4	.26	.56	.72	---		
		5	.26	.56	.79	.87	---	
		6	.28	.51	.65	.59	.67	---
55 Normals[4]	Obtained Matrices	1	---			$Q^2 = .857$		
		2	.19	---				
		3	-.11	.23	---			
		4	.02	.21	.87	---		
		5	.21	.29	.60	.62	---	
		6	.17	.13	.29	.29	.27	---
	Ordered Matrices	1	---			$Q^2 = .884$		
		2	.19	---				
		3	.21	.29	---			
		4	-.11	.23	.60	---		
		5	.02	.21	.62	.87	---	
		6	.17	.13	.27	.29	.29	---
281 Total Sample[5]	Obtained Matrices	1	---			$Q^2 = .856$		
		2	.35	---				
		3	.18	.45	---			
		4	.05	.35	.80	---		
		5	.25	.45	.63	.61	---	
		6	-.17	-.02	.28	.40	.18	---
	Ordered Matrices	1	---			$Q^2 = .884$		
		2	.35	---				
		3	.25	.45	---			
		4	.18	.45	.63	---		
		5	.05	.35	.61	.80	---	
		6	-.17	-.02	.18	.28	.40	---

[1]Critical value of r at .05 level=.18.

[2]Critical value of r at .05 level=.27.

[3]Critical value of r at .05 level=.25.

[4]Critical value of r at .05 level=.26.

[5]Critical value of r at .05 level=.12.

evidence that a simplex has been approximated. On the basis

of that criterion and inasmuch as all of the Q^2 values in

Table 17 are .845 or higher, it is concluded that a simplex

has been approximated for all of the various groups of

subjects. These results are in direct support of Hypoth-

esis 13.

The greatest stock can be placed in the simplex for

the alcoholic group because: (a) Q^2 values of .960 and

.965 for the obtained and ordered correlation matrices

respectively, exceed the .70 criterion by far and are the

highest for this group; (b) all of the correlations within

the matrix are statistically significant at the .05 level;

and (c) all correlations within the simplex are positive

values.

The simplexes for the geriatric group may be seen as

earning the least credence and greatest number of quali-

fications. The Q^2 values of .845 for both the obtained

and ordered matrices are the lowest for any group and, in

addition, four negative correlations resulted. The total

effect of the negative values for this group is unclear,

but it may be tempered somewhat by the fact that none of

them are statistically significant, all appear in column

one, and the column generally exhibits descending correla-

tion coefficients moving from top to bottom.

The results in Table 17 provide supportive evidence

for Guttman's (1959) Contiguity Hypothesis which states

that attitude levels closer to each other in terms of the
semantic scale of their definitions will also be closer
statistically. In other words, the resulting correlation
matrices reveal what Guttman (1966) has termed a "simplex"
ordering and the $\underline{Q}^2$ values in Table 17 indicate that a
simplex has been approximated for each group of subjects
within this research. Finally, the relatively small dif-
ferences between the $\underline{Q}^2$ values for the ordered and obtained
matrices for each group suggests a close correspondence
between the hypothesized order and the "best" order or
between the semantic meaning specified in the six levels
on the obtained statistical structure.

CHAPTER VI

SUMMARY, DISCUSSION, AND RECOMMENDATIONS

Attitudes related to the mentally ill have been con-
sidered primarily in terms of how parents, lay public, and
professional mental health caretakers view and/or influence
those who are mentally ill. Very little systematic atten-
tion has been given to how psychiatric patients view men-
tally ill persons or what impact they might have on one
another.

Problem

The reality of the truly interdependent nature of
attitude formation and expression on the part of one psy-
chiatric patient for another has been all but overlooked.
Such a reality continues to exist despite recognition in
other areas of the part played by intergroup attitudes in
predicting, understanding, and controlling human relations.
It continues also in spite of the importance of psychiatric
patient attitudes insofar as they relate to social struc-
tures, conceptualizations of mental illness, development
of treatment programs, and the development of training
and educational programs for mental health workers.

135

In addition, it is not generally known what impor-
tance can be attributed for different attitudinal levels
to: (a) the amount of contact a person has had with the
mentally ill, (b) the value orientation of the person,
(c) the amount of factual knowledge about mental illness
he possesses, and (d) the demographic characteristics of
the subject. Consequently, the attitudes of the mentally
ill on a comparative basis are far from clear and are in
need of research designed to delineate their structure,
content, determinants, and relationships.

Thus, the major purposes of the present research
were the following:

1. To construct an attitude scale (ABS-MI) accord-
ing to the formulations of Guttman (1957, 1959, 1966),
Jordan (1968), and Maierle (1969), with the mentally ill
as the attitude object.

2. To measure and determine predominate value
orientations and attitudes toward the mentally ill of
normal and psychiatric persons.

3. To determine the predictive ability of hypoth-
esized determinants (demographic, valuational, contactual,
and knowledge) of attitudes toward the mentally ill.

4. To compare a group of normals and samples of
hospitalized psychiatric patients)schizophrenics, geri-
atrics, and alcoholics) on the basis of their attitudes
toward the mentally ill, several predictor variables, and

the interrelationship between attitudes and independent variables.

5. To test Guttman's Contiguity Hypothesis which specifies that responses to an attitude scale developed on the basis of facet analysis will form a matrix of level-by-level correlations which will approximate a simplex (Guttman, 1959, 1966).

6. To examine the effects of order of attitude scale levels on simplex approximations and the correspondence between a theoretical order of administration of scale levels and a "best" order for psychiatric and normal persons.

Related Research

Research concerned with attitudes of schizophrenics, geriatrics, alcoholics, and normals toward the mentally ill was reviewed. Areas reviewed included attitudes of self, peers, community, students, young persons, lay groups and caretakers.

A review of the literature revealed that a great deal of discrepancy existed regarding how psychiatric patients and normals perceive persons who are mentally ill. It was reported in some studies that the image of the mental patient as seen by both patients and normals is rather unflattering. However, other studies related that psychiatric patients' attitudes toward the mentally ill were no more devient than were those of staff members in the fields of

psychiatry, psychology and psychiatric social work. Still other research suggested that attitudes held by normal subjects were not really "bad."

Research literature concerning attitudes toward the alcoholic is limited in both number and scope. What exists indicates that alcoholism, like mental illness, has been negatively viewed by the general public, students, and caretaker groups such as physicians and social workers.

Few attemtps have been made to evaluate attitudes of aged patients toward the mentally ill. Instead, attitudes of elderly individuals, young people, and psychiatric patients toward the aged and aging have been examined in a variety of studies. The results indicate that all three groups tend to have a rather negative appraisal of older people and generally view old age in a gloomy manner.

Although the literature indicated that numerous variables concerning contact, demographic, knowledge, and value orientation factors were related to attitudes, most of the research was inconclusive or contradictory with reference to predictor variables. The reason for this phenomenon might be attributed to the fact that various measures of attitudes were composed of items derived from different attitudinal structures and, therefore, contributed to a lack of control over the various attitudinal levels being measured. None of the studies used an attitude scale based on the structural facet theory proposed by Guttman.

The review of the literature in Chapter II also included a review of facet theory and methodology. A synopsis of that review follows.

Guttman identified four levels, or types of attitudes, generated from permutations of three facets which structure the attitude-object relationship. He formulated a Contiguity Hypothesis which specified that the matrix of attitude level-by-level correlations will approximate a simplex.

Jordan extended Guttman's analysis to a five facet, six-level system and found that data derived from a scale on attitudes toward the mentally retarded (ABS-MR) did generate simplex approximations.

Maierle analyzed 32 permutations of five dichotomized facets and found that only 12 appeared semantically possible. He hypothesized that these 12 members were ordered within seven semantic paths, or ordered sets of level-member items. A set of experimental instruments was developed and subsequently administered to a large group of subjects in a random order and in a hypothesized order. Maierle's results indicated the lack of an ordering principle obviously better than the one hypothesized by Jordan and a generally close correspondence between hypothesized and best orders.

Instrumentation

This study employed a new criterion instrument--the
Attitude Behavior Scale-Mental Illness (ABS-MI) which was
evolved by a Guttman facet theory and analysis rationale.
It contains six levels of attitude structure: (a) Societal
Stereotype; (b) Societal Norm; (e) Personal Moral Evalua-
tion; (d) Personal Hypothetical Action; (e) Personal Feelings;
and (f) Personal Action.

Eight content items, each with a corresponding mea-
sure of intensity were selected for each of the six levels
of the instrument so that the final attitude scale con-
sisted of 96 items. Thus, each one of eight attitude items
and a corresponding measure of intensity was repeated
across all six attitude levels with the attitude items
being altered to conform to the facet structure on the
different levels. The eight content areas are: (a)
Marriage-to; (b) Intelligence-of; (c) Understanding-of;
(d) Invitations-to; (e) Friends-with; (f) Eating-with; (g)
Helpfulness-of; and (h) Loans-to.

The content and intensity measures were combined for
each item on the ABS-MI except when the relationship be-
tween attitudes toward the mentally ill and frequency of
contact was analyzed. The content and intensity values for
each item were combined also on the Efficacy Scale. The
rationale and procedure used for combining the two vari-
ables was provided in Chapter III.

Various aspects concerning the validity of attitude behavior scale type instruments were discussed in Chapter IV and it was emphasized that they provided a rather novel and unique opportunity to compare different dimensions of attitudes. It was pointed out that the use of facet theory and a mapping sentence assures that adequate content validity of attitudinal levels is maintained. In addition, a variety of researchers, including the present one, have obtained simplexes for a wide range of subjects as predicted by Guttman's facet theory. These results provide evidence of construct validity for attitude behavior scales that have been constructed on the basis of facet theory. Finally, attitude behavior scales have been validated through the use of contrasted groups and researchers have demonstrated considerable evidence of "correlational" validity in that a number of predictor variables and measures of attitude have tended to evolve as hypothesized.

Kuder-Richardson-like reliabilities for three samples of psychiatric persons and a sample of normals on six levels of the ABS-MI ranged from .54 to .86. As a whole, the reliabilities were comparable to those obtained on other attitude scales.

Attitude content and intensity scores were combined into one for each item as previously indicated. The result was to increase the majority of reliability estimates across groups and ABS-MI levels.

Measures of independent variables were contained within a 54 item questionnaire. Among the items were measures of (a) demographic variables, (b) change orientation, (c) chronicity orientation, (d) contact with the mentally ill, (e) efficacy, or man's effectiveness in the face of his natural environment, and (f) knowledge about mental illness.

Design and Analysis

The ABS-MI and an accompanying questionnaire was administered to three samples of hospitalized psychiatric patients as well as to a group of normal persons. The samples consisted of (a) 117 schizophrenics, (b) 51 geriatrics, (c) 58 alcoholics, (d) 55 normals. The psychiatric patients were all hospitalized and housed on open, unlocked wards throughout the Battle Creek, Michigan, Veterans Administration Hospital. The sample of normals consisted of graduate students in rehabilitation counseling or personnel and guidance services at Michigan State University.

A number of procedures were used to test the various hypotheses. These included product-moment, partial, and multiple correlation procedures as well as one-way analysis of variance and a multiple means test. Also, a simplex approximation test was used which produces a descriptive statistic (Q^2) for obtained attitude level matrices and matrices reordered into a "best" simplex order.

A total of 13 research hypotheses were formulated which were based on previous research. A summary of the results of the testing of each hypothesis will be presented in the following segment.

Results

Reliability estimates were obtained for each of the sample groups on each of the ABS-MI levels for content scores as well as combined content-intensity scores to test the power of this procedure in the present research. The reliabilities for the combined scores ranged from .55 to .86 and the majority were consistently higher than the content-only reliabilities which ranged from .54 to .81.

A summary of the results of testing each hypothesis follows.

H-1.--Persons who score high on age will score low on positive attitudes toward the mentally ill.

Hypothesis 1 predicts a negative relationship between age and attitudes toward the mentally ill.

The hypothesis was partially supported in that high age and positive attitudes formed a negative relationship on levels 1 and 3-5 for the total sample, levels 3-4 for both schizophrenics and normals; and level 1 for the geriatrics. The data for the alcoholic subjects did not support Hypothesis 1 and in fact, the results obtained for levels 1 and 2 for this group were contrary to those predicted.

H-2.--<u>Amount of education will be positively related</u>
<u>to favorable attitudes toward the mentally ill</u>.

Amount of education was found to be positively re-
lated to ABS-MI scores on levels 3-6 but negatively related
on normative level 2 for the total sample. These apparently
conflicting results were interpreted as indicating that
increasing education was related to a tendency to attri-
bute relatively poor attitudes to others on a normative
level and positive attitude to oneself on levels 3-6.

Of all the individual groups, Hypothesis 2 was sup-
ported most by the data obtained on levels 3-4 and 6 for
the group of normals.

H-3.--<u>Persons who have experienced a relatively short</u>
<u>period of hospitalization will score higher on positive</u>
<u>attitudes toward the mentally ill than will persons who</u>
<u>have experienced a relatively long period of hospitalization</u>.

Shortness of hospitalization was positively related
to attitudes toward the mentally ill on ABS-MI levels 2-3
and 6 but a negative relationship occurred on normative
level 2 for the total sample. Thus, persons whose hos-
pitalization had been of shorter duration attribute more
favorable attitudes to themselves and less positive atti-
tudes to others.

Considering the groups separately, Hypothesis 3 was
confirmed on moral evaluation level 3 and hypothetical
action level 4 for the schizophrenics and on levels 3-5

for the normals. Results obtained for the alcoholic and geriatric group failed to support the hypothesis.

It was pointed out that the data for the total sample and normals should be interpreted with caution since the normals may have adopted an inappropriate frame of reference while responding to the particular item concerning length of hospitalization.

H-4.--Persons who score high on stated importance of religion will score low on positive attitudes toward the mentally ill.

A negative relationship between stated importance of religion and positive attitudes, as predicted by Hypothesis 4, was not found on any ABS-MI levels for any group of subjects. Therefore, it was concluded that the results demonstrated a lack of support for the hypothesis.

H-5.--Persons who score high on stated adherence to religion will score low on positive attitudes toward the mentally ill.

A statistically significant negative relationship between the criterion and adherence to religion occurred on stereotypic level 1 for both the total sample and the schizophrenics. However, a positive relationship resulted on levels 3-4 and 6 for the schizophrenics whereas the hypothesis predicted a negative one.

It was concluded that Hypothesis 5 was unsupported.

146

H-6.--Persons who score high on change orientation
will score high on positive attitudes toward the mentally
ill.

The relationship predicted by Hypothesis 6 was
largely supported for the total sample as well as for the
geriatric, normal, and alcoholic groups.

It was found that individual change orientation
variables appeared to relate differentially to attitudes
and to vary according to subject group and ABS-MI scales.
The best sample group-predictor variable combinations were:
(a) geriatrics-self change, (b) normals-birth control,
and (c) alcoholics-child rearing.

H-7.--Persons who score high on chronicity orienta-
tion will score high on positive attitudes toward the
mentally ill.

High scores on the chronicity variable indicate
rejection of an orientation toward chronicity. Therefore,
a positive relationship between the two variables suggests
that positive attitudes toward the mentally ill are asso-
ciated with low chronicity orientation.

Hypothesis 7 is supported to a great extent for the
total sample as well as for the schizophrenics, geriatrics,
and normals. It is supported only on the more impersonal
normative level 2 for the alcoholic sample.

The strongest single predictor of attitudes was work
involvement for the total sample, schizophrenics, and

geriatrics, whereas responsibility was most powerful for the normal group. A single "best" predictor variable failed to emerge for the alcoholics.

H-8.--The more frequent the contact with mentally ill persons the higher will be the intensity scores on the ABS-MI, regardless of the direction (positiveness or negativeness) of attitude.

Frequency of contact was found to be related to attitudes toward the mentally ill for the total sample. Hypothesis 8 is also supported for the alcoholic sample but it was not confirmed for any of the other three individual groups.

H-9.--High frequency of contact with mentally ill persons will be associated with favorable attitudes toward the mentally ill if high frequency is concurrent with (a) alternative rewarding opportunities, (b) ease of avoidance of the contact, and (c) enjoyment of the contact.

Hypothesis 9 could not be tested directly as originally planned since the data did not meet specified concurrency conditions. However, multiple, partial, and product-moment correlations were obtained which revealed several significant relationships between contact variables and attitudes toward the mentally ill. The most salient of these were the following: (a) contact variables concerned with avoidance, amount, alternatives, and enjoyment, when combined, were significantly related to attitudes

toward the mentally ill for all subject samples; (b) enjoyment of contact with mentally ill persons was the strongest predictor of attitudes; and (c) alternative rewarding opportunities was the weakest predictor of attitudes.

H-10.--Persons who score high in efficacy will score high in positive attitudes toward the mentally ill.

By and large, Hypothesis 10 was confirmed for the schizophrenics but it was not supported for the geriatrics and alcoholics. It was supported on moral evaluation level 3 and hypothetical action level 4 whereas it was unsupported and contrary to prediction on stereotypic level 1 for both the normals and total sample.

H-11.--Persons who score high in knowledge about mental illness will score high in positive attitudes toward the mentally ill.

Knowledge about mental illness was significantly related to attitudes toward the mentally ill on ABS-MI levels 2-6 for the total sample and on levels 2-5 for the schizophrenics, providing direct support for H-11. The relationship emerged on only personal action level 6 for both the geriatrics and alcoholics.

H-12.--The groups will assume the following order with respect to favorable attitudes toward the mentally ill: Normals>Alcoholics>Schizophrenics>Geriatrics.

Hypothesis 12 received the strongest support on ABS-MI moral evaluation level 3 and personal feeling level 5;

however, it was not totally confirmed on any attitudinal level. Even on levels 3 and 5, not all of the means differed significantly from one another. Consistencies in the data that were supportive of H-12 were: (a) normals scored significantly higher than alcoholics, geriatrics and, with one exception on level 2, schizophrenics, and (b) schizophrenics scored higher than geriatrics.

H-13.--The ABS-MI scale levels or attitude sub-universes will form a Guttman Simplex for each of the sample groups.

Using a Q^2 criterion value of .70 or greater, a simplex was approximated for normal, alcoholic, schizophrenic, and geriatric samples as predicted by Hypothesis 13. Also, a close correspondence resulted between the hypothesized order and "best" order.

Discussion of Results

A review, interpretation, and integration of the major findings of the present research is included in this section.

ABS-MI Reliability

Reliabilities for the six levels of the ABS-MI were generally satisfactory and were comparable to other attitude scales. Consistent increments in the majority of the reliabilities of the scale levels occurred as a result of combining content and intensity scores. The effectiveness

of the procedure was greatest for the lowest reliabilities
which generally showed the greatest overall increase from
combining content-intensity scores.

The pattern of the reliability coefficients vary for
the three psychiatric samples, but in general they show a
distinct difference when compared with those obtained for
the normal group. The reliabilities tended to be highest
on the more impersonal ABS-MI levels and lowest on the more
personal feeling level 5 and behavioral action level 6 for
the psychiatric groups. The highest reliabilities for the
normal subjects were obtained on scale levels 4-6, while
the lowest resulted on levels 1-2.

The most adequate interpretation of these results
is that the psychiatric subjects were more certain and con-
sistent with regard to how other people compare the men-
tally ill and how other people behave toward this group
than they were of how they themselves personally feel and
act toward the mentally ill. On the other hand, the
normals were less consistent or sure about how other people
should act towards and compare persons who are mentally
ill. Normals were more consistent and positive with re-
spect to how they would act toward mentally ill persons
and how they personally felt and behaved toward them.

Relating Attitudes and
Demographic Variables

Age was related to ABS-MI attitudes in that older
persons in the total sample expressed more negative attitudes

toward the mentally ill on an abstract and impersonal stereotypic level as well as on progressively more concrete and personal levels ranging from personal moral considerations to personal feelings. As a whole, the more aged subjects tended to believe that other people maintained negative attitudes about the mentally ill. Also, older persons were of the opinion that they should not and would not interact positively with mentally ill persons, and that they had rather negative personal feelings about them.

The relationship between age and attitudes varied within and between groups. Schizophrenics and normals who were older emitted more negative attitudes on both a personal moral and a hypothetical behavioral level, whereas older geriatrics attributed more unfavorable attitudes to others. Otherwise, the older members of the geriatric group did not express unfavorable attitudes toward the mentally ill any more than did those of their group who were younger.

The results for the alcoholics were somewhat contrary to those of the other groups since older alcoholics ascribed favorable attitudes to others on an abstract, impersonal attitudinal level.

Thus, increasing age is related to attitudes toward the mentally ill but the relationship is one that varies according to subject groups and attitudinal structure.

Amount of education was found to be positively related to attitudes toward the mentally ill on the increasingly more personal and action oriented attitudinal dimensions for the total sample. On a less personal, societal normative, amount of education and attitudes were negatively related. The two variables, age and education, were unrelated for the geriatrics and alcoholics and unrelated on a stereotypic level only for the schizophrenics. They were related for the alcoholics on the moral evaluation, hypothetical and personal action dimensions of the ABS-MI.

The occurrence of a significant negative relationship on the normative level and significant positive relationship on the remaining attitudinal levels is an event requiring special mention and discussion. This event, or one in which the relationship between attitudes and a particular variable turns out to be significantly negative on either levels 1 and 2 (stereotypic and normative), or both, while positive relationships result between the variables on one or any number of the remaining levels (3-6), or vice versa, occurred quite frequently throughout the results of this research. As noted by Harrelson (1970), these opposite-direction correlations can be attributed to the fact that the Referent (Facet A), it will be recalled from Figures 3-6 in Chapter III, shifts from Others (a_1) to Self (a_2) from levels 2 to 3 in the ABS-MI. The effect of this shift is that subjects frequently attribute more

negative attitudes to others and more positive attitudes to themselves and in some instances, just the reverse. Specifically in the case of the relationship between education and attitudes, better educated subjects in the total sample attributed less favorable attitudes toward the mentally ill to others, whereas they identified themselves as having more positive attitudes.

A relatively short duration of hospitalization was related to positive attitudes on a personal moral evaluation and affective feelings level for the schizophrenics. Attitudes and length of hospitalization were correlated for both the geriatric and alcoholic sample. Most of the alcoholics had been hospitalized for only a short time. Therefore, this variable is relatively homogeneous within this group which may partially account for the lack of any significant relationship between attitudes and length of hospitalization in their case.

Although attitudes and length of hospitalization were positively related on a number of levels for both the normals and the total sample, it was pointed out that these results may be falacious and should be interpreted cautiously since the normal group may or may not have considered only their non-psychiatric hospital experiences when responding to the item concerning this variable.

Relating Attitudes and Religiosity

Variables concerning religious adherence and religious importance were not strong predictors of attitudes in either the psychiatric or normal samples. Generally the predicted negative relationship between these variables and ABS-MI attitudes failed to materialize. Earlier, a predicted negative relationship between the religious variables and attitudes toward the mentally retarded (Harrelson, 1970) and attitudes toward the physically handicapped (Jordan, 1968) failed to emerge. In view of the results of these studies as well as those of the present one, religious importance and adherence cannot be considered as strong correlates or determinants of attitudes toward the mentally ill, mentally retarded, or physically handicapped.

Relating Attitudes and
Change Orientation

The relationship between change orientation and attitudes was inconsistent in that the relationship varied for subject groups, ABS-MI levels, and particular change orientation items. The two variables were related for the groups as a whole; however, an inconsistent mixture of positive and negative partial correlations on stereotypic level 2 presented a consistent interpretation of the data for this level.

Interestingly, individual change orientation items related differentially to attitudes within samples and

between groups. For example, a self-report measure of "ease of self change" was the strongest predictor of attitudes for the geriatrics, but it was not a good predictor for the remaining groups. On the other hand, a measure of beliefs regarding birth control was the strongest predictor of attitudes toward the mentally ill for the normal sample. In general, the data indicated that a combination of change orientation items was predictive of attitudes and that some individual items were better predictors than others for some groups; however, no single item emerged as the strongest predictor for all samples.

Thus, the multiple correlation procedure, which was employed to examine the relationship between attitudes and change orientation predictor variables, proved to be a valuable tool in that it helped to identify relationships which might have otherwise gone unnoticed.

Relating Attitudes and Chronicity Orientation

The pattern of the relationship between chronicity orientation variables and attitudes toward the mentally ill is similar to that described in the previous section regarding attitudes and change orientation. That is, individually and in combination, chronicity orientation variables are predictive of attitudes; however, the relationships vary in terms of strength depending upon particular groups, ABS-MI levels, and predictor variables.

Although no single predictor was "best" for all samples across all ABS-MI levels, the item which pertained to a willingness to become involved in activities related to work was predictive of attitudes for more groups across more levels than any other variable. The value or importance of the two variables concerning opinions regarding self responsibility for one's own behavior and the need to earn privileges is at best limited, at least for the psychiatric samples. In future research of this type, the elimination of these variables might be considered.

Relating Attitudes and Contact

Frequency of contact with mentally ill persons was unrelated to certainty or sureness of attitudes toward them for any sample except the alcoholics. The more contact these subjects had with mentally ill persons, the more definite they were with respect to their attitudes. Furthermore, increased amount of contact was associated with a tendency for the alcoholic to believe that the attitudes of others toward the mentally ill were quite negative whereas his own were positive with respect to interacting with them on an actual behavioral level.

It would seem that the more an individual reported he enjoyed his contacts with mentally ill persons, the more positive would be his attitudes toward them. Such a relationship is precisely the case for all groups of psychiatric patients. Whether schizophrenic, alcoholic, and geriatric

persons enjoy their contact with the mentally ill is, by far, the strongest predictor of their attitudes toward them.

The schizophrenics indicated that their attitudes toward the mentally ill were more favorable if they had had some opportunity to avoid such contacts. The same relationship, only to a lesser extent, occurred for the normal group. It may be that the former feel satiated with excessive contact, while the latter have experienced few contacts and are fearful of them.

Relating Attitudes and Efficacy

Efficacy was a strong predictor of attitudes toward the mentally ill for the schizophrenics. Those who perceived man as able to cope effectively with various aspects of his natural environment, expressed more positive attitudes.

On a moral evaluation, and a hypothetical behavior level, efficacy was predictive of attitudes for the normal sample. For this group, however, as well as for the geriatrics and alcoholics, a sharp differentiation on the ABS-MI occurs between levels 1-2 and 3-6 where the "referent" shifts from others to "self." On the first, second, or both levels, subjects who scored high on the efficacy scale assigned less favorable attitudes to others.

Generally, the efficacy variable was not a strong predictor of attitudes toward the mentally ill on the more personally oriented action levels of the criterion, especially for the geriatrics, alcoholics, and normals.

Relating Attitudes and Knowledge

Knowledge about mental illness is a good predictor
of attitudes toward the mentally ill for schizophrenics and
normals. Also, if a slightly less than .05 level of sig-
nificance was selected, it would be a reasonably strong
predictor for the alcoholics on ABS-levels 3-5 as it
already is on the more personal and concrete actual behav-
ioral level 6. With respect to the geriatric sample,
knowledge is a strong predictor of the occurrence of
favorable personal interactions with the mentally ill.
Generally the knowledge variable is unrelated to the more
abstract and impersonal ABS-MI levels for the geriatrics
and alcoholics.

In effect, the more knowledgeable geriatrics failed
to indicate that they ought to interact with the mentally
ill or that they felt very positive toward them; however,
what they did indicate was that they have interacted with
them on a number of personal levels. On the other hand,
the normals and the schizophrenics suggest that they
should and would interact with the mentally ill and have
positive feelings about them, but they either do not or
have not interacted together.

Initially it was somewhat confusing and puzzling to
find that schizophrenics who are more knowledgeable about
mental illness, say that they experienced little inter-
personal involvement with other persons who were mentally

ill. One explanation of this phenomenon might be that
although schizophrenics are in the physical presence of
mentally ill persons almost continuously, they do not
tend to be within one another's psychological or inter-
personal proximity or influence. In their daily physical
associations together, many of them make it a practice to
reject or avoid establishment of personal and emotional
contacts and seldom even acknowledge each other in any
manner.

Relating Attitudes and
Group Membership

It will be recalled that the hypothesis relating
attitudes and group membership did not receive complete
support on any ABS-MI level and that a number of contra-
dictions to the hypothesis occurred.

When the hypothesis was originally formulated, intui-
tively it was believed that responses to the ABS-MI and
the items in the questionnaire by alcoholics would be most
similar to normals. That belief turned out to be erroneous.
In fact, in most instances involving a relationship be-
tween a predictor variable and attitudes toward the men-
tally ill, the pattern presented by alcoholics was very
unlike that of normals. In terms of adjusted mean scores
on the ABS-MI (Table 20 in Appendix B), those obtained
by the schizophrenics are more similar to the adjusted
mean scores of normals than are those of alcoholics. This

result was significantly contrary to what was predicted on ABS-MI levels 1, 2, 4, and 6. In no case were the mean scores for the alcoholics significantly higher than those of schizophrenics.

One further observation that warrants elaboration is that the differences between the means for various groups on the 6 levels of the ABS-MI, often are no greater, or even less, than the number of instances where no significant differences occur.

The findings that schizophrenics tend to express more favorable attitudes toward the mentally ill than do alcoholics, and that no significant differences between the mean attitude scores occur for some groups on various attitudinal levels, has at least one important implication for future research of this nature. With respect to the mean scores on the ABS-MI scales, the hypothesized order of the groups should be the following: normals$\geq$schizophrenics$\geq$alcoholics$\geq$geriatrics.

Relating Attitudes and
Multidimensionality

As predicted by Guttman's (1959) Contiguity Hypothesis, a simplex was approximated for the sample of normals and for each sample of psychiatric patients. This finding is supportive of the proposition that there exists an invariate structure of attitudes toward the mentally ill across different groups of psychiatric patients and normals.

Maierle (1969) commented that further research may be needed to establish that the discriminating ability necessary to distinguish among varying level members is found in the less sophisticated. The present research establishes that the less sophisticated, as well as the more sophisticated, do possess the necessary discriminatory ability.

Recommendations for Further Research

A number of recommendations concerning sampling, design, and analysis suggested by Harrelson (1970) and Maierle (1969) were incorporated in the present research. However, various limitations and shortcomings became evident as the study progressed toward completion. A brief summary of their implications as well as recommendations for future research are presented in the final section.

Criterion Instrumentation

Many psychiatric patients commented about the length of the ABS-MI and Personal Questionnaire. Although most of the schizophrenic and alcoholic subjects cooperated quite well with the administration and completion of the instruments, some of them offered observations and comments indicative of an initial reaction of dissatisfaction regarding its total length. Many geriatric subjects thought the instrument too long and became impatient, restless, and distracted during the course of testing, and consequently,

rapport between them and the examiner was difficult to establish, maintain or both, as was motivation to complete the instrument.

It will be recalled that each content item on the ABS-MI Efficacy scale is followed by an intensity item that asks the subject to indicate how sure he is of his response. For many subjects, selection of an intensity item became a rather routine procedure in that they tended most often to be either "fairly sure" or "very sure" of their response to a content item.

The experiences and observations mentioned above resulted in the following recommendations:

1. The total length of both the ABS-MI and the Personal Questionnaire should be reduced in future research.

2. The ABS-MI and Efficacy scale should be constructed and designed so that, if the subject desired, the necessity of indicating an intensity preference following each content item would be eliminated. A possible alternative might be to ask the subject, at the end of each ABS-MI scale level, how sure he was of his answer.

Independent Variable Instrumentation

At the conclusion of his research, Harrelson (1970) reported that a need exists for more adequate predictor variables and suggested that perhaps such variables existed in the form of available psychological tests which could be

incorporated into future research studies. The same can be said of many of the independent variables used in the present research, even though some of Harrelson's recommendations were followed such as combining content and intensity scores into one on the Efficacy scale and revising certain demographic variable questions.

Therefore, it is recommended that certain sections of the Personal Questionnaire be revised further. The following suggestions are offered for future research.

1. Select an improved measure of religious orientation or eliminate the variable altogether since it was not at all predictive of attitudes in the present research or in that completed by Harrelson (1970) and Jordan (1968).

2. Revise the chronicity orientation items as they are presently constructed. They encompass elements of high social desirability and fakeability and may be invalid.

3. With regard to the contact variables, correlate the enjoyment of contact variable directly with attitudes. Revising or discarding the avoidance and alternative variable should be given consideration.

4. Select relevant independent variables for which objective physiological or observational measures are available or can be obtained. This suggestion applies particularly to change orientation, contact, and chronicity orientation variables.

Analysis

The results of the present study reinforce the following two recommendations made by Harrelson (1970). The recommendations which appear in a slightly revised form are:

1. Future studies using ABS type instruments as a criterion should employ a two-way analysis of variance procedure to analyze group-scale level interactions.

2. A test of significance is needed for a simplex approximation statistic.

The following additional recommendation that emerged from the present research can be added to those listed above.

3. Analysis that provides data for a total group consisting of two or more distinct sub-groups should be carefully evaluated and possibly omitted in future research since, in the present study, various total means, scores, and correlational values for combined groups could consist of strikingly different values for the sub-groups.

Hypotheses

The present construction and form of Hypothesis 9 which relates contact to attitudes and Hypothesis 12 which relates attitudes and group membership does much to preclude obtaining the significant relationships they specify.

Thus, it is recommended that the hypotheses be reformulated to read as follows for Hypothesis 9 and 12 respectively.

1. Persons who score high in enjoyment of contact with the mentally ill will score high in attitudes toward mentally ill persons.

2. The groups will assume the following order with respect to favorable attitudes toward the mentally ill: Normals$\geq$Schizophrenics$\geq$Alcoholics$\geq$Geriatrics.

Administration

As indicated earlier, during the planning stages of this study, it had been decided to administer the instrument to the subjects in groups. Subsequent experiences, however, led to group administration to normals, alcoholics, and schizophrenics and individual administration to geriatrics. In future research involving geriatric subjects, individual administration of the instrument to all subjects is recommended.

Generalizability

The results of the present study can be safely generalized only to Caucasian male schizophrenics, alcoholic, and geriatric subjects who reside on unlocked wards at the Battle Creek, Michigan, Veterans Administration Hospital and to a particular group of graduate students at Michigan State University. To insure wider generalization of the results, it is recommended that future research in the area of attitudes toward the mentally ill incorporate a greater diversity of groups in a more extensive geographical area.

Theory

To data, quite a number of studies, in addition to the present one, have demonstrated that facet theory and analysis provide a very functional and fruitful approach to ordering disparate and seemingly unrelated psychological events and concepts on a theoretical, predictive, and descriptive level. The greatest weakness in the present research is the lack of adequate attitude predictor variables.

In conclusion, the following recommendations are presented.

1. The theoretical basis of the relationships between attitudes and attitude predictor variables, as well as empirical measures of the latter, should be strengthened.

2. Facet theory should incorporate the occurrence of negative relationships between various levels of an attitude universe.

3. To facilitate exploration and identification of attitude-behaviors and personality interrelationships, facet theory and analysis should be incorporated into the construction of both attitudinal and personality measures in future descriptive and experimental studies.

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167

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168

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APPENDICES

APPENDIX A

ATTITUDE BEHAVIOR SCALE: ABS-MI

ATTITUDE BEHAVIOR SCALE - ABS-MI

DIRECTIONS

This booklet contains statements of how people behave in certain situations or feel about certain things. You, yourself, or other persons often behave in the same way toward everyone, including mentally ill persons.

By mentally ill persons we mean those children or adults whose behaviors, feelings, or emotions cause them to have difficulties with everyday problems which they are unable to solve without help.

You also have some general ideas about yourself, about other persons like you, and about mentally ill persons. Sometimes you feel or behave the same way toward everyone and sometimes you feel or behave differently toward the mentally ill. Here is a sample question:

Sample 1

1. Other people believe they are more attractive than most mentally ill persons.

    (1.) agree
    2. uncertain
    3. disagree

    If others believe that mentally ill persons have less chance than they have to be attractive, you should circle the number 1 as shown above, or if you are using an IBM answer sheet make a heavy dark line on the answer sheet between the two lines after the number as follows:

    1. ■■■■   2. =====   3. =====   4. =====   5. =====

    After each statement there will also be a question asking you to state how certain or sure you were of your answer. If you choose answer number 1 as above and were very sure your complete answer would be as follows:

Sample 2

1. Other people believe they ⟵⟶ 2. How sure are you of
    are more attractive than   this answer?
    most mentally ill persons.

    (1.) agree   1. not sure
    2. uncertain   2. fairly
    3. disagree   (3.) very sure

1. ■■■■ 2 ==== 3 ==== 4 ==== 5 ====   1 === 2 === 3 ■■■ 4 === 5 ===

********** DO NOT PUT YOUR NAME ON THE BOOKLET ********************

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112270-RW

ABS-I-MI

Directions: Section 1

This section contains statements about ideas which other people have about mentally ill persons. Circle or fill in the answer sheet number that indicates how others compare themselves to the mentally ill. Please answer all questions.

Other people believe the following things about mentally ill persons as compared to those who are not mentally ill.

1. Other people believe their ⟵⟶ 2. How sure are you of this
marriages are happier than answer?
those of most mentally ill
persons.

   1. agree   1. not sure
   2. uncertain   2. fairly sure
   3. disagree   3. very sure

3. Other people believe they are 4. How sure are you of this
more intelligent than most answer?
mentally ill persons.

   1. agree   1. not sure
   2. uncertain   2. fairly sure
   3. disagree   3. very sure

5. Other people believe they are 6. How sure are you of this
more understanding than most answer?
mentally ill persons.

   1. agree   1. not sure
   2. uncertain   2. fairly sure
   3. disagree   3. very sure

7. Other people believe they are 8. How sure are you of this
less careless than most answer?
mentally ill persons when
invited to someone's home.

   1. agree   1. not sure
   2. uncertain   2. fairly sure
   3. disagree   3. very sure

9. Other people believe they are 10. How sure are you of this
more friendly than most answer?
mentally ill persons.

   1. agree   1. not sure
   2. uncertain   2. fairly sure
   3. disagree   3. very sure

ABS-I-MI

Other people believe the following
things about mentally ill persons
as compared to those who are not
mentally ill:

11. Other people believe their   12. How sure are you of this
    eating habits are better than   answer?
    those of most mentally ill
    persons.

    1. agree   1. not sure
    2. uncertain   2. fairly sure
    3. disagree   3. very sure

13. Other people believe they are   14. How sure are you of this
    more helpful than most   answer?
    mentally ill persons are.

    1. agree   1. not sure
    2. uncertain   2. fairly sure
    3. disagree   3. very sure

15. Other people believe that   16. How sure are you of this
    when they lend things to   answer?
    others they are more reliable
    than most mentally ill persons.

    1. agree   1. not sure
    2. uncertain   2. fairly sure
    3. disagree   3. very sure

112270-RW

ABS-II-MI

Directions: Section II

This section contains statements about interacting with mentally ill persons. Please choose the answer that indicates what you think others believe about interacting with mentally ill persons.

Most people believe the following about interacting with mentally ill persons:

17. Most people believe that others just like themselves are married to mentally ill persons.

    1. disagree
    2. uncertain
    3. agree

18. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

19. Most people believe that others like themselves intellectually enjoy mentally ill persons.

    1. disagree
    2. uncertain
    3. agree

20. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

21. Most people believe that others like themselves relate understandingly to mentally ill persons.

    1. disagree
    2. uncertain
    3. agree

22. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

23. Most people believe that others like themselves invite mentally ill persons into their homes.

    1. disagree
    2. uncertain
    3. agree

24. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

25. Most people believe that others like themselves have friends who are mentally ill.

    1. disagree
    2. uncertain
    3. agree

26. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

Most people believe the following
about interacting with mentally
ill persons:

27. Most people believe that
others like themselves eat
with persons who are
mentally ill.

    1. disagree
    2. uncertain
    3. agree

28. How sure are you of this
answer?

    1. not sure
    2. fairly sure
    3. very sure

29. Most people believe that
others like themselves
accept help from mentally
ill persons.

    1. disagree
    2. uncertain
    3. agree

30. How sure are you of this
answer?

    1. not sure
    2. fairly sure
    3. very sure

31. Most people believe that
others like themselves lend
things to mentally ill
persons.

    1. disagree
    2. uncertain
    3. agree

32. How sure are you of this
answer?

    1. not sure
    2. fairly sure
    3. very sure

ABS-III-MI

Directions: Section III

This section contains statements about ways in which you, yourself, should act toward mentally ill persons. Please choose the answer that indicates how you feel you should act or believe.

In respect to mentally ill persons, do you, yourself, believe that it is usually right or usually wrong:

33. I should be willing to marry persons who are mentally ill.

    1. disagree
    2. uncertain
    3. agree

34. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

35. I should be willing to intellectually enjoy mentally ill persons.

    1. disagree
    2. uncertain
    3. agree

36. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

37. I should be willing to understand mentally ill persons.

    1. disagree
    2. uncertain
    3. agree

38. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

39. I should be willing to invite mentally ill persons to my home.

    1. disagree
    2. uncertain
    3. agree

40. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

41. I should be willing to be friends with mentally ill persons.

    1. disagree
    2. uncertain
    3. agree

42. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

43. I should be willing to eat with mentally ill persons.

    1. disagree
    2. uncertain
    3. agree

44. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

In respect to mentally ill persons,
do <u>you, yourself, believe</u> that it
is usually <u>right</u> or usually <u>wrong</u>:

45. I should be willing to
accept help from mentally
ill persons.

    1. disagree
    2. uncertain
    3. agree

46. How sure are you of this
answer?

    1. not sure
    2. fairly sure
    3. very sure

47. I should be willing to
lend things to mentally
ill persons.

    1. disagree
    2. uncertain
    3. agree

48. How sure are you of this
answer?

    1. not sure
    2. fairly sure
    3. very sure

ABS-IV-XI

Directions: Section IV

This section contains statements about <u>how you think you would act</u> toward mentally ill persons. Choose the answer that indicates how you think you would act.

In respect to a mentally ill person <u>would you, yourself</u>:

49. I would marry someone who is mentally ill.

    1. disagree
    2. uncertain
    3. agree

50. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

51. I would intellectually enjoy a mentally ill person.

    1. disagree
    2. uncertain
    3. agree

52. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

53. I would understand a mentally ill person.

    1. disagree
    2. uncertain
    3. agree

54. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

55. I would invite a mentally ill person to my home.

    1. disagree
    2. uncertain
    3. agree

56. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

57. I would be friends with mentally ill persons.

    1. disagree
    2. uncertain
    3. agree

58. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

59. I would eat with mentally ill persons.

    1. disagree
    2. uncertain
    3. agree

60. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

In respect to a mentally ill
person, would you, yourself:

61. I would accept help from
    mentally ill persons.

    1. disagree
    2. uncertain
    3. agree

62. How sure are you of this
    answer?

    1. not sure
    2. fairly sure
    3. very sure

63. I would lend things to
    mentally ill persons.

    1. disagree
    2. uncertain
    3. agree

64. How sure are you of this
    answer?

    1. not sure
    2. fairly sure
    3. very sure

Directions: Section V

This section concerns actual feelings that people may have about
the mentally ill. You are asked to indicate how you feel about
the following statements.

How do you actually feel toward mentally ill persons:

65.   I feel unhappy about
      marrying a mentally
      ill person.

      1.   agree
      2.   uncertain
      3.   disagree

66.   How sure are you of this
      answer?

      1.   not sure
      2.   fairly sure
      3.   very sure

67.   I feel intellectually
      attracted to mentally
      ill persons.

      1.   disagree
      2.   uncertain
      3.   agree

68.   How sure are you of this
      answer?

      1.   not sure
      2.   fairly sure
      3.   very sure

69.   I am frightened about
      understanding a mentally
      ill person.

      1.   agree
      2.   uncertain
      3.   disagree

70.   How sure are you of this
      answer?

      1.   not sure
      2.   fairly sure
      3.   very sure

71.   I am happy about inviting
      mentally ill persons to
      my home.

      1.   disagree
      2.   uncertain
      3.   agree

72.   How sure are you of this
      answer?

      1.   not sure
      2.   fairly sure
      3.   very sure

73.   I feel friendly toward
      mentally ill persons.

      1.   disagree
      2.   uncertain
      3.   agree

74.   How sure are you of this
      answer?

      1.   not sure
      2.   fairly sure
      3.   very sure

75.   I feel at ease about
      eating with mentally
      ill persons.

      1.   disagree
      2.   uncertain
      3.   agree

76.   How sure are you of this
      answer?

      1.   not sure
      2.   fairly sure
      3.   very sure

How do you actually feel toward
mentally ill persons:

77. I feel all right about
     accepting help from
     mentally ill persons.

     1. disagree
     2. uncertain
     3. agree

79. I feel tense about lending
     things to mentally ill
     persons.

     1. agree
     2. uncertain
     3. disagree

78. How sure are you of this
     answer?

     1. not sure
     2. fairly sure
     3. very sure

80. How sure are you of this
     answer?

     1. not sure
     2. fairly sure
     3. very sure

Directions: Section VI

This section concerns actual experiences you have had with mentally ill persons. Try to answer the following questions from the knowledge of your actual experiences.

Experiences or contacts with mentally ill persons:

81. I am married to a mentally ill person.

    1. disagree
    2. uncertain
    3. agree

82. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

83. I have intellectually enjoyed mentally ill persons.

    1. disagree
    2. uncertain
    3. agree

84. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

85. I have understood mentally ill persons.

    1. disagree
    2. uncertain
    3. agree

86. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

87. I have invited mentally ill persons to where I live.

    1. disagree
    2. uncertain
    3. agree

88. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

89. I have friends who are mentally ill.

    1. disagree
    2. uncertain
    3. agree

90. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

91. I have eaten with persons who are mentally ill.

    1. disagree
    2. uncertain
    3. agree

92. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

Experiences or contacts with mentally ill persons:

93. I have accepted help from mentally ill persons.

    1. disagree
    2. uncertain
    3. agree

94. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

95. I have loaned things to mentally ill persons.

    1. disagree
    2. uncertain
    3. agree

96. How sure are you of this answer?

    1. not sure
    2. fairly sure
    3. very sure

This part of the booklet deals with many things. Part of the questionnaire has to do with personal information about you. Since the questionnaire is completely anonymous or confidential, you may answer all of the questions freely without any concern about being identified. It is important to obtain your answer to every question.

Read each question carefully and do not omit any questions. Please answer by circling the answer you choose, or if you are using an IBM answer sheet, make a heavy dark line on the answer sheet between the two lines after the number you select.

97. Please indicate your age as follows:

      1. 30 years of age or under

      2. 31-40 years

      3. 41-50 years

      4. 51-60 years

      5. 60 years or over

      6. Write your exact age_____

98. About how much education do you have?

      1. 6 years of school or less

      2. Between 7 and 9 years of school

      3. Between 10 and 12 years of school

      4. Some college or university

      5. A college or university degree

      6. Write the number of years you went to school_____

99. About how important is your religion to you in your daily life?

    1. Not at all important

    2. Not very important

    3. Neither important nor unimportant

    4. Fairly important

    5. Very important

100. In respect to your religion, about to what extent do you observe the rules and regulations of your religion?

    1. Almost never

    2. Rarely

    3. Occasionally

    4. Frequently

    5. Almost always

101. Some people are more set in their ways than others. How would you rate yourself?

    1. I find it very difficult to change

    2. I find it slightly difficult to change

    3. I find it neither difficult nor easy to change

    4. I find it somewhat easy to change

    5. I find it very easy to change

102. What is your feeling about the following statement?

"New methods of raising children should be tried out."

    1. Almost never

    2. Rarely

    3. Occasionally

    4. Frequently

    5. Almost always

103. What is your feeling about a married couple practicing birth control?

       1. It is almost never right

       2. It is rarely right

       3. It is occasionally right

       4. It is frequently right

       5. It is almost always right

104. How long have you been hospitalized?

       1. 15 or more years

       2. 10-15 years

       3. 5-10 years

       4. 1-5 years

       5. Less than one year

       6. Write the number of years that you have been hospitalized_____

105. I feel responsible for my actions as follows: (circle one answer only)

       1. Almost never

       2. Rarely

       3. Occasionally

       4. Frequently

       5. Almost always

106. I like to be involved in some kind of work, recreational, or hobby activities as follows: (circle one answer only)

       1. Almost never

       2. Rarely

       3. Occasionally

       4. Frequently

       5. Almost always

107. Privileges granted by a psychiatric institution such as a privilege card, passes, etc., should be <u>earned</u>: (circle one answer only)

      1. Almost never

      2. Rarely

      3. Occasionally

      4. Frequently

      5. Almost always

This part of the questionnaire deals with your experiences or contacts with mentally ill persons. Perhaps you have had much contact with mentally ill persons, or you may have studied about them. On the other hand, you may have had little or no contact with mentally ill persons, and may have never thought much about them at all.

In the following questions, if more than one experience applies, please choose the answer with the highest number.

108. Have you had any experience with <u>mentally ill</u> persons? Considering all of the times you have talked, worked, or in some other way had personal contact with mentally ill persons, about how many times has it been altogether?

    1. Less than 10 occasions

    2. Between 10 and 50 occasions

    3. Between 50 and 100 occasions

    4. Between 100 and 500 occasions

    5. More than 500 occasions.

109. When you have been in contact with mentally ill persons, how <u>easy</u> for you, in general, would it have been to have avoided being with these mentally ill persons?

    1. I could not avoid the contact

    2. I could generally have avoided these personal contacts only at great cost or difficulty

    3. I could generally have avoided these personal contacts only with considerable difficulty

    4. I could generally have avoided these personal contacts but with some inconvenience

    5. I could generally have avoided these personal contacts without any difficulty or inconvenience

110. How have you generally felt about your experiences or contacts with mentally ill persons?

    1. I definitely disliked it

    2. I did not like it very much

    3. I neither liked it nor disliked it

    4. I liked it somewhat

    5. I definitely enjoyed it

111. In your contact or experience with mentally ill persons, what opportunities do you have to associate with someone else such as friends, relatives, hospital personnel, etc. that are acceptable to you?

    1. No one else is available

    2. Other people available are <u>not at all</u> acceptable to me.

    3. Other people available are <u>not quite</u> acceptable to me

    4. Other people available are <u>slightly</u> acceptable to me

    5. Other people available are <u>fully</u> acceptable to me

LIFE SITUATIONS

This section of the booklet deals with how people feel about several aspects of life or life situations. Please indicate how you feel about each situation by <u>circling</u> the answer you choose, or if you are using an IBM answer sheet fill in the space after the number you select.

112. It should be possible to ←→ 113. How sure do you feel
eliminate war once and about your answer?
for all.

1. strongly disagree   1. not sure at all
2. disagree   2. not very sure
3. agree   3. fairly sure
4. strongly agree   4. very sure

114. Success depends to a large 115. How sure do you feel
part on luck and fate. about your answer?

1. strongly agree   1. not sure at all
2. agree   2. not very sure
3. disagree   3. fairly sure
4. strongly disagree   4. very sure

116. Some day more of the 117. How sure do you feel
mysteries of the world about your answer?
will be revealed by
science.

1. strongly disagree   1. not sure at all
2. disagree   2. not very sure
3. agree   3. fairly sure
4. strongly agree   4. very sure

118. By improving industrial and 119. How sure do you feel
agricultural methods, poverty about your answer?
can be eliminated in the world.

1. strongly disagree   1. not sure at all
2. disagree   2. not very sure
3. agree   3. fairly sure
4. strongly agree   4. very sure

120. With increased medical 121. How sure do you feel
knowledge it should be about your answer?
possible to lengthen the
average life span to 100
years or more.

1. strongly disagree   1. not sure at all
2. disagree   2. not very sure
3. agree   3. fairly sure
4. strongly agree   4. very sure

122. Someday the deserts will be converted into good farming land by the application of engineering and science.

   1. strongly disagree
   2. disagree
   3. agree
   4. strongly agree

123. How sure do you feel about your answer?

   1. not sure at all
   2. not very sure
   3. fairly sure
   4. very sure

124. Education can only help people develop their natural abilities; it cannot change people in any fundamental way.

   1. strongly agree
   2. agree
   3. disagree
   4. strongly disagree

125. How sure do you feel about your answer?

   1. not sure at all
   2. not very sure
   3. fairly sure
   4. very sure

126. With hard work anyone can succeed.

   1. strongly disagree
   2. disagree
   3. agree
   4. strongly agree

127. How sure do you feel about your answer?

   1. not sure at all
   2. not very sure
   3. fairly sure
   4. very sure

128. Almost every present human problem will be solved in the future.

   1. strongly disagree
   2. disagree
   3. agree
   4. strongly agree

129. How sure do you feel about your answer?

   1. not sure at all
   2. not very sure
   3. fairly sure
   4. very sure

MENTAL ILLNESS

This section of the questionnaire deals with information about mental illness. Please circle your answer, or if you are using an IBM answer sheet fill in the space after the number you select.

130. Children usually do not forget about frightening experiences in a short time.

    1. strongly disagree
    2. disagree
    3. agree
    4. strongly agree

131. Psychiatrists try to teach mental patients to hold in their strong emotions.

    1. strongly agree
    2. agree
    3. disagree
    4. strongly disagree

132. Most of the mentally ill cases are found in people over fifty years of age.

    1. strongly agree
    2. agree
    3. disagree
    4. strongly disagree

133. Many of the people who go to mental hospitals are able to return to work in society again.

    1. strongly disagree
    2. disagree
    3. agree
    4. strongly agree

134. X-rays of the head will not tell whether a person is likely to develop mental illness.

    1. strongly disagree
    2. disagree
    3. agree
    4. strongly agree

135. Most people can recognize the type of person who is likely to have a nervous breakdown.

    1. strongly agree
    2. agree
    3. disagree
    4. strongly disagree

136. People who are likely to have a nervous breakdown pay little attention to their personal appearance.

    1. strongly agree
    2. agree
    3. disagree
    4. strongly disagree

137. Almost any disease that attacks the nervous system is likely to bring on mental illness.

    1. strongly agree
    2. agree
    3. disagree
    4. strongly disagree

138. Most people who "go crazy" try to kill themselves.

    1. strongly agree
    2. agree
    3. disagree
    4. strongly disagree

139. If a child is jealous of a younger brother, it is best not to let him show it in any way.

    1. strongly agree
    2. agree
    3. disagree
    4. strongly disagree

140. A person cannot rid himself of unpleasant memories by trying hard to forget them.

    1. strongly disagree
    2. disagree
    3. agree
    4. strongly agree

141. Helping the mentally ill person with his financial and social problems will not cure his disorder.

    1. strongly disagree
    2. disagree
    3. agree
    4. strongly agree

142. Most of the people in mental hospitals speak in words that can be understood.

    1. strongly disagree
    2. disagree
    3. agree
    4. strongly agree

143. Early training will not make the child's brain grow faster.

      1. strongly disagree
      2. disagree
      3. agree
      4. strongly agree

144. Older people have a less difficult time recovering from a nervous breakdown.

      1. strongly agree
      2. agree
      3. disagree
      4. strongly disagree

145. There is not much that can be done for a person who develops a mental disorder.

      1. strongly agree
      2. agree
      3. disagree
      4. strongly disagree

146. Few of the people who seek psychiatric help need the treatment.

      1. strongly agree
      2. agree
      3. disagree
      4. strongly disagree

The following four questions are general in nature. Please answer all of them.

147. Please indicate your sex.

      1. Female

      2. Male

148. What is your marital status?

      1. Married

      2. Single

      3. Divorced

      4. Widowed

      5. Separated

149. What is your religion?

     1. I prefer not to answer

     2. Catholic

     3. Protestant

     4. Jewish

     5. Other or none

150. My therapy has consisted <u>mostly</u> of the following: (Circle one answer only)

     1. I have not had any therapy

     2. Medications

     3. Assignment to activities such as Occupational Therapy (O.T.), Corrective Therapy (C.T.), etc.

     4. Group therapy

     5. Individual therapy

APPENDIX B

STATISTICAL MATERIAL

TABLE 18.--N's, means, and standard deviations for psychiatric and normal samples on 12 dependent[1] and 18 independent[2] variables.

Variable[3]	55N[4]		58A[5]		117S[6]		51G[7]	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
Attitude Content								
Stereotype	13.1	2.9	11.1	2.6	15.2	4.8	9.9	2.4
Normative	13.8	3.3	14.7	4.2	17.9	3.9	15.2	4.6
Moral Evaluation	19.9	3.0	18.1	3.1	18.3	3.8	16.9	4.3
Hypothetical Action	19.2	3.6	17.0	3.1	16.9	3.5	17.5	4.6
Personal Feeling	17.9	3.1	15.7	3.0	17.6	3.3	16.5	3.9
Personal Action	17.7	4.0	16.2	3.2	13.8	4.3	16.8	3.9
Attitude Intensity								
Stereotype	16.8	3.5	19.9	2.9	19.1	3.5	20.8	4.2
Normative	16.7	4.0	19.1	3.0	19.7	3.7	21.0	4.5
Moral Evaluation	21.0	2.5	20.4	2.8	19.9	3.5	22.1	3.8
Hypothetical Action	20.1	3.1	19.4	3.8	19.7	3.5	22.0	3.6
Personal Feelings	20.2	3.2	19.2	3.6	21.0	3.4	22.0	3.6
Personal Action	20.8	2.7	20.6	2.7	19.9	3.5	22.4	3.2
Demographic								
Age	1.1	.3	2.9	.8	2.6	1.0	5.0	.1
Education	4.9	.3	2.8	.8	3.0	.9	2.4	1.1
Relig.-Importance	3.2	1.5	3.7	1.0	3.8	1.3	3.6	1.4
Relig.-Adherence	3.2	1.4	3.5	1.1	3.7	1.3	3.8	1.2
Hospitalization	4.9	.6	4.9	.4	2.9	1.4	2.6	1.4
Change Orientation								
Self Change	2.9	1.1	2.6	1.1	2.6	1.3	2.9	1.6
Child Rearing	3.8	.9	3.5	1.1	3.3	1.3	3.2	1.3
Birth Control	4.7	.7	3.9	1.2	3.4	1.5	3.4	1.5
Chronicity Orientation								
Responsibility	4.8	.7	4.5	.8	4.5	1.0	4.6	.9
Work Involvement	4.3	1.0	4.0	1.2	3.7	1.3	3.9	1.3
Privileges	3.4	1.1	4.3	1.1	4.0	1.4	4.5	.8
Contact								
Amount	2.4	1.4	2.4	1.4	3.4	1.6	3.7	1.6
Avoidance	3.0	1.6	3.7	1.6	2.6	1.7	2.5	1.6
Enjoyment	3.7	.9	3.2	.9	3.1	1.1	2.9	1.2
Alternatives	4.4	1.2	4.2	1.1	3.9	1.4	4.1	1.3
Value								
Efficacy-Content	24.1	2.7	24.6	3.2	24.0	4.0	25.9	3.4
Efficacy-Intensity	29.3	4.6	30.8	3.1	30.3	4.9	31.9	5.2
MI Knowledge	52.6	6.1	47.2	4.2	46.1	5.9	45.8	6.1

[1] Attitude content and intensity variables

[2] Demographic and all subsequent variables

[3] Variables are described in Chapter III

[4] Normals

[5] Alcoholics

[6] Schizophrenics

[7] Geriatrics

TABLE 19.--H's, means, and standard deviations for psychiatric and normal samples on 1 independent[1] and 6 dependent[2] variables--content and intensity combined.

Variable[3]	55N[4]		58A[5]		117S[6]		51G[7]	
	X̄	SD	X̄	SD	X̄	SD	X̄	SD
Attitude--Content and Intensity Combined								
Stereotype	29.2	10.5	21.3	9.8	37.6	17.1	18.1	9.6
Normative	31.9	11.4	34.4	15.9	47.1	14.1	37.5	17.5
Moral Evaluation	55.1	11.5	47.5	12.3	48.3	13.9	43.4	16.4
Hypothetical Action	52.1	13.9	43.1	12.3	43.2	13.0	45.1	17.6
Personal Feeling	47.1	11.9	38.3	10.9	46.3	12.4	41.9	15.5
Personal Action	46.6	15.5	40.8	12.7	31.9	16.1	43.0	15.2
Efficacy--Content and Intensity Combined	84.3	13.2	88.2	15.9	84.7	19.8	93.4	16.8

[1] Efficacy

[2] ABS-MI levels 1-6

[3] Variables are described in Chapter III

[4] Normals

[5] Alcoholics

[6] Schizophrenics

[7] Geriatrics

TABLE 20.--Sample sizes, adjusted means,[1] F's, and multiple means test for psychiatric and normal samples--efficacy and ABS-MI content and ABS-MI content and intensity combined.

Variables	55N[2] Adj X	58A[3] Adj X	117S[4] Adj X	51G[5] Adj X	26F[6] Adj X	29M[7] Adj X	F	Multiple Means Test**
ABS-MI Scale Levels								
Stereotype	29.32	24.11	29.12	20.92	28.68	23.09	7.27*	N>A, N>G, S>G, S>A
Normative	31.92	34.25	41.52	37.40	36.16	36.38	4.80*	S>A, S>N
Moral	55.01	46.26	47.56	42.12	46.50	48.97	5.83*	N>A, N>S, N>G, S>G
Hypo. Behavior	52.06	42.18	46.81	44.23	45.42	47.23	3.30*	N>A, N>G, S>A
Feelings	46.97	35.74	39.27	39.34	37.75	42.91	5.34*	N>A, A>S, N>G
Personal Action	46.55	40.44	47.80	42.68	44.05	44.69	4.39*	N>A, S>G, S>A
Demographic								
Age	1.12	2.89	2.59	4.97	2.88	2.90	192.91*	G>S, G>A, G>N, A>S, A>N, S>N
Education	4.93	2.79	3.04	2.35	3.27	3.28	65.01*	N>A, N>S, N>G, A>G, S>A, S>G
Relig.-Importance	3.13	3.84	3.93	3.65	3.75	3.54	3.13*	A>N, S>N
Relig.-Adherence	3.19	3.59	3.83	3.96	3.76	3.52	2.94*	S>N, G>N
Hospitalization[8]	4.86	4.95	2.97	2.71	3.97	3.77	65.60*	S>N, S>A, G>N, G>A
Change Orientation								
Self Change	2.87	2.29	2.29	2.57	2.21	2.80	2.04	- - -
Child Rearing	3.78	3.51	3.30	3.15	3.42	3.44	2.24	- - -
Birth Control	4.72	4.05	3.59	3.60	4.16	3.82	6.86*	N>A, N>S, N>G, A>S
Chronicity Orientation								
Responsibility	4.80	4.60	4.56	4.73	4.75	4.59	.85	- - -
Work Involvement	4.25	3.91	3.68	3.80	3.85	3.97	1.86	- - -
Privileges	3.44	4.44	4.08	4.62	4.28	4.02	7.17*	A>N, S>N, G>N, A>S, G>S
Contact								
Amount	2.38	2.05	3.01	3.27	2.30	3.06	8.12*	S>N, S>A, G>N, G>A
Avoidance	3.05	3.95	2.81	2.73	3.39	2.89	7.15*	A>N, A>S, A>G
Enjoyment	3.67	2.88	2.78	2.56	2.65	3.30	7.44*	N>A, N>S, N>G
Alternatives	4.34	4.15	3.87	4.06	4.03	4.18	1.31	- - - -
Value								
Efficacy	84.15	85.51	82.06	90.69	82.92	88.28	2.99*	G>S
MI Knowledge	52.59	46.35	45.24	44.97	46.43	48.14	14.30*	N>A, N>S, N>G

[1]Adjusted for sex and sample size

[2]Normals

[3]Alcoholics

[4]Schizophrenics

[5]Geriatrics

[6]Females

[7]Males

[8]High values correspond to low hospitalization and vice versa

*p.<.05