INFORMATION TO USERS

This manuscript has been reproduced from the microfilm master. UMI films the text directly from the original or copy submitted. Thus, some thesis and dissertation copies are in typewriter face, while others may be from any type of computer printer.

The quality of this reproduction is dependent upon the quality of the copy submitted. Broken or indistinct print, colored or poor quality illustrations and photographs, print bleedthrough, substandard margins, and improper alignment can adversely affect reproduction.

In the unlikely event that the author did not send UMI a complete manuscript and there are missing pages, these will be noted. Also, if unauthorized copyright material had to be removed, a note will indicate the deletion.

Oversize materials (e.g., maps, drawings, charts) are reproduced by sectioning the original, beginning at the upper left-hand corner and continuing from left to right in equal sections with small overlaps. Each original is also photographed in one exposure and is included in reduced form at the back of the book.

Photographs included in the original manuscript have been reproduced xerographically in this copy. Higher quality 6" x 9" black and white photographic prints are available for any photographs or illustrations appearing in this copy for an additional charge. Contact UMI directly to order.

UMI
University Microfilms International
A Bell & Howell Information Company
300 North Zeeb Road, Ann Arbor, MI 48106-1346 USA
313/761-4700  800/521-0600
Assessing mental health and mental retardation professionals’ knowledge of mental illness, mental retardation and mental illness as it relates to persons with mental retardation

Petruska, Richard James, Ph.D.

The Ohio State University, 1991

Copyright ©1991 by Petruska, Richard James. All rights reserved.
ASSESSING MENTAL HEALTH AND MENTAL RETARDATION
PROFESSIONALS' KNOWLEDGE OF MENTAL ILLNESS,
MENTAL RETARDATION AND MENTAL ILLNESS AS IT
RELATES TO PERSONS WITH MENTAL RETARDATION

DISSERTATION

Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By
Richard J. Petruska, B.A., M.A., M.S.W., M.A.P.A.

* * * * *

The Ohio State University
1991

Dissertation Committee:
Keith Kilty, Ph.D.
Amy Riemenschneider, D.S.W.
Virginia Richardson, Ph.D.

Approved by

Keith Kilty, Adviser
College of Social Work
Thanks to Amy Riemenschneider, D.S.W. and Keith Kilty, Ph.D. for their suggestions and direction during the planning, execution and review of this research; to Virginia Richardson, Ph.D. and Henry Leland, Ph.D. for their helpful comments; and to Bob Ryan, D.S.W. who was involved in this study until the time of his death and an adviser in the best sense of the word.
VITA

November 7, 1955......................... Born - Cleveland, Ohio

1977........................................... B.A. Psychology
Cleveland State U.

1980........................................... M.A. Social Psychology
Cleveland State U.

1982-1983..................................... Social Worker,
Northeast Ohio
Developmental Center
Cleveland, Ohio

1988........................................... M.A. Public Administration
Ohio State U.

1988........................................... M.S.W. Social Work
Ohio State U.

Publications

space measurement: A validational comparison.
The Psychological Record, 31, 145-151.

measures of interpersonal adequacy to safety and esteem
motives. Journal of Personality Assessment, 46, 3,
279-283.

attributes and prosocial behavior. Journal of
Personality and Social Psychology, Vol. 46, No. 2,
458-468.

Fields of Study

Major Field: Social Work
# TABLE OF CONTENTS

**PAGE**

<table>
<thead>
<tr>
<th>ACKNOWLEDGEMENTS</th>
<th>ii</th>
</tr>
</thead>
<tbody>
<tr>
<td>VITA</td>
<td>iii</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>viii</td>
</tr>
</tbody>
</table>

## CHAPTER

### I. INTRODUCTION ................................................................. 1

- Statement of Purpose ................................................. 4
- Nature of the Problem .............................................. 5

### II. REVIEW OF THE LITERATURE ........................................ 9

- Prevalence, Assessment & Diagnostic Issues ............... 11
  - Prevalence of Mental Illness in Persons with Mental Retardation ................................... 11
  - Assessment of Depression ...................................... 15
  - Diagnostic Overshadowing ....................................... 15
- Treatment Strategies and Interventions .................... 18
  - Prevention ........................................................ 19
  - Psychotherapeutic Methods ................................... 21
  - Group and Behavioral Therapies ............................. 23
- Services to Persons with Mental Illness and Mental Retardation ........................................... 26
  - Outpatient Services ............................................ 26
  - The Extended Role of CMHCs ................................. 29
  - Program Models .................................................. 31
  - Service Systems ................................................ 36
- Social Work Implications ......................................... 40
III. METHODOLOGY ................................................................. 44

Research Questions .......................................................... 44
Population ........................................................................ 46
Research Design ................................................................ 47
Instrumentation ............................................................... 49
Data Collection .................................................................. 56
  The Nature of the Data to be Collected ......................... 56
  Data Collection Procedures ............................................. 56

IV. RESULTS ........................................................................... 58

Survey Return Rates ......................................................... 58
Characteristics of the Sample ............................................. 58
Attitudinal Questions ......................................................... 59
Additional Frequencies ....................................................... 62
T-tests ................................................................................ 62
  Developmental vs. Clinical Psychologists ...................... 68
Chi-Squares for Respondent Opinions ............................... 70
Regression Analyses ......................................................... 72
  Attitudinal Variables ..................................................... 73
    Test Scores for Mental Health Professionals .................. 73
    Test Scores for Mental Retardation Professionals ............ 73
    Test Scores for Mental Health & Mental Retardation
      Professionals ................................................................. 74
Demographic and Informational Variables .......................... 76
  Test Scores for Mental Health Professionals ..................... 76
  Test Scores for Mental Retardation Professionals ............... 76
  Test Scores for Mental Health & Mental Retardation
    Professionals ................................................................. 77
  Attitudinal, Demographic and Informational Variables
    Combined ........................................................................ 79
    Test Scores for Mental Health Professionals ...................... 79
    Test Scores for Mental Retardation Professionals ............... 79
    Test Scores for Mental Health & Mental Retardation
      Professionals ................................................................. 80

V. DISCUSSION ...................................................................... 83

Summary of Results ......................................................... 83
Interpretations ................................................................. 88
  The Nature of the Population ........................................... 88
  Respondent Beliefs .......................................................... 90
Content Areas Most Often Answered Incorrectly ................ 91
Interpretations of T-test Results ......................................... 91
Interpretations of Regression Analysis .............................. 94
  Regression for Demographic & Informational
    Variables ................................................................. 95

- v -
I. RESPONDENT OPINIONS ........................................ 157

LIST OF REFERENCES ........................................... 159
LIST OF TABLES

<table>
<thead>
<tr>
<th>TABLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Characteristics of the Sample</td>
<td>60</td>
</tr>
<tr>
<td>2. Respondent Beliefs about Personal Abilities</td>
<td>61</td>
</tr>
<tr>
<td>3. T-Tests</td>
<td>64</td>
</tr>
<tr>
<td>4. T-tests for Differences Between MR/DD Professionals</td>
<td>67</td>
</tr>
<tr>
<td>5. T-tests for Psychologists</td>
<td>69</td>
</tr>
<tr>
<td>6. Standardized Regression Coefficients for Attitudinal Variables</td>
<td>75</td>
</tr>
<tr>
<td>7. Standardized Regression Coefficients for Demographic and Informational Variables</td>
<td>78</td>
</tr>
<tr>
<td>8. Standardized Regression Coefficients for Informational, Demographic and Attitudinal Variables Combined</td>
<td>81</td>
</tr>
<tr>
<td>9. Pass/Fail Rates for Mental Health Professionals</td>
<td>147</td>
</tr>
<tr>
<td>10. Pass/Fail Rates for Mental Retardation Professionals</td>
<td>148</td>
</tr>
<tr>
<td>11. The Nature of the Respondents' Professional Practice</td>
<td>150</td>
</tr>
<tr>
<td>12. Respondents' Coursework and Professional Training</td>
<td>152</td>
</tr>
<tr>
<td>13. Respondents' Personal Belief in the Adequacy of their Professional Training</td>
<td>154</td>
</tr>
<tr>
<td>14. Agency Policy on Addressing the Mental Health Needs of Persons with Mental Retardation</td>
<td>156</td>
</tr>
<tr>
<td>15. Respondent Opinions</td>
<td>158</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

People with mental retardation are vulnerable to the same range of behavior and emotional problems as people without retardation, but as researchers in the field have noted: "...their difficulties have rarely been the subject of systematic study and their proper treatment has always been a low priority for both medicine and psychiatry." (Gualtieri, 1982; p.ix).

Furthermore, persons with mental retardation are at risk for the development of psychopathology. Recent studies indicate that between 25% and 30% of people with mental retardation also have a co-existing psychiatric disorder (Fletcher & Menolascino, 1989). Inadequate defense mechanisms and tenuous social and emotional supports have caused the incidence rate of mental illness in the retarded to be nearly twice as high as that of the non-retarded population. Despite this high prevalence, professionals and volunteers have long been unable and/or unwilling to address the needs of individuals who manifest co-existing symptoms of mental retardation and mental illness (Matson & Barret, 1982).

During the past two decades the deinstitutionalization movement has brought more of these mentally ill/mentally retarded clients into the mainstream of society, forcing mental health professionals to become reinvolved in the treatment and life adjustment challenges of citizens with mental retardation. A number of serious dilemmas accompany their reinvolvement, however, not the least of which is the
apparent current state of polarization that exists between the fields of mental health and mental retardation/developmental disabilities. Few mental health personnel are knowledgeable and experienced in working with persons who are retarded and even fewer are experienced with the condition in conjunction with mental illness. Menolascino & Stark (1984) note that such training was an integral part of the mental health professional's experience around the turn of the century but ceased to be the case during the first two decades after. Three major changes in professional and societal attitudes surrounding people who have mental retardation may have contributed to this gradual breaking away of the mental health profession. First, the techniques of psychometric intelligence testing replaced the psychiatric case-study approach. Second, the "eugenics movement" labeled people with retardation as deviants and criminals; and third, genetic-brain-pathology causalities became the predominant viewpoint in the field of mental retardation. These factors, acting together, displaced the excellent record of individualized assistance and humanistic concern displayed by the mental health profession for the retarded at the turn of the century and contributed to the mental health professionals' declining interest in and enthusiasm for mental retardation. These trends paved the way for four decades of fear and misunderstanding about the retarded and led to policies of custodial care and institutionalization that stood for many years. This state of affairs persisted until the early 1960's and "left the mental health aspects of mental retardation as a narrow and 'fruitless' area for professional involvement" (Menolascino & Stark, 1984; p.xv).

Finally, in 1963 President Kennedy's Panel on Mental Retardation, along with subsequent federal legislation, renewed professional and parent/volunteer interest and involvement in this area.
Improvements in the diagnosis, treatment, and management of mental retardation flowed from the new national commitments to service, research, training, and social policy changes. Spurred onward by fresh conceptualizations of societal and professional viewpoints (e.g., the ideology of normalization and the maturational posture of the developmental model), the quality-of-life issue for the mentally retarded again became a focal point for professional approaches. (Menolascino & Stark, 1984; p.xvi)

Likewise, the civil rights movement at that time spurred greater concern for the rights of people with mental retardation who were being segregated in large state institutions. Subsequent deinstitutionalization policies created a new system of community-based services to which newly-released residents were expected to adapt. Passive and dependent behaviors that were reinforced in institutional settings had to be unlearned and replaced with interpersonal skills that were necessary for successful functioning in these community settings. In its haste to eliminate physical segregation, deinstitutionalization failed to consider the impact of such an abrupt move on the individuals involved, replacing one problem with another. It is the lack of these needed interpersonal skills (such as impulse control and adaptive behavior in conflict situations) "that have underscored the pressing need for greatly increased professional knowledge, involvement, and research into the personality adjustments and the mental illness parameters of mentally retarded citizens" (Menolascino & Stark, 1984; p.xvi).

Although problems in adjusting to community life can be a cause of emotional problems in individuals with mental retardation it is important to note that the majority of these people do not have psychiatric problems. Nevertheless, the rate of mental illness in the retarded population is nearly twice as high as the general public and they can experience any of the forms of mental illness, just as the non-retarded population (Fletcher & Menolascino, 1989).
STATEMENT OF PURPOSE

The premise of this dissertation is that both mental health and mental retardation professionals are responsible for the mental health needs of the mentally retarded. In resolving the crisis of scarce services for this population, the 1978 President's Commission on Mental Health recommended that Community Mental Health Centers should have the responsibility for the provision of mental health services for clients with mental retardation and their families. This is in line with one of the key concepts of the normalization principle; full utilization of local generic services. In addition, the original Community Mental Health Center legislation of 1963 had as its thrust the serving of all mentally ill citizens within a short distance of their home. Unfortunately, a combination of budgetary cutbacks and professional misunderstanding about the nature of mental retardation led to the selective omission of the retarded from CMHC caseloads (Menolascino & McCann, 1983). Other reasons for this widening gap between mental health and mental retardation services will be elaborated on in later chapters but it is proposed here that the inclusion of mental health as well as mental retardation professionals in a study related to the topic of mental illness in persons with mental retardation is a justified one. The care and treatment of these dually-diagnosed clients should not fall to the mental retardation sector alone.

Given the premise that both of these groups of professionals should be involved in the provision of mental health services to persons with mental retardation it is important to learn what their current state of knowledge is about this topic. Little is known about how informed professionals in mental health and mental retardation are about each other's discipline and, more importantly, how informed and prepared they are to address the needs of clients who are both mentally ill and mentally retarded. Since professionals in both disciplines may have occasional contact with this
type of client, such knowledge would be a first step toward developing effective and practical approaches to meeting the mental health needs of persons with mental retardation.

The purpose of the research proposed here then will be to determine the knowledge base of mental health and mental retardation professionals regarding an issue that has critical importance to both the clients affected by it and the service providers delegated to address it: the mental health needs of persons with mental retardation. This was done through an assessment of their knowledge of their own and each other's field of practice, as well as the one condition that requires knowledge of both disciplines: mental illness in persons who are retarded. To accomplish this, a survey instrument was developed that contained questions on each of these three areas (See APPENDIX A). Differences in scores on the objective portions of the survey were analyzed in terms of the respondents' field of practice (mental health or mental retardation), their attitudes and opinions about treating a client who is dually diagnosed, and the nature and extent of their experience, training and education. Demographics were also examined in light of differences in test scores.

NATURE OF THE PROBLEM

Professionals in the field of mental retardation and developmental disabilities have noted that people who are both mentally retarded and mentally ill constitute one of the most underserved populations in the United States (Reiss, Levitan & McNally, 1982). They are underserved for a variety of reasons, one of which is that they "fall through the cracks" in the service delivery system between mental health centers serving people who require therapy or counseling and mental retardation agencies serving people with mental retardation (Rowitz, 1981). Another problem is that the
stigma of mental retardation is so salient that it tends to overshadow any co-existing psychiatric problems (Chess, 1970; Phillip, 1967).

Mental illness is often considered of secondary importance in a retarded person (Reiss, Levitan, & Szyszko, 1982) and the emotional problems are often viewed as a side effect or byproduct of the intellectual impairment, even when they are not (Phillip, 1967). Another problem is that very few professionals are adequately trained to provide psychotherapeutic services to persons with mental retardation (Cushna, Szymanski & Tanguay, 1980), even though effective approaches are now available. Traditionally, the presence of mental retardation has been an exclusionary criterion for patients being considered for psychotherapy but this is no longer a valid reason. Effective therapies are available but very few effective therapists to deliver them (Matson, 1984).

The barriers then are psychological as well as physical. Antiquated notions about the nature of mental illness in persons with mental retardation still prevail among service providers and the general public. The lack of adequate community services and competent professionals to deliver them are all formidable problems; formidable because many studies have highlighted the importance of mental health as a critical factor in determining how well a person with mental retardation will adjust to community and family life.

Today, these problems are complicated by an almost complete separation of mental health and mental retardation services. Unfortunately, diagnoses often fail to confine themselves to such neat and exclusive categories, leaving service seekers to decide for themselves which system to approach in their search for help. Swanson & Mennlascino (1983) note that:

The frequent overlap and blurring of diagnostic differentiation between mental illness and mental retardation - especially early in life -
present serious problems. For example, in the severe disorders of children such as the childhood psychoses or infantile autism, parents must select the correct service system. If they have a 4-year-old child who is withdrawn, has minimal language, and displays primitive stereotyped motor behaviors, the challenge becomes, should they seek services from a mental health system or a mental retardation system for their child? Frequently, such children are referred from one system to the other, and this diagnostic merry-go-round perpetuates the specious arguments concerning mental versus physical developmental problems. Furthermore, if retarded adults have emotional problems in addition to and/or as a result of their intellectual limitations, where should they go for services? Do their local mental retardation system counselors try to help them as best they can? Should they be referred to a private mental health practitioner? Who will correlate the "old" (retardation) problems with the needs of the "new" (mental illness) symptoms? All too often, what actually occurs is a continuation of the merry-go-round with the afflicted individuals being passed between the two service systems. Frequently, neither of these systems provides the needed services (of appropriate quality and quantity) to meet the persisting cry for help. (p.221-222)

The current intent of federal law and state service systems is for persons with mental retardation who need mental health services to receive them in their local community mental health center. Whatever services are provided to non-retarded clients must also be provided to those who have mental retardation. On paper then CMHCs are and have been legally responsible for providing mental health services to the mentally retarded.

Professionals in both mental health and mental retardation agree that these centers should continue as primary coordinators of such services, with various extensions and modifications. Traditional mental health services need an attitudinal set and changes in professional techniques when adapted to serving the retarded. Caregivers need to familiarize themselves with general principles as well as more specialized and specific techniques for dealing with this population. To affect attitude changes, awareness-sensitivity courses should be included in orientation programs and inservice training in order to overcome outdated and stereotyped thinking. More of these rec-
ommendations for "bridging the gap" in service provision to this overlooked population will be presented in later sections.

Given the consensus that mental health professionals have an important role to play in addressing the mental health needs of all citizens, including those who are mentally retarded, this study proposes to compare their knowledge of and attitudes toward people who are both retarded and mentally ill with those of professionals who work exclusively in the area of mental retardation/developmental disabilities.
CHAPTER II
REVIEW OF THE LITERATURE

In recent years the subject of mental illness and its effects on persons with mental retardation has come to be recognized as an important area of study, with research addressing such varied topics as incidence rates, diagnosis and therapies, and service delivery systems. For the purposes of this review, three sections will serve as the framework for the discussion of the literature on mental illness and its relationship to persons with mental retardation: 1) Prevalence and Assessment Issues; 2) Treatment Strategies and Interventions; and 3) Service Systems and Program Models. Each of these sections will also contain subsections that relate to the specifics of the particular subject matter. Lastly, a fourth section will discuss the social work aspects of mental retardation and the specific issue of mental illness as it relates to persons with mental retardation. An outline of this review then appears below:
I. Prevalence, Assessment & Diagnostic Issues

1) Prevalence of mental illness in persons with MR
2) Assessment of depression
3) Diagnostic overshadowing

II. Treatment Strategies & Interventions

1) Prevention
2) Psychotherapeutic methods
3) Group and behavioral therapies

III. Services for Persons with Dual Diagnosis

1) Outpatient services
2) The extended role of CMHCs
3) Innovative program models
4) Service systems

IV. Social Work Implications
Prevalence and Assessment of Mental Illness in Persons with Mental Retardation

Approximately 3% of the population has mental retardation (Garfield, 1963) and these individuals fall prey to the same range of emotional illnesses as persons of normal intelligence (Eaton & Menolascino, 1982). In fact, recent studies indicate that between 25 and 30% of all persons with mental retardation have a co-existing psychiatric disorder, an incidence rate that is significantly higher than the one found for persons who are not retarded (Fletcher & Menolascino, 1989).

Due to primitive defense mechanisms combined with inadequate social and emotional supports, these individuals are nearly twice as vulnerable to mental illness as persons who are not retarded (Fletcher & Menolascino, 1989; p.ix).

Attempts to estimate the prevalence of mental illness among people with mental retardation have yielded various results, depending on the methodology of the study. Generally, they have been conducted either through an examination of the case files of a designated service system (e.g., Reiss, 1985) or more directly through the use of behavior rating scales and structured interviews with a designated group. The former technique has usually resulted in lower rates as compared to the latter. Those studies that relied on interviews or other rating systems yielded rates of mental illness between 20 and 40% of persons who were mentally retarded. Those at the low end used measures that discounted certain symptoms of mental health disorders, while those at the high end included the full range of symptoms, including personality disorders. Surveys of clinics and institutional populations (e.g., Eaton & Menolascino, 1982; Lund, 1985) have also yielded higher rates but these may be artificially high.
since clients referred to such facilities may not represent the whole population of persons with mental retardation. In contrast, a study of 400 deinstitutionalized persons with mental retardation conducted by Gollay, Freedman, Wyngaarden & Kurtz (1978) found that only 13% reported psychological problems, with the greatest frequency among older individuals who were less retarded.

Over the years, Steven Reiss has conducted a number of studies on the nature and prevalence of mental illness in persons with mental retardation. In surveying referrals to a mental health program for the developmentally disabled he found that 77% of those referrals fell into 4 categories: 1) schizophrenic symptomology (24%); 2) antisocial behavior (24%); 3) depression (13%); and, 4) personality disorder (15%) (Reiss, 1982). Although not intended as a study of prevalence it pointed out the types of problems that were considered important enough at that time for persons with mental retardation to be referred for mental health services.

More recently, Reiss (1990) attempted to evaluate the prevalence of dual diagnosis (mentally ill/mentally retarded) in the metropolitan area of Chicago through use of a two-step methodology. He first administered a mental health screening to a randomly selected group of participants in a community-based day program for persons with mental retardation and then had a percentage of those who tested positive and negative for mental illness evaluated by clinical psychologists. Results showed that 39% of the people with mental retardation participating in the day care program had co-existing psychological problems, with these problems having a drastic range of severity. Only a small minority were found to be afflicted with very serious forms of mental illness. Most of the dually-diagnosed clients were found to be "more vulnerable to personality problems such as hypersensitivity to rejection/criticism, excessive dependency, and social inadequacy" (p. 583).
Of further significance was the comparison of this 39% prevalence rate to the 11.7% rate recorded in the case files of the subjects, supporting the idea that reviews of case files yield artificially low incidence rates, and that, in general, mental illness is being underdiagnosed.

In a study of a state-wide data base of 78,000 clients, Borthwick-Duffy & Eyman (1990) found that dually diagnosed clients possessed more cognitive skills than those who did not have mental health problems and that the more severe the level of retardation, the less likely the individual was to have experienced psychiatric problems. These researchers also found that those persons with psychiatric problems who were mentally retarded were more likely to reside outside of their natural home. Overall, about 10% of this mentally retarded population was also diagnosed with a mental impairment.

In a British study of 15,000 residents of a large hospital for the mentally handicapped, Wright (1982) found that 2.8% had an accompanying affective illness, 1.8% had schizophrenia and 2.7% had an atypical affective illness.

In an effort to determine whether certain mental disorders occur less frequently among persons with mental retardation, Jacobson (1990) reviewed the distribution of psychiatric classifications of over 42,000 persons with mental retardation who were registered in the New York Developmental Disabilities Information System. Rates of reported schizophrenic and psychotic disorders were higher than those for personality disorders, affective disorders, neuroses and behavior disorders. Previously, Jacobson (1982) also investigated problem behavior and psychiatric impairment within a population of over 30,000 persons receiving developmental disability services, finding that a minority of that population displayed some type of problem behavior. In addition, he discovered that the more restrictive the person's residential setting the greater the lik-
lihood of displaying more problem behaviors. The diagnosis of psychiatric disorders was also found to be a function of problem behavior and frequency rather than intellectual level or living situation.

In an effort to determine the nature and prevalence of emotional disturbance in retarded children, Menolascino (1969) found that 25% of the patients assessed in his study displayed evidence of psychosis, while in a separate study Phillips & Williams (1975) determined that of 100 children who were mentally retarded referred to a psychiatric clinic “38 of these children were psychotically disturbed, 13 had no evidence of psychiatric disorder, and 49 showed symptoms of characterologic, neurotic, behavioral, or situational disorders” (p. 1265). They also found that these symptoms were no different than those of non-retarded children referred to the same clinic. In other words, children with mental retardation did not exhibit psychiatric symptoms that were different in kind from children who were not retarded.

In discussing the prevalence of mental illness in the retarded population Lewis & Maclean (1982) conclude:

The available studies lead to the inescapable conclusion that emotional disorders are much more common among mentally retarded persons than in the general population. This conclusion is based on investigations using very different patient samples and very different methodologies. (p. 7)

Finally, Reiss (1990) notes that, depending on the type of assessment measures that are used, substantial differences in rates of psychiatric disorders will result. More comprehensive assessment measures that count more symptoms of psychopathology will yield higher rates than those that only count some mental health disorders.
Assessment of Depression

Like other types of mental illness, depression is a disorder to which persons with mental illness are more vulnerable than persons who are not retarded (Reynolds & Baker, 1988). In a review of studies conducted on the depressive symptoms displayed by persons with mental retardation, Pawlorcyzk & Bechwith (1987) found that DSM-III diagnostic criteria for major depression was generally applicable for persons with mild or moderate retardation. In a project also related to assessment, Reynolds & Baker (1988) developed a self-report questionnaire specifically designed for persons with mental retardation.

Given that depression is the primary health problem in the United States and that persons with mental retardation who are depressed may be at serious risk for other mental health problems, more attention should be given to this specific mental health question.

Diagnostic Overshadowing

In addition to the underdiagnosis of mental illness in persons with mental retardation, clinicians often demonstrate a diagnostic bias that minimizes the impact of emotional disturbance in the presence of retardation. In a series of three classic studies Reiss, Levitan & Szyzko (1982) demonstrated this phenomenon of "overshadowing" in a number of experimental situations. In the first study psychologists minimized a neurosis in case studies that suggested co-existing mental retardation as compared to case
studies that did not suggest this presence. In cases of more severe mental illness (such as schizophrenia, psychosis, emotional and personality disorder and thought disorder) clinicians continued to rate case descriptions as less likely to be examples of these illnesses when the person was also suggested to be retarded as compared to normal intelligence. This diagnostic bias was demonstrated over a number of clinical syndromes, including schizophrenia and personality disorder.

In the second study, social workers as well as psychologists were found guilty of this bias, including graduate students and experienced professionals in both disciplines (Levitan & Reiss, 1983). Diagnostic overshadowing was also found to be unrelated to professional experience with persons who are mentally retarded. A third study by these researchers tested 30 psychologists who worked in state institutions for mentally retarded persons and 30 psychologists who worked in state institutions for the mentally ill. Each rated a case history of a person with schizophrenia on 11 scales of psychopathology with half of the cases also indicating that the person was retarded. Both groups were just as likely to view emotional problems in the retarded case histories as less important than those that suggested the presence of normal intelligence (Reiss & Szyszko, 1983).

These results have since been replicated. Alfred & Locke (1984) presented doctoral level psychologists of various orientations and levels of experience with a transcript that was labeled either "retarded" or "nonretarded". Those psychologists that read the transcript with the retarded label demonstrated more diagnostic bias by giving it lesser ratings of psychopathology as compared to those psychologists whose case did not suggest the presence of retardation. These results represent a "labeling bias associated with the characterization of the client's intellectual limitation" (Alfred & Locke, 1984; p.195).
The most recent research on the overshadowing phenomenon suggests that it may be a function of IQ range. Spengler, Strohmer, & Prout (1990) found no evidence for overshadowing at higher levels of mental retardation and borderline intelligence ranges. In discussing their results the authors note:

...the overshadowing bias appears to be a robust phenomenon for IQs in the low range of mild mental retardation, the IQ range used in studies by Reiss and his colleagues, but may not generalize across the largest group of persons with mental retardation, those with IQs in the upper range of mild retardation, and to the even larger group of persons with borderline intelligence. (p. 210).

In contrast to earlier studies, greater experience was also associated with overshadowing:

More experienced counselors were less likely to recommend psychotherapy and psychopharmacological treatment, but rated the person with mental retardation more neurotic than did less experienced counselors. Stereotypes or biases associated with individuals who have IQs in the low range of mild mental retardation become strengthened over time, a finding consistent with the rival stereotyping hypothesis. (p. 211).
TREATMENT STRATEGIES AND INTERVENTIONS

In treating individuals who are mentally ill and mentally retarded, a variety of approaches must be utilized. Due to the complexity of treatment ingredients (which may include the use of psychoactive drugs, citizen advocate contacts, behavior shaping and the active involvement of family support systems) Menolascino (1983) has recommended that the team approach be used "as a prime pathway for providing a wide spectrum of individualized services for the mentally ill-mentally retarded individual" (p.42).

In another article, Ruedrich & Menolascino (1984) recommend the use of a highly systematic and structured approach to addressing the needs of the mentally retarded and, in particular, to those retarded individuals whose conditions are complicated by a psychiatric disorder. Their proposed model is based on 6 key elements:

1. Careful diagnosis and treatment
2. Active family involvement
3. Implementing principles of primary and secondary prevention
4. Implementing principles of tertiary prevention
5. Implementing principles of normalization
6. Coordination of services (pp. 72-75)

In terms of specific treatment, these authors go on to suggest the use of 8 balanced treatment approaches, including:

1. Counseling, guidance, individual/group psychotherapy
2. Behavior modification
3. Psychoactive drugs
4. Parent counseling
5. Social ecology - residential
6. Vocational habilitation - work
7. Social - recreation
8. Follow-along services (p. 76)

In describing this balanced treatment approach, Ruedrich & Menolascino (1984) note that the techniques may need to be used simultaneously, and that a failure to do this may be one of the most common reasons for treatment-failure in this area. As a result, the expectations are very high for the professionals involved, yet, "less elaborate or less balanced treatment interventions too often miss the goals of the needed combined approaches to these complex individuals" (pp. 75-76).

The remainder of this section consists of a brief discussion of prevention issues as well as various therapeutic techniques that have been specifically designed for use with individuals and groups who have mental retardation.

Prevention

It is now known that psychosocial deprivation is the cause of between 60 and 80% of all cases of mild mental retardation (Stroman, 1989). This greater prevalence of mental retardation in persons from lower socio-economic levels highlights the effects of social influence on mental retardation.

Three of the most common biological causes of mental retardation are Down's syndrome, spina bifida and alcohol abuse during pregnancy (Bauemeister, 1988). In a
survey to investigate what measures are being implemented to prevent fetal alcohol-related birth defects, (the most clearly defined maternal behavior associated with brain maldevelopment) Bauemeister & Hamlett (1986) found rather discouraging results. According to these authors, official State reactions were often "punitive rather than health-oriented". Risk factors, in any event, do not operate independently and psychosocial and biological risks may have multiplicative effects and outcomes (Bauemeister, 1988).

In a specific reference to the prevention of psychotic disorders in persons with mental retardation, Szymanski (1987) incorporated the three traditional levels of prevention to the condition: primary, secondary and tertiary. Primary prevention for psychosocial dysfunction can be directed at both individuals and the environment. For the former, attention to the person's development of self-worth, just as in non-retarded persons, reduces the chances of compensatory behaviors that may be maladaptive and harmful to the individual. Use of the developmental model in general, with emphasis on resolving the crisis surrounding each developmental stage, is a valuable approach in preventing problems in persons with mental retardation and has traditionally been used as a habilitative philosophy for persons with disabilities. A specific problem many persons with mental retardation undergo is "relocation syndrome" (Carsrud, et al, 1980), in which new living situations create anxiety, depression and disorientation. Gradual and appropriate preparation for such moves have been demonstrated to prevent the problem (Weinstock, et al, 1979).

Environmental contributions to psychological problems can be prevented by providing services to families and other caregivers. This can take the form of appropriate and instructive training of these caregivers as well as direct services for them. Respite care, for example, can help to alleviate the stress and exhaustion that can
indirectly lead to resentment of the person with mental retardation, and subsequent maladaptive behavior. Adequate and effective medical and mental health services should be available as well as financial help to pay for them.

Secondary prevention involves early diagnosis and adequate and competent clinical services. Today, the lack of mental health professionals who are trained and motivated to work with clients who display co-existing symptoms of mental illness and mental retardation is a critical problem (Cushna, Szymanski & Tanguay, 1980). Tertiary prevention involves the recognition that interventions will not always be effective but that maintenance of quality of life should continue for all persons, regardless of the success or failure of specific treatments. Furthermore, attempts should always be made to improve this quality, even through seemingly small ways, such as reduction of medications to reduce negative side-effects.

**Psychotherapeutic Methods**

Until recent years there has been little interest in the provision of counseling and psychotherapeutic services for persons with mental retardation (Matson, 1984). Despite many early articles that recognized the value and feasibility of such services (e.g., Thorne, 1948; Woody & Billy, 1966) ongoing misunderstandings about the developmentally disabled have continued to foster the notion that psychotherapy is inappropriate or ineffective. Fletcher (1989) observes that "Psychotherapists tend to view the retarded in the same way nonprofessionals view this population - as uninteresting and
unattractive" (West & Richardson, 1981), while Matson (1984) states that, inspite of "modified or newly developed psychotherapy methods, use of psychotherapy with persons who are mentally retarded has actually decreased to the point where many clinicians interested in mental health consider treatment of those with mental retardation well outside of their purview" (p.170). This attitude prevails inspite of studies that have found that psychotherapy can help adolescents with mental retardation and adults "work through conflicts and problems that prevent them from successfully adapting to their environment" (Moody, 1972; p. 395).

One factor that has discouraged the use of psychotherapy with this population is an erroneous assumption that the personality structure of persons with mental retardation is different because of their handicap (Rowitz, 1981). Research has shown, however, that no single personality type is associated with mental retardation and personality patterns as well as behavior disorders vary as much in the retarded population as in those with normal intelligence (Singh, 1972).

In addition, an imbalance of services that emphasize education for overcoming intellectual handicaps as opposed to promoting emotional health and psychological growth for persons with mental retardation has led to a reluctance to use psychotherapy with retarded individuals (Reiss, 1982). As this author notes, however:

The time to correct this imbalance is now. Many mentally retarded persons have serious psychological problems for which potentially effective therapies have been developed. There is no excuse for not making psychotherapy available to those who can benefit from it (p.132).

Individual psychotherapy has been proposed as a viable and necessary service for persons with mental retardation but has been hampered by an incomplete understanding of the lives of these individuals (Levitas & Gilson, 1989). Using techniques that have been proven to be successful with other populations whose thinking is also at
the "concrete level" (such as children), psychotherapeutic models developed for children may have more to offer than standard techniques of adult psychotherapy, since persons with mental retardation may share with children the dilemma of having very little control over their own lives.

Recently, Hurley (1989) discussed the efficacy of therapeutic approaches for patients who were mentally retarded in a series of three research studies. These studies:

"...yielded results demonstrating that mentally retarded individuals benefit from standard therapeutic approaches with little modification. Further, the patients improved substantially, and they benefited from treatment in a reasonable amount of time. Peck's (1977) study of systematic desensitization used a small subject sample that showed a trend toward positive results. Silvestri (1977) achieved good results using implosive therapy. Stone & Coughlin (1973) investigated the process of counseling in six clients and produced interesting ideas about the counselor-client interaction in this small sample. (Hurley, 1989; p.272)."

Hurley concludes that further research on psychotherapy with people who are mentally retarded is needed in order to establish a stronger knowledge base to support the application of clinical techniques for this population.

Group and Behavioral Therapies

In addition to individual counseling, group therapy has also come to be seen as a useful approach for persons who are mentally retarded with emotional disorders (Fletcher, 1984); viewed by many professionals in the field of mental retardation as "an
integral component of any truly comprehensive treatment program for this population" (Monfils, 1989; p.112). Role-playing techniques have been successfully implemented in group settings (Schramski, 1984) as have other approaches such as theme-centered group work, in which a specific topic or theme is discussed during each group session (Monfils, 1985). Some of the most common issues or themes that recur in group therapy for persons with mental retardation are poor self-esteem, sexual problems, interpersonal relationships and adjustment problems when separating from the family (Monfils, 1989).

Behavioral therapy, while becoming an accepted and widely used approach to the treatment of many psychiatric problems, has only begun to be used as a way to address the emotional problems of people with mental retardation (Hurley, 1989a). Focusing on behavior rather than intrapsychic states or psychiatric history, behavior therapy techniques have been used to address a wide range of problems with persons who are retarded (Gardner, 1988).

Numerous illustrations are provided in the research and clinical literature of the potential therapeutic efficacy of behavioral approaches with such problems as physical aggression and related conduct disorders, eating disorders, self-injury, stereotypy, pica and coprophagy, psychogenic vomiting and ruminating, attention deficit disorders, fears and phobias, obesity, anxiety disorders, enuresis and encopresis, personality disorders, and various symptoms associated with depression, psychoses, and autism (Gardner & Cole, 1984). (Gardner, 1988; p.161).

In addition, it has been used to teach social skills (Matson & McCartney, 1981) and now has a good prognosis for success in the treatment of patients who are mentally retarded with such conditions as phobias, depression and anorexia.

In regard to phobias, Hurley & Sovner (1982) and Jackson (1983) both found that persons with mental retardation generally respond to the traditional techniques of counterconditioning and desensitization in much the same way as persons of normal
intelligence. Overall, this trend applies to most behavior therapy techniques used for phobias, depression and anorexia nervosa. Those techniques that are highly successful for patients of normal intelligence generally are effective with persons who have mental retardation. Effective treatment takes about the same time for patients who are mentally retarded and these patients sustain improvements at levels comparable to those who are not retarded (Hurley, 1989a).

One alternative to traditional operant methods has been the development of social learning approaches. Modeling positive behavior and role playing techniques have met with success and approval by advocates and professionals since its focus is the acquisition of positive skills as a means of reducing aberrant behavior (Matson, 1990). In some cases these techniques are also supplemented with reinforcers such as tokens, thereby pairing social reinforcement with more tangible rewards.

It is interesting to speculate about which of these techniques is in greatest use today. Jacobson & Ackerman (1989) surveyed psychologists who provide services to persons with mental retardation and found that 72% described their clinical approach as "behavior analytic"; with 55% of those specifically using social learning methods and 46% an "eclectic" clinical approach. These same psychologists rated the utility of individual and group counseling as having the greatest value for persons in the borderline and mild mental retardation range and little or no value for those in the severe or profound range.
SERVICES TO PERSONS WITH MENTAL ILLNESS AND MENTAL RETARDATION

Most if not all of the treatment techniques used with populations of normal intelligence are also used with mentally ill/mentally retarded persons (Holmes, 1983). The comprehensive and successful implementation of these techniques, however, has been found wanting. Recent studies have demonstrated that services for persons with mental retardation and psychiatric impairments are not readily available and that greater administrative and clinical resources will be needed to meet the needs of this specialized population (Jacobson & Ackerman, 1988).

This section is divided into a discussion of current outpatient mental health programs for persons with mental retardation, the extended role of CMHCs, some innovative programs that have been developed by professionals and laypersons, and a brief review of service systems that have evolved to meet the needs of citizens with co-existing symptoms of mental illness and mental retardation.

Outpatient Services

Recent research has demonstrated a significant consumer demand for outpatient community mental health services for persons with mental retardation (Reiss & Trenn, 1984). These authors describe an Illinois-Chicago clinic that was specifically developed to provide outpatient mental health services for people with developmental disabilities. During a 27 month period, 247 clients were referred from 63 local agencies,
leading the researchers to suggest that "one of the greatest needs for mental health services for people who are mentally retarded is a need for outpatient services providing professional support to community-based facilities" (p. 115).

Whether or not specialized facilities designed solely for the treatment of mentally ill-mentally retarded clients should be built is a matter of debate and speculation. In Ohio, state policy does not subscribe to the philosophy of treating these dually-diagnosed clients in such specialized facilities, recommending instead that generic mental health services be utilized on a case-by-case basis (State Plan of the Ohio Dept. of Mental Health, fiscal years 1987-1988). Such an approach is in line with the principle of normalization, a trend that has revolutionized the field of mental retardation over the last 20 years. Federally mandated in the deinstitutionalization policy of 1971, it required the development of community support services, including mental health services. Ruedrich & Menolascino, (1984) note that:

The concept of normalization requires that such services be available to the dually diagnosed individual in his or her community, and it involves psychiatric and other mental health consultation to group homes, schools, and other educational and vocational settings. A relatively small percentage of retarded-mentally ill individuals will require short or long-term inpatient mental-health placement for behavioral management because because they are a dangerous to themselves or to others. These individuals should be treated in mental health facilities in or near their home communities when their special needs exceed the capabilities and the expertise of most community-based programs. Rarely, some retarded individuals will require long-term care when they present with intractable psychiatric disorders (psychosis, affective disorders, severe personality disorder); these too, should optimally be cared for in mental health facilities in their area rather than institutional settings for the retarded with limited or no psychiatric consultation. (p. 75)

Who will take responsibility for these community mental health services for the retarded continues to be a controversy. As an example, in the early 1980's a major political confrontation occurred in New York City over who would treat psychiat-
rically disturbed developmentally disabled clients (Marcos, Gil & Vazquez, 1986). Tensions and disputes arose between programs that treated psychiatric patients and those that were geared toward the developmentally disabled. Both systems argued that they lacked the resources to care for such patients. Deinstitutionalization created a situation in which psychiatric units of municipal general hospitals became the primary referral source for patients with mental retardation in the community who were psychiatrically disturbed.

Lacking an appropriate alternative for the patients, many of them were held in emergency wards until a setting could be found that would provide an alternative level of care. When none developed these psychiatric units inadvertently began to supply long-term hospitalization, to the detriment of the unit's quality of care. Staff resources became strained and the cost of providing long-term care in an acute-care hospital became prohibitive.

Eventually, a policy was introduced to maintain patients needing admission to the emergency room for not longer than 24 hours. The hospitals and state institutions together decided which hospitalized patients required long-term care and those patients were transferred to a state facility within 21 days. The policy also required that "a series of clinical and administrative procedures be performed for each patient, including repeated psychological testing, extensive documentation of psychosocial and educational background, and direct examination by screening teams by the state." (p173). While this policy did facilitate the hospitalization of patients, the long-range goals of the client were not met because of the lack of specialized services specifically designed for persons who were mentally ill and mentally retarded.
The Extended Role of CMHCs

Swanson & Menolascino (1983) have covered some of the roles that community mental health centers (CMHCs) might play in the treatment of people with mental retardation who require mental health services. One early idea was for each CMHC to have a specialist in mental retardation. Certain specially trained and experienced personnel at each CMHC would be designated to provide mental health services to the mentally retarded and their families. "A more recent innovation is the utilization of the parents of the retarded who have received special training in mental health, in this role" (p. 224). The use of parents in the role of service providers has met with a great deal of success and is in line with the philosophy of CMHCs to train the community to eventually provide their own services. Some specific programs that have been developed in various parts of the country will be discussed in the next section.

Outreach and consultation are other types of services that CMHCs can provide to citizens who are mentally retarded as well as mentally ill. Such services can be both direct (diagnosis, follow-up clinical services) and indirect (education, consultation, program administration) in nature.

Likewise, private practitioners who work part-time at CMHCs are a new resource that can be tapped to deliver specialized services or in-service training. Such private-practice consultants provide mental health personnel with a wide variety of vocational opportunities and also allow clients who are mentally ill/mentally retarded to receive services where they actually reside (Watson, 1983). This may be in group homes, family houses or institutional-based settings.

Consultive arrangements with private practitioners (with such specialties as advanced behavioral analyses) provide CMHCs with the advantage of portability in
both techniques and service providers. For citizens who are mentally ill and mentally retarded, these innovative models of care bring the "practice" to the client - "replete with a new base of one-to-one individuality, high professional competence, confidentiality, and reasonable costs - all within the mainstream mode of obtaining human services (Swanson & Menolascino, 1983; p. 232).

A final variation of basic extended services provided by CMHCs is to provide these services within transitional living facilities. Assigning CMHCs to a small network of community group homes reduces the need for inpatient hospitalization and other specialized community-based services. Such group homes can also serve as training sites for a variety of professional trainees.

Swanson & Menolascino (1983) emphasize the importance of close-to-home and family treatment for all citizens who are mentally ill, including the mentally retarded. Thus the CMHC has "excellent potential for becoming the key component of locally available clinical mental health resources for retarded citizens" (p. 233).

These authors go on to note that the Mental Health Systems Act holds promise for delivering generic mental health services for all citizens, including the mentally retarded who experience mental illness. Although the CMHC model is currently in a state of flux its thrust is still to provide these generic mental health services, which may include programs in prevention, early case finding and mental health education. Swanson & Menolascino (1983) conclude by stating that the generic model of service delivery "can enlarge the services provided by local, educational, vocational, and retardation systems of service" (p.233).
Program Models

A pioneer in the field of psychiatric services to persons with mental retardation, Menolascino described one of the first linkings of services provided by a psychiatric training hospital (The University of Nebraska Medical Center) with community-based mental retardation programs in order to provide mental health services to retarded citizens (Levie, Roberts & Menolascino, 1979). The development of specific policies that defined the relationship between the institute and the community agencies permitted better coordination of and more effective services to the clients and their referral agencies. These authors noted that "role definition and sharing of information and expertise are among the major challenges in joint treatment" (p.384).

Since federal and state policies lack financial incentives and often move too slowly, a county systems model described by Fletcher (1988) proposed that service to persons who are dually diagnosed with mental illness and mental retardation can best be coordinated at the local level. Since 1984, Ulster County in rural New York has developed and implemented a comprehensive service system through 6 components: 1) outpatient mental health services; 2) day treatment services; 3) inpatient psychiatric care; 4) appropriate community-based residential services; 5) vocational training and employment; and, 6) staff training coordination.

Specialized services for persons with co-existing symptoms of mental illness and mental retardation are intended to be short-term and transitional in nature to enable the person to return to the generic service delivery system as soon as possible. Designed to "bridge the gap" between the mental health and mental retardation service delivery systems and provide the specialized care these persons require, they also serve to deter institutionalization.
One of the most innovative program aspects of the Ulster County system has been the development of a day program designed to increase social support for persons who are mentally ill/mentally retarded. It has been found that the lack of this social support from significant others is an important factor in the development of emotional problems in persons with mental retardation (Reiss, 1985). Poor social networks and family ties are typical for the client who is mentally retarded as are problems in establishing significant social relationships. Superimposing a psychiatric disorder, with its additional stigmas, only increases the possibility that the individual's social support system will break down. Parents of children with co-existing symptoms of mental illness and mental retardation often find the burden of caring for their offspring so burdensome that institutionalization is sought. As a result, these clients wind up in psychiatric hospitals and developmental centers where little, if any, support is provided.

The deinstitutionalization movement has now brought these individuals back into the community, with all their accompanying problems. As a response to their need for social support, Fletcher (1989) described a day program developed within the Ulster County Service System for persons who were emotionally disturbed and mentally retarded, with the goals of "improving interpersonal and social relationship skills, teaching adaptive coping skills, decreasing psychiatric symptoms and preparing members to return to less specialized community-based mental health and/or mental retardation services" (p.442). Designed to enhance each members' self-worth and potential, the program's activities include social, recreational and creative art therapies and clinical groups, with individual psychotherapy and supportive counseling also available.
An exploratory study of the effectiveness of this program found that the social support experienced by the members was significantly enhanced. Through self-report inventories, the members' self-esteem and feelings of belonging increased while the negative effects of stress were reduced (Fletcher, 1989).

In another attempt to evaluate a program specifically designed for clients dually diagnosed with mental illness and mental retardation, Galligan (1990) described a special unit within a developmental center in New York State in which individuals with mental retardation and psychiatric problems were transferred from psychiatric centers in the area. With the underlying premise that services for individuals with mental retardation are most effective when based on the developmental rather than the medical model, this program demonstrated a significant increase in clients' "level of independence in various personal skills and a decrease in the frequency of their most problematic behaviors. Also, the percentage of clients on psychotropic medication decreased" (p.356). While this progress was noted, the author also stated that "significant obstacles to their further growth was found, particularly a lack of residential alternatives and community supports. (p. 357).

The lack of trained professionals in the area of mental illness/mental retardation, combined with the increasing demands for service, has spawned a number of alternative programs for this population. Increased parent involvement has been designed into programs for a variety of populations, with interventions occurring in the home or other natural environment (Allin, 1989). The combining of theoretical approaches (e.g., psychodynamic, behavioral, informational) has also been found to be superior to a single approach, providing "increased sensitivity to highly diverse individual, family and situational demands - an important advantage that becomes limited by adherence to a single approach" (Tymchuck, 1975, 1983).
The Home Intervention Program (HIP) described by Allin (1989) utilizes all of these components as well as very flexible time scheduling and program staff that consists of a male-female therapist team. The bulk of the clients reside with their natural families and are typically those who are mentally retarded and exhibit problem behaviors. The therapist team then, makes home visits with the full cooperation and participation of family members. Phases of the program entail: 1) a client selection phase; 2) an intensive involvement phase; 3) a supportive involvement phase; 4) termination; and, 5) follow-up.

Interventions of staff and family members occur in a variety of settings, including home, school and work environments for varying lengths of time and result in the development and implementation of a treatment plan. Family members are trained to implement this plan and, ideally, motivated to carry it out once staff-client contact is reduced in the supportive and termination phases. This program has demonstrated the instrumental role of parents and families in a successful community-based treatment plan. As the author notes: "By giving parents a direction, some information, insight, and a practical approach, they are able to impact on a wide range of behavior that otherwise threatens family unity and client independence and places more demands on our community resources" (Allin, 1989; p.277).

In another program that utilizes parents of clients, the Regional Intervention Program (RIP) for pre-schoolers and their parents makes use of "parents as primary therapists for their own children, as trainers of fellow parents and as implementors of the service delivery systems daily operation" (Timm, 1989; p.281). Originally designed for children in the Nashville, Tennessee area who demonstrated a variety of diagnostic characteristics, including retardation, autism, behavior disorders and multiple handicaps, the current RIP network is now composed of 21 certified programs in the
U.S., Canada and Brazil. These children may be "delayed in language, motor and/or cognitive development with related behavior and emotional problems (Fields, 1975; p.3).

A parent implemented program, RIP provides services not usually available in most service delivery systems, an example of which is the provision of parent support. In this case, parent implementation translates into parents taking primary responsibility for clinical training and administrative functions, services that are usually performed by professional, clinical staff.

Parents at RIP serve as primary therapists and teachers for their own children, as operators of the service delivery system on a daily basis, as trainers of newer parents learning to perform these same functions, and as ultimate evaluators of the program's strengths and deficits (Timm & Rule, 1981; p.283).

Professional resources are available on a full-time and "as-needed" basis and a doctoral level staff member serves as an administrative and clinical director. The actual parent participation is divided into two phases - active treatment and payback.

During treatment, parents work individually with their own children both at RIP and at home. When not engaged in individual sessions with their own children or in the training and feedback sessions with experienced parents that follow each session, the treatment parents are assisting in other program activities. They may teach in one of the classrooms, collect data, prepare instructional materials, or supervise the sibling nursery. When a family's active treatment phase is completed, parents then participate in a system of payback of time and skills to the program. (p.284)

Demonstrating both clinical and cost effectiveness (with a proven cost-benefit ratio of $3.00 in savings for every dollar spent) this program model represents a grass-roots effort at the amelioration and prevention of significant problems faced by children with handicaps and their families.
Service Systems

Human services programs can be organized one of two ways, generically or according to the specific needs of a subpopulation (Gettings, 1988). In the former, agencies are established to provide generic services such as health care, education and social services to all persons requiring them. In the latter, the service delivery system revolves around the specialized needs of a specific population and is designed to provide a wide range of services to meet all the needs of this population. In the generic model, special populations may fall through the cracks in the delivery system because the needs of certain populations are too specialized or complex. In the specialized system, services may become duplicated, overly specialized and economically unfeasible. Today, both generic and specialized programs co-exist with one another, often without coordination and frequently with gaps in effective and efficient service delivery.

At the federal level, Social Security, SSI, Medicaid and Medicare are the primary mechanisms for providing support services to persons with mental illness and persons with mental retardation. Gettings (1988) notes that while this federal support has allowed such individuals to become more integrated into the community, the exclusive reliance on federal support has impeded reform at the state and local levels and made it more difficult for clients to break out of the system. The exclusive reliance on Medicaid and Social Security benefits has bred a dependence on these monies and services, making personal and fiscal independence more difficult for clients to attain.

At the next level, there are as many different systems as there are states in the union. Gettings (1988) divides state organizational structures into 5 categories:

1. A COMBINED mental health/mental retardation (or developmental disabilities) agency within an umbrella human service department.
2. SEPARATE, coequal divisions of mental health and mental retardation (or developmental disabilities) services within the framework of an umbrella human services department.

3. A COMBINED cabinet-level department of mental health (or mental health and developmental disabilities) that has responsibility for mental retardation programs.

4. A SEPARATE, coequal cabinet-level departments of mental health and mental retardation (or developmental disabilities).

5. SEPARATE, coequal mental health and mental retardation (or developmental disabilities) agencies within another, nonumbrella department. (p.388)

The trend today is toward organizational differentiation between services in mental health and mental retardation (Tarjan, 1988). Since little research has been conducted on this subject, it has not yet been determined if this trend facilitates or impedes the effective delivery of mental health services to persons with mental retardation.

Local and area-wide services are also unique to each particular state. In mental health, federal policy of the 1960's created the system of Community Mental Health Centers, but the lack of similar legislation in mental retardation allowed each state to create a service delivery system which best met its perceived needs. Gettings (1988) has again created a typology of local area-wide mental retardation/developmental disabilities systems:

1. Combined mental health/mental retardation (or developmental disabilities) catchment areas with administrative responsibility vested in a SINGLE community (usually a countywide or multicounty) agency or board.

2. Contiguous mental health and mental retardation (or developmental disabilities) catchment areas with separate, coequal community administering agencies.

3. Noncontiguous mental health and mental retardation (or developmental disabilities) catchment areas with separate, coequal community administrative agencies or boards.
4. Integrated regional or area administrative offices of a unified state mental health (or mental health and mental retardation) agency, staffed by state employees, who are responsible for coordinating services to both target populations (i.e., MR and MH).

5. Integrated human services catchment areas, staffed by state employees, where mental health and mental retardation (or developmental disabilities) are just two of a variety of program functions.

6. Specialized regional or area administrative offices of the state mental retardation (or developmental disabilities) agency.

7. Categorical regional service centers, either operated by state employees or by nonprofit entities contracting with the state.

8. Direct contractual relationships between the state agency and individual MR or DD vendor agencies.

9. Coordination of local mental retardation (or developmental disabilities) functions through county welfare or social services agencies.

10. Using existing state residential centers for the mentally retarded as the management hub of a network of regional day and residential services. (p.389-391)

Gettings notes that over the past 20 years the trend has been toward the establishment of separate local mechanisms for delivering mental health and mental retardation/developmental disabilities services. In an effort to improve the responsiveness of existing service systems to the mental health needs of persons with mental retardation, Gettings (1988) states that:

First, we must foster interagency collaboration and cooperation at the state and local levels. Second, we must assure that specialists in both mental health and mental retardation services are fully apprised of the importance of joint planning and service delivery on behalf of clients whose needs span the two service systems. Third, we must agree on common diagnostic terminology and functional responsibility for serving dually diagnosed clients, if we are to avoid having 'mentally retarded clients...bouncing back and forth between mental health and mental retardation professionals, with neither agency offering an adequate service delivery plan to meet the client's needs' And, finally, we must determine the efficacy of existing and newly formulated techniques of delivering mental health services to mentally retarded clients, in various diagnostic categories and age groupings. (p.391)
Finally, Gettings advises that: 1) state and local management must be committed to interagency collaboration on behalf of these clients and, 2) both service systems must agree to share financial and administrative responsibility.

Other authors (e.g., Pepper & Ryglewicz, 1989) have suggested specific ways to bridge the administrative gaps that exist between agencies in different fields, such as individual case conferences between professionals in both groups and general meetings of staffs in both service areas. Other suggestions have been regularly scheduled formal presentations by staff or outside experts and "Development of linkages that provide for joint participation in assessment, treatment planning and implementation, administrative problem-solving, and continuity of care for all dual-problem or multi-problem clients" (Pepper & Ryglewicz, 1989; p.259).
SOCIAL WORK IMPLICATIONS

Social workers may be surprised to learn that their profession's record of service to persons with mental retardation has been something less than pristine. Writing in 1971, Margaret Adams noted that:

In general the mainstream of social work in America has not demonstrated a concern for retardation and its social implications commensurate with that given to other problem areas or with the needs of this client group. Therefore, responsibility for social service to this category of handicap has been borne by a small number of social workers operating in the specialized retardation facilities - mainly the state institutions and more recently the community evaluation clinics. Although a tradition of conscientious and imaginative service has been maintained, the isolation of their professional settings has prevented those workers from making a significant impact upon the main body of social work. (pp. 52-54)

During the Kennedy years, when the field of mental retardation underwent a renaissance of thinking about treatment approaches for this population, most social workers opted to maintain the "status quo" rather than support such enlightened viewpoints. Dybwad (1970) has noted the hesitancy of such organizations as the Child Welfare League of America and the Family Service Association of America to respond to the 1961 President's Panel on Mental Retardation's concern about treatment of the mentally retarded; going on to write that, "The same unresponsiveness was encountered from The National Association of Social Workers whose staff stoutly maintained, all through the nationwide mental retardation planning effort initiated by President Kennedy, that this problem was outside their sphere of activity" (p.739).

At the same time, social workers of the 1950's and 60's were doing much to discourage the innovative ideas that sought to change institutionalization policies that segregated retarded people from the mainstream of society. Skarnulis (1974) reports that:
As agents of society, social workers have supported the parents of the mentally retarded child in making their decision to institutionalize him. Professional involvement began as an acquiescence to parental requests for help, but developed into open support and encouragement for residential placement. Concurrently, institutional involvement degenerated often from a temporary position of educational services to placement for life.

Social workers became agents who could translate society's prejudices into the professional jargon required for admission to a residential facility. They assuaged parents' guilt, placated the conscience of society at large, and lent an air of respectability to specious admission procedures. (p.59)

This trend continued through the 1970's and was reflected in the professional literature. Between 1956 and 1965 (at a time when dramatic changes were occurring in the field) only 7 of 515 articles were published on the topic of mental retardation in SOCIAL WORK, the representative journal of the profession (Horejsi, 1979). From 1965 to 1975, 10 of 652 articles focused on this subject, or a mere 1.5% (Horejsi, 1979).

Reasons for this lack of interest vary. The heavy use of psychoanalytic theory at that time all but eliminated persons with mental retardation from serious consideration as clients. Casework with this population also seemed difficult since the person with mental retardation's limited verbal skills again seemed to rule them out as beneficiaries of such service. Scanlon (1978) has noted, however, that just because learning and communication are more difficult for the person with mental retardation does not mean that they are incapable of feeling, growth or change.

Despite this history of prejudice from both professionals and laymen "a small number of social workers, with little support from their professional organization or from schools of social work, did commit themselves to the field of mental retardation" (Horejsi, 1979; p.40). Social work contributions in research and practice consisted of: 1) individual and group counseling to retarded clients and their relatives;
Social workers then, did make contributions in the area of mental retardation through their boundry work, or "interventions at the interface of social systems". Social work practice often entails the modification of the way in which one system interacts with another, for the maximum welfare of the client. Clientele, in fact, are often assigned a caseworker whose specific responsibility is to facilitate this intervention. In elaborating on this "boundry work", Horejsi (1971) notes that:

Helping a family (one system) to become involved in an association for retarded citizens (another system) is boundry work. Helping a retarded person to leave the institution and enter a community group home is boundry work. Helping an individual to obtain supplemental security income is boundry work. Helping one agency to coordinate its services with those provided by another is boundry work. Tasks such as intake, discharge planning, placement, case coordination, information and referral, and such roles as social brokerage, mediation, and advocacy involve boundry work or intervention at the interface of systems. (p.40-41)

It is this type of boundry work that now must be conducted on behalf of the mentally retarded who are also afflicted with mental illness. It has already been discussed how the fields of mental health and mental retardation took divergent and over-specialized paths through the years, each denying responsibility for the dually diagnosed population. Social workers must now attempt to re-establish the original links between these two service systems in order to provide the help that is so desperately needed. Effort should be focused at both the direct and indirect service levels. Policy making and community organization must be modified to incorporate the
specialized needs of citizens who are mentally ill-mentally retarded while improve-
ments must also be made in the coordination of the networks of clinical services of-
ered through the mental health and mental retardation systems. Horejsi (1979) states that "The movement toward deinstitutionalization and the accompanying expan-
sion of community-based services have created a complex service network and have succeeded in multiplying the number of system boundaries. Now more than ever, there is a demand for social work's boundary skills" (p.42). For those who are men-
tally retarded and afflicted with a psychiatric impairment the boundaries are even greater.

In addition to this boundary work, our profession can work to establish more appropriate and adequate care for individuals who are both mentally ill and mentally retarded. This is in line with what some social work scholars claim is the central role and function of social work in society; social caring (Moris, 1976). Moris believes that social work "will begin to place increasing emphasis on the functions of care and maintenance - functions that it abandoned in the 1920's but are highly valued by society and are still unclaimed by any other profession" (Horejsi, 1979; p.41).

Again, such aims can and should be extended to such overlooked populations as the mentally ill-mentally retarded, particularly since their needs have traditionally been misunderstood and neglected. This study is an attempt to begin such boundary work by attempting to determine the extent of knowledge and training that mental health and mental retardation professionals currently possess about dual diagnosis and its treatment.
CHAPTER III
METHODOLOGY

RESEARCH QUESTIONS

Some of the questions asked in this study were: To what extent are professionals in the field of mental health knowledgeable about the subject of mental illness? and, likewise, To what extent are professionals in the field of mental retardation knowledgeable about the subject of mental retardation? A third question asked: What do each of these groups of professionals know about the other's field of practice? That is, what do mental health professionals know about mental retardation and what do mental retardation professionals know about mental illness? Finally, what does each group know about the one condition that requires expertise in both fields, mental illness as it relates to persons with mental retardation?

Such questions are important because professionals from mental health and mental retardation may occasionally have to address the needs of clients who fall outside of their particular specialty and because many clients display symptoms which are a concern to both disciplines. That is, some clients display co-existing symptoms of mental retardation and significant psychiatric impairment.

Comparisons were then made between the two professional groups in terms of what they knew about their own and each other's field of practice as well as on the extent of their knowledge of the effects of mental illness on persons with mental retardation. Regarding the problems surrounding the provision of adequate services
to persons who are mentally ill and mentally retarded, this knowledge may help to establish a baseline of information about each group's particular capacity to address the needs of this specialized population while also suggesting areas where additional training and education may be useful.

In addition to these comparisons, the impact of such intervening variables as profession, years of experience, demographics and the nature and extent of each respondent's education and training were examined. The extent that each mental health and mental retardation professional felt confident about treating and referring clients who were dually diagnosed with mental illness and mental retardation was also assessed.
The population studied were full and part-time practitioners in the fields of mental health and mental retardation who were employed in community agencies and programs sponsored by The County Board of Mental Health and the County Board of Mental Retardation and Developmental Disabilities during 1990. In general, mental health practitioners were operationally defined as those non-administrative personnel whose position required at least a four-year degree and whose primary function was direct service to clientele in need of mental health services. These practitioners may have been clinical psychologists, social workers, therapists, counselors, nurses, caseworkers or other degreed clinicians who, in one way or another, provided services directly to the client. Mental retardation practitioners were similarly defined as those personnel whose position required at least a four-year degree and whose primary function was direct service to clients with mental retardation or developmental disabilities.

The majority of mental health services rendered through this County Mental Health System are provided by centrally located community mental health centers and smaller suburban counseling centers. Services rendered through the County Board of Mental Retardation and Developmental Disabilities are provided in more diverse settings. The county at that time operated 4 sheltered workshops as well as a network of group homes for people with mental retardation. There were also smaller agencies offering specialized services such as day programming for senior citizens with mental retardation.
RESEARCH DESIGN

The research design was a cross-sectional survey. A single observation was made of two professional groups: mental health and mental retardation practitioners (operationally defined above). These two professional groups comprised the primary independent variable of the study with job classification comprising a subcategory of this variable. All of the employees within the two service systems who met the defined criteria were requested to participate.

The primary dependent variables were defined as:

1. Generic knowledge about mental illness as determined by 20 objective multiple-choice type questions. These questions were based on information provided in the 1983 Revised Edition of The Diagnostic and Statistical Manual on Mental Disorders (DSM-III-R).

2. Generic knowledge about mental retardation as determined by 20 objective multiple-choice type questions. These questions were derived from Riemensneider's (1975) information inventory on mental retardation and were adapted to reflect current research on this topic.

3. Generic knowledge about psychiatric conditions in persons with mental retardation as determined by 15 multiple-choice type questions. Information for these questions was based on current information and research conducted on this subject. Thus, each correct response is substantiated by a piece of empirical research related to the topic of each question. The specific reference for each question is available in APPENDIX B.

4. The extent of education, training and experience in the fields of mental health, mental retardation and dual diagnosis, both academic and applied.
5. Attitudes and philosophy toward the care and treatment of persons with both mental retardation and mental illness as determined by 6 multiple-choice type questions.

Results from this last variable may help to shed light on the general attitudes and philosophy of mental health and mental retardation practitioners toward treating people with both mental retardation and psychiatric illnesses. Such information may also be helpful in determining the state of affairs that now exist in community agencies in terms of treatment for the mentally retarded, as well as suggesting any informal policies or procedures that may currently exist. Such information will complement the harder data from the first two variables which highlight the respondents' actual knowledge and experience in dealing with clients who are mentally ill/mentally retarded.

The combined information from these five variables is important because it will help to determine the readiness of mental health and mental retardation practitioners, in terms of knowledge, training and attitude, to successfully address the specialized needs of citizens with mental retardation who are impaired with a psychiatric illness. If, as some research suggests, deficiencies in knowledge, training and experience do exist, efforts can be directed toward correcting those deficiencies. In addition, discrepancies in attitude between policy makers, academic researchers and other theorists and the direct practitioners who actually implement such policies and theories may help to explain why there has been an ongoing deficit in services to this group. For example, do mental health practitioners believe that they are responsible for treating mentally ill-mentally retarded clients or do they believe that this responsibility falls to another group? Such information may suggest new directions in education, training and service provision.
INSTRUMENTATION

Inventories to assess knowledge of mental disabilities have been used before. Rycus (1990) developed a "Developmental Disabilities Quiz" to measure the extent of knowledge retained by trainees on that topic after attending a workshop. A paper-and-pencil test consisting of 65 items, this instrument was designed to determine the trainees' knowledge of facts, information and attitudes about developmental disabilities, as well as contributing factors and signs of the condition.

A similar assessment tool was developed by Riemenschneider (1975) for use in determining the relationship of social workers' knowledge about mental retardation to their intervention on behalf of persons with mental retardation. Portions of this tool were incorporated into the instrument created for the study reported here, specifically that portion which assessed knowledge of mental retardation and developmental disabilities.

A combination of new and pre-existing questions then were used to compile the survey instrument used in this study (See APPENDIX A). It contains three major sections with the first section comprised of objective multiple-choice questions. This section was further divided into three sub-sections corresponding to the topics of mental illness, mental retardation and mental illness as it relates to persons with mental retardation.

The first subsection of the instrument was designed to assess generic knowledge of mental illness, with 20 questions on this subject created from information contained in the Diagnostic and Statistical Manual on Mental Disorders III-Revised Edition (1987). An attempt was made to sample the most important areas of mental illness and a record of chapter titles and page numbers in the DSM-III is available in the first section of APPENDIX B as a reference for the information used in these questions. Two examples of these questions on mental illness are presented below:
Mood disorders are divided into 3 classifications: manic disorders, depressive disorders, and bipolar disorders.

1) True
2) False
3) Don't know

This condition has a prodromal phase, an active phase and a residual phase. (Circle one)

1) Bipolar disorder
2) Schizophrenia
3) Sleep-wake schedule disorder
4) None of the above
5) Don't know

The second subsection was designed to assess generic information about mental retardation with 20 questions on this subject selected from a pre-existing instrument designed by Riemenschneider (1975). These questions were selected to represent major content areas in mental retardation and developmental disabilities and have been updated and revised to reflect current knowledge about these subjects. The correct
answers are listed in the second section of APPENDIX B and two examples are presented below:

MOST MENTALLY RETARDED CHILDREN CAN BECOME VOCATIONALLY INDEPENDENT ADULTS.

1) TRUE
2) FALSE
3) DON'T KNOW

MOST INDIVIDUALS WHO ARE MENTALLY RETARDED WOULD BE CLASSIFIED AS:

1) SEVERELY RETARDED
2) MODERATELY RETARDED
3) MILDLY RETARDED
4) PROFOUNDLY RETARDED
5) DON'T KNOW
Finally, the third subsection consisted of 15 questions specifically designed to assess knowledge about mental illness as it relates to persons with mental retardation. These questions were derived from the latest information and research conducted on this topic and references are available in the third section of APPENDIX B to validate the content of each question. An example of this question is presented below:

**PERSONS WITH MENTAL RETARDATION ARE MORE SUSCEPTIBLE TO MENTAL ILLNESS THAN NON-RETARDED INDIVIDUALS.**

1) TRUE  
2) FALSE  
3) DON'T KNOW

A total of 55 questions from these three subsections then comprised the first major section of the survey instrument. In the second major section, demographic questions were posed in addition to detailed questions designed to assess the extent of each respondent's education, training and experience in three major fields: 1) mental health; 2) mental retardation; 3) co-existing symptoms of a psychiatric impairment and mental retardation. These questions assessed the number and type of coursework taken in these three areas as well as any workshops, inservices, applied training or other professional experience the respondent may have possessed. They also assessed the number of years that each respondent has worked in each of these disciplines. An example of two of these questions is presented below:
OVER THE YEARS, WHAT PERCENTAGE OF YOUR CLIENTS HAVE HAD THE *COMBINED* PROBLEMS OF MENTAL RETARDATION AND A SIGNIFICANT PSYCHIATRIC DISORDER?

1) NONE  
2) 0 TO 25%  
3) 26 TO 50%  
4) 51 TO 75%  
5) 76 TO 100%

HAVE YOU TAKEN ANY COURSES ON MENTAL ILLNESS AS IT RELATES TO PERSONS WITH MENTAL RETARDATION IN ANY DEGREE PROGRAM?

1) NO  
2) YES  IF YES, ABOUT HOW MANY CREDITS? ____

In addition, a few of the questions asked the respondent to comment on his or her own personal ability to treat a person who was both mentally ill and mentally retarded as well as how adequate he/she believed their professional training has been in preparing them to treat this type of client. A sample of these types of questions is presented below:
HOW CONFIDENT ON THE WHOLE DO YOU FEEL ABOUT YOUR ABILITY TO TREAT CLIENTS WITH MENTAL RETARDATION FOR A PSYCHIATRIC IMPAIRMENT?

1) VERY CONFIDENT  
2) SOMEWHAT CONFIDENT  
3) NOT VERY CONFIDENT

OVERALL HOW ADEQUATE DO YOU BELIEVE YOUR PROFESSIONAL TRAINING HAS BEEN IN PREPARING YOU TO DEAL WITH CLIENTS WHO ARE RETARDED AS WELL AS MENTALLY ILL?

1) NOT AT ALL ADEQUATE  
2) MINIMALLY ADEQUATE  
3) FAIRLY ADEQUATE  
4) VERY ADEQUATE

A few of these questions were derived from Riemenschneider's (1975) survey instrument while others were modified from other sources.

The final section of the survey consisted of four opinion questions about the care and treatment of clients who have been dually diagnosed with a condition of psychi-
atric disturbance and mental retardation. Questions ranged in content from the type of treatment the respondent would recommend for this type of client to the type of facility he or she believed was best prepared to meet the specialized needs of the mentally ill-mentally retarded population (e.g., CMHC, psychiatric hospital or developmental center).

All of the responses to the survey questions, with the exception of the demographic data and training questions, were multiple-choice in nature to aid in coding and statistical analysis. Some blank space was also left at the end of the survey in which respondents were invited to share their own experiences in dealing with clients who were both mentally ill and mentally retarded and also to write any personal opinions they may have had about this subject.
DATA COLLECTION

The Nature of the Data to be Collected

The data for this study took three forms, corresponding to the three major sections of the survey instrument. The first section consisted of questions that had right or wrong answers; therefore, responses fell into one of three categories: "Correct", "Incorrect", or "I Don't Know". In coding the responses for statistical analysis there was also a fourth category for missing data.

In the second section, demographic questions were asked that produced nominal data (e.g., job classification). In addition, questions about years of experience and educational background were also asked. Ordinal data was collected in the form of the respondent's judgments about his or her ability in various areas (e.g., 1) feel very confident; 2) feel somewhat confident; 3) do not feel confident).

In the third section of the survey a few attitudinal questions were asked that produced more nominal data (e.g., Should mentally retarded people with a psychiatric problem be treated in: 1) a mental health center; 2) a developmental center; 3) other).

Data Collection Procedures

Data for this study was collected in the form of a paper-and-pencil survey (See APPENDIX A). In order to promote candid answers and a high response rate it was conducted anonymously. That is, individual respondents were not identified in any way other than through an indication of job category, which they themselves sup-
plied. No code numbers or other identifiers were used on the instrument nor was there any attempt to link any of the respondents with their answers.

Permission to conduct the study was obtained from The County Board of Mental Health and The County Board of Mental Retardation and Developmental Disabilities in a central Ohio city, although each Board dictated that it would be up to each individual agency in its system to decide for itself if it would like to participate. Ten out of the eleven community mental health centers and counseling centers in the county agreed to participate in the study while all eight of the mental retardation agencies under board jurisdiction agreed to participate. In addition, one private mental retardation agency elected to participate as well as the MR/DD research facility at a local state university.

Survey packets were distributed in person at clinical staff meetings at each of these twenty mental health and mental retardation agencies, with each packet containing the instrument, a two-page cover letter explaining the purpose and intent of the study (see APPENDIX C) and a phone number to call in the event of questions or concerns. Completed surveys were either returned by mail or picked up in person at the next scheduled meeting. A minimum of 14 days and a maximum of 30 days was allowed to complete and return the survey. The survey itself took about 30 minutes to complete. Interest in the survey was high and most agency personnel requested a copy of the results and, in some cases, an in-person presentation of same.
CHAPTER IV
RESULTS

SURVEY RETURN RATES

Ten out of the eleven mental health agencies contacted agreed to participate in the study, yielding 121 completed surveys out of a total of 155 that were distributed (78% return rate). Ten out of the ten mental retardation agencies contacted agreed to participate in the study, yielding 103 completed surveys out of a total of 130 that were distributed (80% return rate). The final tally then was 224 completed surveys out of 285 that were distributed for an overall return rate of 78.6%.

CHARACTERISTICS OF THE SAMPLE

The characteristics of the 121 professionals from the field of mental health and the 103 professionals from the field of mental retardation/developmental disabilities are reported in Table 1. In addition to demographic information, the table also reports the respondents' years of experience, number of years employed in current agency and whether or not the person had a degree in a human service field, defined here as social work, counseling, psychology or nursing.
ATTITUDINAL QUESTIONS

Table 2 reports the distribution of responses to the series of questions that asked for ratings of ability to address the needs of clients with mental retardation who are also mentally ill. In addition, one question assessed the amount of reading the respondent had reportedly conducted on this subject.
### Table 1

*Characteristics of the Sample*

<table>
<thead>
<tr>
<th></th>
<th>MENTAL HEALTH PROFESSIONALS</th>
<th>MENTAL RETARDATION PROFESSIONALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td><strong>SEX</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MALE</td>
<td>38</td>
<td>31.4</td>
</tr>
<tr>
<td>FEMALE</td>
<td>82</td>
<td>67.8</td>
</tr>
<tr>
<td><strong>md</strong></td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>121</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>AGE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 or under</td>
<td>8</td>
<td>6.6</td>
</tr>
<tr>
<td>26 to 35</td>
<td>46</td>
<td>38.0</td>
</tr>
<tr>
<td>36 to 45</td>
<td>40</td>
<td>33.1</td>
</tr>
<tr>
<td>over 45</td>
<td>26</td>
<td>21.5</td>
</tr>
<tr>
<td><strong>md</strong></td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>121</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Years of Employment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 2 years</td>
<td>16</td>
<td>13.2</td>
</tr>
<tr>
<td>2 to 5</td>
<td>25</td>
<td>20.7</td>
</tr>
<tr>
<td>6 to 10</td>
<td>28</td>
<td>23.1</td>
</tr>
<tr>
<td>11 to 15</td>
<td>23</td>
<td>19.0</td>
</tr>
<tr>
<td>&gt; 15</td>
<td>27</td>
<td>22.3</td>
</tr>
<tr>
<td><strong>md</strong></td>
<td>2</td>
<td>1.7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>121</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Years of Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 2 years</td>
<td>51</td>
<td>42.1</td>
</tr>
<tr>
<td>2 to 5</td>
<td>38</td>
<td>31.4</td>
</tr>
<tr>
<td>6 to 10</td>
<td>19</td>
<td>15.7</td>
</tr>
<tr>
<td>11 to 15</td>
<td>6</td>
<td>5.0</td>
</tr>
<tr>
<td>&gt; 15</td>
<td>6</td>
<td>5.0</td>
</tr>
<tr>
<td><strong>md</strong></td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>121</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Degree in Human. Serve</th>
<th>Frequency</th>
<th>Percent</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>119</td>
<td>98.3</td>
<td>45</td>
<td>43.6</td>
<td></td>
</tr>
<tr>
<td>Degree in other area</td>
<td>1</td>
<td>.8</td>
<td>58</td>
<td>56.4</td>
</tr>
<tr>
<td><strong>md</strong></td>
<td>1</td>
<td>.8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>121</td>
<td>100.0</td>
<td>103</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*md = missing data*
Table 2

Respondent Beliefs about Personal Abilities

<table>
<thead>
<tr>
<th>HOW CONFIDENT</th>
<th>MENTAL HEALTH PROFESSIONALS</th>
<th>MENTAL RETARDATION PROFESSIONALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO YOU FEEL ON</td>
<td>n=121</td>
<td>n=103</td>
</tr>
<tr>
<td>THE WHOLE ABOUT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>YOUR ABILITY TO:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FREQUENCY</td>
<td>PERCENT</td>
</tr>
<tr>
<td>Recognize a psychiatric impairment in a client with mental retardation?</td>
<td>Very Conf.</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Somewhat Conf.</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td>Not Very Conf.</td>
<td>38</td>
</tr>
<tr>
<td>client with mental retardation?</td>
<td>md</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>121</td>
<td>100.0</td>
</tr>
<tr>
<td>Use appropriate referral sources for clients with mental retardation and a psychiatric impairment?</td>
<td>Very Conf.</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Somewhat Conf.</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>Not Very Conf.</td>
<td>28</td>
</tr>
<tr>
<td>md</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>121</td>
<td>100.0</td>
</tr>
<tr>
<td>Talk with clients with mental retardation about seeking help elsewhere for a psychiatric impairment?</td>
<td>Very Conf.</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>Somewhat Conf.</td>
<td>61</td>
</tr>
<tr>
<td></td>
<td>Not Very Conf.</td>
<td>20</td>
</tr>
<tr>
<td>md</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>121</td>
<td>100.0</td>
</tr>
<tr>
<td>Treat clients with mental retardation for a psychiatric impairment?</td>
<td>Very Conf.</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Somewhat Conf.</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td>Not Very Conf.</td>
<td>43</td>
</tr>
<tr>
<td>md</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>121</td>
<td>100.0</td>
</tr>
<tr>
<td>How much reading would you say you have done on mental illness as it relates to persons with mental retardation?</td>
<td>none</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>a little</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>some</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>a lot</td>
<td>2</td>
</tr>
<tr>
<td>md</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>121</td>
<td>100.0</td>
</tr>
</tbody>
</table>

md = missing data
ADDITIONAL FREQUENCIES

In addition to the descriptors reported in the "Characteristics of the Sample" a wealth of other information about the respondents is available in the APPENDICES; including data about their training, education and professional practice. All of the frequencies are presented in tabular form and are organized according to the respondents' field of practice, either mental health or mental retardation. The nature of the information presented in each Appendix is listed below:

- **APPENDIX D** - Pass/fail rates for each objective question
- **APPENDIX E** - Nature of the respondents' professional practice
- **APPENDIX F** - Respondents' coursework and professional training
- **APPENDIX G** - Personal beliefs about the adequacy of their training
- **APPENDIX H** - Agency policy on clients with symptoms of both mental illness and mental retardation.
- **APPENDIX I** - Respondent opinions

T-TESTS

A series of 4 t-tests were conducted to investigate the differences in test scores between mental health and mental retardation professionals on the three major question areas: mental illness, mental retardation and mental illness as it relates to persons with mental retardation. In addition, a t-test was conducted to test for differ-
ences in *total* scores between the two groups of respondents. The results of these t-tests are summarized below in Table 3.
### Table 3

*T-Tests*

#### TOTAL SCORE ON 55 OBJECTIVE QUESTIONS

<table>
<thead>
<tr>
<th># OF CASES</th>
<th>M</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>MENTAL HEALTH PROFESSIONALS</td>
<td>121</td>
<td>31.7</td>
<td>6.05*</td>
</tr>
<tr>
<td>MR/DD PROFESSIONALS</td>
<td>103</td>
<td>26.8</td>
<td></td>
</tr>
</tbody>
</table>

#### SCORE ON 20 QUESTIONS RELATED TO MENTAL ILLNESS

<table>
<thead>
<tr>
<th># OF CASES</th>
<th>M</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>MENTAL HEALTH PROFESSIONALS</td>
<td>121</td>
<td>14.6</td>
<td>15.4*</td>
</tr>
<tr>
<td>MR/DD PROFESSIONALS</td>
<td>103</td>
<td>7.7</td>
<td></td>
</tr>
</tbody>
</table>

#### SCORE ON 20 QUESTIONS RELATED TO MENTAL RETARDATION

<table>
<thead>
<tr>
<th># OF CASES</th>
<th>M</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>MENTAL HEALTH PROFESSIONALS</td>
<td>121</td>
<td>11.2</td>
<td>-1.92 (ns)</td>
</tr>
<tr>
<td>MR/DD PROFESSIONALS</td>
<td>103</td>
<td>11.9</td>
<td></td>
</tr>
</tbody>
</table>

#### SCORE ON 15 QUESTIONS RELATED TO MENTAL ILLNESS IN PERSONS WITH MENTAL RETARDATION

<table>
<thead>
<tr>
<th># OF CASES</th>
<th>M</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>MENTAL HEALTH PROFESSIONALS</td>
<td>121</td>
<td>5.8</td>
<td>-4.53*</td>
</tr>
<tr>
<td>MR/DD PROFESSIONALS</td>
<td>103</td>
<td>7.0</td>
<td></td>
</tr>
</tbody>
</table>

* p < .000
For the 20 questions on mental illness the mean score for the mental health professionals (X=14.6) was significantly higher than that of the mental retardation professionals (X=7.7), (t=15.4, d.f.=222; p<.000). In contrast, for the 20 questions on mental retardation there was no significant difference in mean score between the mental health professionals (X=11.2) and the mental retardation professionals (X=11.9). For the 15 questions on mental illness as it relates to persons with mental retardation, there was a significantly higher mean score for the mental retardation professionals (X=7.0) as compared to the mental health professionals (X=5.8), (t=-4.5, d.f.=222; p<.000). Overall, the mean score for the mental health professionals (X=31.7) on the entire test (i.e., on all 55 objective questions) was significantly higher than the mean score for the mental retardation professionals (X=26.8), (t=6.0, d.f.=222; p<.000).

One fundamental difference between the respondents in mental health as compared to the respondents in mental retardation was that there was far more diversity in academic backgrounds in the latter group. Although all respondents were required to have at least a 4-year degree, the types of degrees were much more varied among the MR/DD respondents. This was probably due to the greater range of activities that these employees are involved in. Mental retardation agencies are often responsible for education, rehabilitation and vocational training as well as interpersonal counseling. Thus, their backgrounds are more diverse. One-hundred percent of the mental health practitioners, on the other hand, possessed human service degrees in traditional clinical professions, such as psychology, counseling, nursing or social work, reflecting the clinical focus of services provided at mental health centers. Only about half of the participating mental retardation practitioners in the study possessed degrees of this nature.
As a result of this difference between groups, a series of t-tests were conducted between the MR/DD respondents who possessed human service degrees and those who did not. These results are reported in Table 4. For the 20 questions on mental illness the mental retardation practitioners who possessed a human service degree had a significantly higher mean score (X=9.4) as compared to the mental retardation practitioners who had a degree in another area (X=6.5), (t=4.1, d.f.=101; p<.000). For the 20 questions on mental retardation there was no significant difference between MR/DD respondents who possessed a human service degree (X=12.4) and those who did not possess such a degree (X=11.5). For the 15 questions on mental illness as it relates to the retarded, the human service degree respondents had a significantly higher mean score (X=7.8) than the respondents without such a degree (X=6.4), (t=3.68, d.f.=101; p<.000). For total scores, the MR/DD practitioners with human service degrees again scored significantly higher (X=29.7) than their counterparts who did not possess human service degrees (X=24.5), (t=4.3, d.f.=101; p<.000).
Table 4

*T-tests for Differences Between MR/DD Professionals*

<table>
<thead>
<tr>
<th>TOTAL SCORE ON 55 OBJECTIVE QUESTIONS</th>
<th># OF CASES</th>
<th>M</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>MR/DD Professionals with a human service degree</td>
<td>45</td>
<td>29.7</td>
<td>6.3</td>
<td>4.39*</td>
</tr>
<tr>
<td>MR/DD Professionals with a non-human service degree</td>
<td>58</td>
<td>24.5</td>
<td>5.6</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SCORE ON 20 QUESTIONS RELATED TO MENTAL ILLNESS</th>
<th># OF CASES</th>
<th>M</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>MR/DD Professionals with a human service degree</td>
<td>45</td>
<td>9.4</td>
<td>4.0</td>
<td>4.16*</td>
</tr>
<tr>
<td>MR/DD Professionals with a non-human service degree</td>
<td>58</td>
<td>6.5</td>
<td>3.1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SCORE ON 20 QUESTIONS RELATED TO MENTAL RETARDATION</th>
<th># OF CASES</th>
<th>M</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>MR/DD Professionals with a human service degree</td>
<td>45</td>
<td>12.4</td>
<td>2.6</td>
<td>1.57</td>
</tr>
<tr>
<td>MR/DD Professionals with a non-human service degree</td>
<td>58</td>
<td>11.5</td>
<td>2.7</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SCORE ON 15 QUESTIONS RELATED TO MENTAL ILLNESS IN PERSONS WITH MENTAL RETARDATION</th>
<th># OF CASES</th>
<th>M</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>MR/DD Professionals with a human service degree</td>
<td>45</td>
<td>7.8</td>
<td>1.7</td>
<td>3.68*</td>
</tr>
<tr>
<td>MR/DD Professionals with a non-human service degree</td>
<td>58</td>
<td>6.4</td>
<td>1.9</td>
<td></td>
</tr>
</tbody>
</table>

* p < .000
Developmental vs. Clinical Psychologists

A clear demarcation was noted between the specialty area of doctoral-level psychologists who participated in the study and their particular field of practice. Of the 21 doctoral-level psychologists who completed the survey (11 from mental health agencies and 10 from mental retardation agencies) 10 of the 11 (90.9%) employed in mental health settings possessed doctorates in clinical psychology, while 9 out of 10 (90.0%) employed in MR/DD settings possessed doctorates in developmental psychology. As an interesting aside, a series of 3 t-tests were conducted to compare the test scores of these 2 groups of psychologists on the objective portions of the survey. These results are reported in Table 5.
### Table 5

*T-tests for Psychologists*

#### TOTAL SCORE ON 55 OBJECTIVE QUESTIONS

<table>
<thead>
<tr>
<th># Of Cases</th>
<th>M</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEVELOPMENTAL PSYCHOLOGISTS</td>
<td>9</td>
<td>34.3</td>
<td>4.9</td>
</tr>
<tr>
<td>CLINICAL PSYCHOLOGISTS</td>
<td>10</td>
<td>35.1</td>
<td>3.9</td>
</tr>
</tbody>
</table>

#### SCORE ON 20 QUESTIONS RELATED TO MENTAL ILLNESS

<table>
<thead>
<tr>
<th># Of Cases</th>
<th>M</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEVELOPMENTAL PSYCHOLOGISTS</td>
<td>9</td>
<td>12.0</td>
<td>3.3</td>
</tr>
<tr>
<td>CLINICAL PSYCHOLOGISTS</td>
<td>10</td>
<td>35.1</td>
<td>3.9</td>
</tr>
</tbody>
</table>

#### SCORE ON 20 QUESTIONS RELATED TO MENTAL RETARDATION

<table>
<thead>
<tr>
<th># Of Cases</th>
<th>M</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEVELOPMENTAL PSYCHOLOGISTS</td>
<td>9</td>
<td>13.5</td>
<td>2.4</td>
</tr>
<tr>
<td>CLINICAL PSYCHOLOGISTS</td>
<td>10</td>
<td>12.3</td>
<td>2.4</td>
</tr>
</tbody>
</table>

#### SCORE ON 15 QUESTIONS RELATED TO MENTAL ILLNESS IN PERSONS WITH MENTAL RETARDATION

<table>
<thead>
<tr>
<th># Of Cases</th>
<th>M</th>
<th>SD</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEVELOPMENTAL PSYCHOLOGISTS</td>
<td>9</td>
<td>8.7</td>
<td>1.3</td>
</tr>
<tr>
<td>CLINICAL PSYCHOLOGISTS</td>
<td>10</td>
<td>7.4</td>
<td>1.4</td>
</tr>
</tbody>
</table>

* P < .05 ** P < .01
For the 20 questions on mental illness the mean score of the clinical psychologists ($X=15.4$) was significantly higher than that of the developmental psychologists ($X=12.0$), ($t=2.80$, d.f.=$17$; $p<.01$). For the 20 questions on mental retardation there was no significant difference in mean score between the clinical psychologists ($X=12.3$) and the developmental psychologists ($X=13.5$). For the 15 questions on mental illness as it relates to persons with mental retardation there was a significantly higher mean score for the developmental psychologists ($X=8.7$) as compared to the clinical psychologists ($X=7.4$), ($t=-2.2$, d.f.=$17$; $p<.04$). Overall, for the combined 55 questions, the mean score for the clinical psychologists ($X=35.1$) was not significantly higher than the mean score for the developmental psychologists ($X=34.3$).

Except for the nonsignificant difference in total test score these results mirror those found for the t-tests conducted to investigate the differences between mental health and mental retardation professionals' test scores, overall.

**CHI-SQUARES FOR RESPONDENT OPINIONS**

As an aid to interpreting the results, it was important to examine the consistency between the outcome of the objective portions of the survey and the respondents' personal opinions of the content areas presented. Because of this, a chi-square analysis was conducted for each of the four final questions of the survey to determine if there was a significant difference in opinion between mental health and mental retardation professionals on these issues.
No significant difference was found for the question that solicited opinions about which profession the respondent thought was best able to treat psychiatric problems in persons with mental retardation. Likewise, no significant difference was found between the 2 groups of professionals for the question that asked if special training in the mental retardation aspects of mental illness should be required of all professionals in mental retardation.

A significant difference was found between the responses of professionals in mental health and mental retardation for the question that asked if professionals in the former group should receive training in the mental health needs of persons with mental retardation. Sixty-five percent of the mental health professionals agreed with this statement while 82.5% of the mental retardation professionals agreed (Kramer's V=2.4; p<.001). A significant difference was also found between the 2 groups on the question that asked which facility should treatment originate in for persons who are mentally ill/mentally retarded (Kramer's V=.214; p<.006). Of the professionals from mental health, 9.4% said that such treatment should originate in a mental health facility while 57% said "it can vary". Of the professionals from mental retardation, 20.4% said that it should originate in a mental health facility while 61% said that "it can vary".
REGRESSION ANALYSES

A series of 9 stepwise multiple regression procedures were conducted on the data. Since some of the independent variables entailed the respondent's opinions and attitudes, a separate series of regression analyses were conducted on these variables. The first of these regression procedures were conducted on the data from the mental health professionals, the second from the mental retardation professionals and the third from both groups combined. This series of 3 regression procedures are summarized in Table 6.

The remaining independent variables consisted of demographic and other factual information about the respondent's practice, education and experience. A series of 3 regression procedures were conducted on these variables; the first again using data exclusively from the mental health professionals, the second using data exclusively from the mental retardation professionals and the third using the entire data base. The results of this series of regression analyses are summarized in Table 7.

The final series of regression procedures investigated the impact of all of the independent variables together, attitudinal and demographic/informational. As in the first two series, the first regression procedure was conducted on the data from the mental health professionals, the second on the data from the mental retardation professionals and the third on both groups together. The results of these analyses are summarized in Table 8.

All of the equations were computed in a stepwise manner and all $R^2$s were based on equations using significant regression weights ($p<.05$). The 3 sections that follow summarize the 9 stepwise regression procedures and the standardized regression weights that were significant in each.
Attitudinal Variables

The results of this series of regression analyses are summarized in Table 6.

Test Scores for Mental Health Professionals

Two of the seven independent variables had significant standardized regression weights, and the equation accounted for 26.9% of the variance. Those mental health professionals who expressed high confidence about using referral sources for a mentally ill/mentally retarded client had significantly higher test scores than those who did not have high confidence. Also, those mental health professionals who believed that their training was adequate in preparing them to deal with mentally ill clients had significantly higher scores.

Test Scores for Mental Retardation Professionals

Only one of the seven independent variables had a significant standardized regression coefficient and the equation accounted for 13.7% of the variance. High test scores were associated with higher confidence about recognizing a psychiatric problem in a client with mental retardation.
Test Scores for Mental Health & Mental Retardation Professionals

Four independent variables yielded significant regression coefficients and the equation accounted for 31.0% of the variance. The respondent's field of practice, either mental health or mental retardation, was significantly associated with overall test scores. Mental health professionals scored significantly higher than mental retardation professionals. High confidence about ability to recognize a psychiatric impairment in a person with mental retardation and high confidence about using an appropriate referral service for such a client were again associated with higher test scores. A positive association was also found between high test scores and an overall feeling of adequacy in dealing with a mentally ill client.
Table 6

*Standardized Regression Coefficients for Attitudinal Variables*

<table>
<thead>
<tr>
<th></th>
<th>REGRESSION USING MENTAL HEALTH PROFESSIONALS</th>
<th>REGRESSION USING MR/DD PROFESSIONALS</th>
<th>REGRESSION USING BOTH GROUPS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n=121</td>
<td>n=103</td>
<td>n=224</td>
</tr>
<tr>
<td><strong>Beta</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>about ability to:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>recognize a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>psychiatric problem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>in a client with MR</td>
<td></td>
<td>-0.37*</td>
<td>-0.19*</td>
</tr>
<tr>
<td>use appropriate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>referral sources</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>for clients with</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MI/MR</td>
<td></td>
<td>-0.41*</td>
<td>-0.14*</td>
</tr>
<tr>
<td>talk with a client</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>with MR about</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>seeking help</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>about a psychiatric</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>problem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>treat a client with</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MR for a psychiatric</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>problem</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall feeling</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>that personal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>training has been</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>adequate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>to address the</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>needs of clients</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>with:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- mental illness</td>
<td></td>
<td>0.25*</td>
<td>0.24*</td>
</tr>
<tr>
<td>- mental retardation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- mental illness/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>mental retardation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field of Practice (MHor MR/DD)</td>
<td></td>
<td></td>
<td>-0.33*</td>
</tr>
</tbody>
</table>

* p < .05

$R^2 = .27$  $R^2 = .14$  $R^2 = .31$
Demographic and Information Variables

The results of this series of regression analyses are summarized in Table 7.

Test Scores for Mental Health Professionals

Two independent variables were significantly associated with test scores for mental health professionals, and the equation accounted for 19.8% of the variance. The presence of an informal policy on dealing with mentally ill/mentally retarded clients at the respondent's agency was positively associated with higher test scores. The number of professional courses or workshops the respondent had taken was also positively associated with higher scores.

Test Scores for Mental Retardation Professionals

Two independent variables were significantly associated with test scores for mental retardation professionals with 23.8% of the variance accounted for. The number of active cases the respondent had who were mentally ill was positively associated with test scores as was the amount of reading the person had reportedly conducted on the effects of mental illness on persons with mental retardation.
Test Scores for Mental Health & Mental Retardation Professionals

The same two independent variables that were reported significant for mental retardation professionals alone were also found to be significant for both mental health and mental retardation professionals combined. In addition, a third independent variable was also found to be significant and the equation accounted for 26.5% of the variance. The respondent's number of active cases who were mentally ill was positively associated with higher test scores as was the amount of reading the respondent had reportedly conducted on the effects of mental illness on persons with mental retardation. The third significant independent variable was the respondent's field of practice. Mental health professionals again had significantly higher test scores than mental retardation professionals.
Table 7

Standardized Regression Coefficients for Demographic and Informational Variables

<table>
<thead>
<tr>
<th></th>
<th>REGRESSION USING MENTAL HEALTH PROFESSIONALS (n=121)</th>
<th>REGRESSION USING MR/DD PROFESSIONALS (n=103)</th>
<th>REGRESSION USING BOTH GROUPS (n=224)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent Variables</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age group of clients</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># of cases who are:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---mentally ill.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---mentally retarded</td>
<td>.28 *</td>
<td>-.19 *</td>
<td></td>
</tr>
<tr>
<td>% of clients who are MI/MR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presence of policy at agency for serving MI/MR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---formal policy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---informal policy</td>
<td>.31 *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount of reading conducted on MI/MR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># of academic courses in</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---mental illness</td>
<td>.44 *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---mental retardation</td>
<td>.33 *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---MI/MR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># of professional courses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---mental illness</td>
<td>.31 *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---mental retardation</td>
<td>---MI/MR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---years of experience</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---years at agency</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field of Practice (MH or MR/DD)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05

R^2 = .20  R^2 = .24  R^2 = .27
Attitudinal, Demographic and Informational Variables Combined

The results of this series of regression analyses are summarized in Table 8.

Test Scores for Mental Health Professionals

For test scores by mental health professionals, three independent variables had significant standardized weights, and the equation accounted for 35.6% of the variance. The respondent's feeling of adequacy in dealing with mentally ill clients was positively associated with test scores as was the presence of an informal policy at the respondent's agency for addressing the mental health needs of persons with mental retardation. Lastly, a significant association existed between test scores and the respondent's confidence in using appropriate referral sources for mentally retarded clients. Higher respondent confidence levels were positively associated with higher test scores.

Test Scores for Mental Retardation Professionals

For test scores by mental retardation professionals, two independent variables yielded significant standardized regression coefficients, and the equation accounted for 25.3% of the variance. The amount of reading the respondent had reportedly conducted on mental illness in persons with mental retardation was positively associated with test scores, while the respondent's confidence in recognizing a psychiatric impairment in a mentally retarded client was also positively associated with test scores.
Test Scores for Mental Health & Mental Retardation Professionals

Five independent variables had significant standardized coefficients, and the equation accounted for 37.1% of the variance. The adequacy of the respondent's professional training in preparing him or her to deal with mentally ill clients was positively associated with test scores as was the amount of reading the respondent had reportedly conducted on the subject of mental illness in persons with mental retardation. The presence of an informal policy on addressing the mental health needs of mentally retarded clients was also positively associated with test scores. Next, the respondent's confidence in recognizing a psychiatric impairment in a client with mental retardation was positively associated with test scores. Finally, the largest association occurred between test scores and the respondent's field of practice. Overall, professionals from mental health had significantly higher overall test scores than professionals from mental retardation.
Table 8

Standardized Regression Coefficients for Informational, Demographic and Attitudinal Variables Combined

<table>
<thead>
<tr>
<th>REGRESSION USING MENTAL HEALTH PROFESSIONALS</th>
<th>REGRESSION USING MR/DD PROFESSIONALS</th>
<th>REGRESSION USING BOTH GROUPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>n=121</td>
<td>n=103</td>
<td>n=224</td>
</tr>
<tr>
<td><strong>Beta</strong></td>
<td><strong>Beta</strong></td>
<td><strong>Beta</strong></td>
</tr>
</tbody>
</table>

**INDEPENDENT VARIABLES**

Confidence about ability to:

- recognize a psychiatric problem in a client with MR
  - .26* ........................................... .20*

- use appropriate referral sources for clients with MI/MR
  - .46*

- talk with a client with MR about seeking help about a psychiatric problem

- treat a client with MR for a psychiatric problem

Overall feeling that personal training has been adequate to address the needs of clients with:

- mental illness
  - .20* ........................................... .18*

- mental retardation

- mental illness/mental retardation

* p < .05
Table 8 (continued)

<table>
<thead>
<tr>
<th>REGRESSION USING MENTAL HEALTH PROFESSIONALS</th>
<th>REGRESSION USING MR/DD PROFESSIONALS</th>
<th>REGRESSION USING BOTH GROUPS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beta</strong></td>
<td><strong>Beta</strong></td>
<td><strong>Beta</strong></td>
</tr>
<tr>
<td>Age group of clients</td>
<td></td>
<td></td>
</tr>
<tr>
<td># of cases who are:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---mentally ill</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---mentally retarded</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% of clients who are MI/MR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presence of policy at agency for serving MI/MR</td>
<td>0.18 *</td>
<td>0.16 *</td>
</tr>
<tr>
<td>---formal policy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---informal policy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount of reading conducted on MI/MR</td>
<td>0.34 *</td>
<td>0.18 *</td>
</tr>
<tr>
<td># of academic courses in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---mental illness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---mental retardation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---MI/MR</td>
<td></td>
<td></td>
</tr>
<tr>
<td># of professional courses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---mental illness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---mental retardation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---MI/MR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---years of experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---years at agency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Field of Practice (MH or MR/DD)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p < .05

R² = .36

R² = .25

R² = .37
SUMMARY OF RESULTS

A total of 121 surveys were completed and returned by professionals from mental health agencies out of 155 that were distributed, for a return rate of 78%. A total of 103 surveys were completed and returned by professionals from mental retardation out of 130 that were distributed, for a return rate of 79%. The grand total then was 224 surveys completed out of 285 distributed, for an overall return rate of 78.6%

T-tests were conducted to investigate the differences in test scores between professionals from mental and mental retardation on 3 major questions areas: 1) mental illness; 2) mental retardation; and, 3) mental illness as it relates to persons with mental retardation. Significant differences in total test scores between the two groups (i.e., the score on all three sections combined) were also examined.

Professionals from mental health were found to have scored significantly higher on the questions relating to mental illness as compared to the professionals from mental retardation, while no significant difference was found between the 2 groups on the questions relating to mental retardation. Professionals from mental retardation, however, scored significantly higher on the questions that related to mental illness in persons with mental retardation as compared to the professionals from mental health. Overall, the mean score for the mental health professionals on the entire test was significantly higher than the mean score for the mental retardation professionals.
T-tests were also conducted between professionals from mental retardation who had human service degrees and those who had degrees in other areas. Those professionals from mental retardation who had a human service degree scored significantly higher on the questions that related to mental illness as compared to those professionals who had degrees in another area, while there was no significant difference between the 2 groups on the questions that related to mental retardation. On the questions that related to mental illness in persons with mental retardation the human service degreed respondents scored significantly higher than those without such a degree. For total score, the professionals from mental retardation who possessed a human service degree scored significantly higher overall than their counterparts who had degrees in other areas.

It was noted that almost all of the psychologists who had responded to the survey from mental retardation agencies were developmental psychologists while almost all of the psychologists who had responded from mental health agencies were clinical psychologists. T-tests conducted between these 2 groups of psychologists mirrored the results from the comparison of mental health and mental retardation professionals overall, although mean scores were somewhat higher. Clinical psychologists scored significantly higher on the mental illness portion of the test as compared to the developmental psychologists while no significant difference was found between the 2 groups on the mental retardation portion. Developmental psychologists, however, had significantly higher mean scores on the questions that related to mental illness in persons with mental retardation as compared to the mean scores for clinical psychologists. No significant difference in total score was found between the 2 groups of psychologists.
A series of 9 stepwise regression procedures were conducted; 3 on the attitudinal variables only, 3 on the demographic and informational variables only and 3 on both groups of variables combined. The first regression procedure in each set of three was conducted on data from the mental health professionals only. The second regression procedure was conducted on data from the mental retardation professionals only and the third was conducted on the entire data set; that is, from both groups together.

On the regression analysis of attitudinal variables for mental health professionals only, those respondents who expressed high confidence about using referral sources for a client with mental illness and mental retardation had significantly higher scores than those that did not express high confidence. Significantly higher scores were also associated with greater belief in the adequacy of one's training in preparing to deal with clients who have both a mental illness and mental retardation.

On the regression analysis of attitudinal variables for professionals from mental retardation only, higher confidence in recognizing a psychiatric problem in a client with mental retardation was associated with higher test scores.

On the regression analysis for both mental health and mental retardation professionals, four independent variables yielded significant regression coefficients. The respondents' field of practice, high confidence about one's ability to recognize a psychiatric impairment in a person with mental retardation and high confidence about using an appropriate referral service for such a client were all associated with higher test scores as was a higher feeling of adequacy in dealing with any client with mental illness.
On the regression analysis of demographic and informational variables for mental health professionals only, the presence of an informal policy on dealing with clients with mental retardation and a mental illness at the respondent's agency and the number of professional courses or workshops that the respondent had taken were positively associated with higher test scores.

On the regression analysis of demographic and informational variables for mental retardation professionals only, the number of clients the respondent had who were mentally ill was positively associated with test scores as was the amount of reading the respondent had reportedly conducted on the effects of mental illness on persons with mental retardation.

On the regression analysis of demographic and informational variables for both groups of professionals combined, the number of clients that the respondent had who were mentally ill was again positively associated with test scores as was the amount of reading the respondent had reportedly conducted on the effects of mental illness on persons with mental retardation. In addition, the respondents' field of practice was significantly related to test scores, with professionals from mental health receiving significantly higher overall test scores as compared to professionals from the field of mental retardation.

On the regression analysis of all variables for professionals from mental health only, 3 independent variables had significant standardized weights. The respondents' feeling of adequacy in dealing with clients who were mentally ill was positively associated with test scores as was the presence of an informal policy at the respondents' agency for addressing the mental health needs of persons with mental retarda-
tion. Also, a significant association existed between test scores and the respondent's confidence in using appropriate referral sources for clients with mental retardation.

On the regression analysis of all variables for professionals from mental retardation only, the amount of reading they had reportedly conducted on mental illness in persons with mental retardation was positively associated with test scores as was the respondent's confidence in recognizing a psychiatric impairment in a client with mental retardation.

On the regression analysis using all of the variables for both groups of professionals, five independent variables yielded significant standardized coefficients. The adequacy of the respondent's professional training in preparing to deal with mentally ill clients was positively associated with test scores as was the amount of reading he or she had reportedly conducted on the subject of mental illness in persons with mental retardation. The presence of an informal policy on addressing the needs of clients with co-existing symptoms of mental illness and mental retardation was also significantly associated with test score, as was the respondent's confidence in recognizing a psychiatric impairment in a client with mental retardation. Finally, the respondent's field of practice was highly associated with test score, with professionals in mental health scoring significantly higher than professionals in mental retardation.
INTERPRETATIONS

It is important to understand that the survey conducted here was a knowledge inventory and not an assessment of clinical ability. No correlation or relationship was predicted between knowledge of a certain topic and an individual's competence as a practitioner. Such a relationship may in fact exist but this remains for future research to establish. This will be elaborated on in the recommendations for future research. The purpose here instead was to compare the knowledge base of two groups of professionals on a topic that has important implications for both in terms of service provision. Professionals in the fields of mental health and mental retardation share an equal responsibility for addressing the mental health needs of persons with mental retardation and determining the extent of their knowledge about this topic is a first step toward improving the quality of services to this population.

The Nature of the Population

The two groups of professionals were quite similar in terms of demographics and other variables. More women than men were represented in both mental health and mental retardation and the majority of respondents from both fields were between 26 and 45 years of age. In terms of years of experience, there was an even distribution among the mental health professionals across all categories, whereas most of the mental retardation professionals fell into the "6 to 10 years" or "11 to 15 years" categories. The majority of both mental health and mental retardation professionals had been employed at their agency for less than 10 years.
The biggest difference between the two groups of professionals occurred in the subject area of their college degrees. Ninety-eight percent of the mental health professionals possessed a degree in a human service area (psychology, social work, counseling or nursing), whereas only 43.6% of the mental retardation professionals possessed a degree in this area.

In terms of their professional practice, the age group of the majority of the clients for both groups was "over 25 years of age". In addition, the majority of professionals from both mental health and mental retardation also reported that the percentage of their clients who had co-existing symptoms of mental illness and mental retardation over the years had been "25% or less".

Regarding their training and coursework, 80% of the mental health professionals had not taken any courses in mental retardation and 28% of the mental retardation professionals had not taken any courses in mental illness. Eighty-eight percent of mental health professionals and 82% of mental retardation professionals had not taken any courses that specifically addressed the mental health needs of persons with mental retardation. Likewise, neither group had had much professional training in co-existing symptoms of mental illness and mental retardation, with 24% of mental health professionals and 52% of mental retardation professionals reporting such training.
Respondent Beliefs

Some large differences occurred between mental health and mental retardation professionals in terms of their personal confidence in addressing various aspects of treatment for persons with mental illness and mental retardation. Thirty-one percent of the professionals from mental health stated that they were "not very confident" about recognizing a psychiatric impairment in a person with mental retardation as compared to 18% of the professionals from mental retardation. Likewise, 23% of the professionals from mental health were "not very confident" about using referral sources for clients with mental illness and mental retardation as compared to 11% of the mental retardation professionals. Fourty-five percent of the mental retardation professionals and 27% of the mental health professionals reported being "very confident".

Other large differences occurred in the respondents' confidence about treating a client with both mental illness and mental retardation. Sixteen percent of the mental health professionals reported being "very confident" and 35% "not very confident". An even greater percentage of mental health professionals were "not very confident" (60%) with only 6.8% "very confident".

These results highlight the very low feelings of confidence that professionals from both areas have about treating this population. The specialized nature of the population may reduce confidence in one's ability to effectively treat such clients for psychiatric problems or, alternatively, doubts may exist as to whether these clients can benefit from such treatment in the first place.
Content Areas Most Often Answered Incorrectly

In the study reported here both groups of professionals tended to miss the same questions relating to mental illness in persons with mental retardation; suggesting a general ignorance about certain aspects of this condition, regardless of background or profession. Most of these questions addressed the prevalence of mental illness in persons with mental retardation and the greater susceptibility of this population to psychiatric problems. Few professionals in either field were apparently aware of this phenomenon. In addition, both groups consistently scored poorly on the primary causal factors that contribute to this susceptibility. Finally, the fact that mental retardation is not evenly distributed among socio-economic levels, but is concentrated at the lower socio-economic level for milder degrees of impairment (Drew, Logan, & Hardman, 1988) was a commonly missed question.

Interpretations of T-test Results

As expected, professionals from the fields of mental health and mental retardation knew more about their own areas as compared to the areas of their counterparts. That is, professionals from mental health knew more about mental illness than professionals from mental retardation and professionals from mental retardation knew more about mental retardation than professionals from mental health, though in the
latter case the difference was not significant. Knowledge about mental illness as it affects persons with mental retardation was poor for both groups (mean scores of under 50%) despite a significantly higher overall score in this category for professionals from mental retardation. An additional factor is that the t-value was negative, indicating that while the scores of the mental health professionals were decreasing, those of the mental retardation professionals were increasing.

The result of this last t-test is critical since it suggests that the responsibility for addressing the mental health needs of persons with mental retardation may be perceived by mental health professionals as one which falls to the field of mental retardation, since most knowledge about the topic, limited though it is, is retained by professionals who specialize in that area. This interpretation is reinforced by the earlier findings that indicated a low percentage of respondents from mental health who were confident about treating these types of clients, though it should also be noted that the respondents from mental retardation reported an equally low rate of confidence.

The higher scores by professionals from mental retardation on the portion of the survey related to mental illness in persons with mental retardation suggests that what little training or education is currently available on this subject may be targeted almost exclusively toward professionals in mental retardation. The fact that professionals from mental health who had more coursework or other training in mental retardation also displayed higher scores in this area highlights the value of such training to any group that encounters clients of this type.

Alternatively, the higher scores by mental retardation professionals may have resulted from more day-to-day experience with this population and its ongoing struggles with mental health issues, thus permitting these professionals to gain better insight and understanding of this problem. Such an interpretation is consistent with
the fact that mental health professionals who had clients with mental retardation scored higher on this portion of the survey than mental health professionals who did not report having clientele of this nature.

Consistent with these results were the respondents' opinions. A significant difference was found between professionals in each specialization when asked where they believed treatment should originate for persons with mental illness and mental retardation. Only 9.4% of the mental health professionals, as compared to 28% of the mental retardation professionals, indicated that treatment should originate in a mental health agency.

The results from the t-tests conducted for psychologists was also consistent with the overall differences between professionals from mental health and mental retardation. Psychologists from mental health scored significantly higher than those from mental retardation on questions relating to mental illness but significantly lower on the specialized topic of mental illness as it relates to persons with mental retardation. There, the MR/DD psychologists scored significantly higher, though even their accuracy rate was only about 60%. Such results suggest that what little training or education professionals in these two areas of practice receive in the mental health aspects of mental retardation is concentrated primarily in the field of mental retardation.

While disappointing, these results are not surprising given the gap that has developed between the two fields over the years. By its very nature and definition, the field of mental retardation has concentrated primarily on the intellectual and behavioral deficits of persons with mental retardation, with emotional needs a secondary concern. The fact that even professionals who have undergone extensive training and education in the different facets of mental retardation scored low only reinforces the notion that the mental health of persons with mental retardation has, for the most part, been neglected.
The t-tests conducted between mental retardation professionals who possessed a human service degree and those who possessed a degree in another area indicated that the presence of a human service degree resulted in significantly higher overall scores and significantly higher scores on the questions that related to mental illness and mental illness in persons with mental retardation. Interestingly, no significant difference was found between the groups for the section that pertained to mental retardation, suggesting that those who did not have academic exposure to the field of mental retardation may have learned enough about it through "on the job experience" to score just as well as their counterparts who had pursued a formal education in a human service discipline.

Despite significant differences, it is hard to overlook the fact that, in general, the mean scores for both mental health and mental retardation professionals were very low; suggesting that neither group was sufficiently knowledgeable about the effects of mental illness in persons with mental retardation to score above the fiftieth percentile (i.e., above 50%).

Interpretations of Regression Analysis

The fact that a direct comparison was conducted here between specialists in the fields of mental health and mental retardation gives us a broad look at the knowledge base that currently exists between these two specialties. In general, those from mental retardation may know more about mental illness in persons with mental retardation, but a number of other variables also seem to contribute to any one respondent’s particular knowledge about this topic. Some of these were ascertained in the series of 9 stepwise regression analyses that are discussed below.
Regression for Demographic & Informational Variables

For the analysis that utilized data from the mental health professionals only, variables that accounted for significant amounts of variance were whether the person had taken any courses on mental retardation and whether there was an informal policy at the respondent's agency for treating clients who were mentally ill and mentally retarded. The influence of the first variable is obvious. If professionals in mental health learned more about mental retardation through workshops or inservices it is logical to assume that they will know more about this subject than those who have not undertaken such training.

The significance of an "informal policy" is more confusing, however, since a definition of "informal" was left up to the respondent. Higher scores were displayed by persons in either discipline whose agency possessed such a policy. Perhaps employees whose agency had had enough experience with these types of clients to develop a policy on how to deal with them, or were aware enough of the problems encountered by this special population to develop such a policy, learned more about the specifics of their condition than employees whose agency did not have such a policy. Because each respondent may have had a different definition of "informal", however, this result is not interpretable.

In the analysis of the data from the mental retardation professionals only, the number of cases the respondent had who were mentally ill made a significant difference in test score as did the amount of reading reported by the respondent on the topic of mental illness in persons with mental retardation. As with the professionals from mental health, more "cross-over" exposure to clients who were outside of their specialty resulted in higher overall test scores. Thus, mental retardation professionals with mentally ill clients had higher overall scores as did those who had reportedly
conducted more reading on the effects of mental illness in persons with mental retardation.

The same variables that accounted for significant amounts of variance for mental retardation professionals alone were also significant when the data for both groups of professionals were analyzed together. In addition, the variable that accounted for the greatest amount of variance was the respondents' specialization: either mental health or mental retardation. Those from mental health had significantly higher overall scores.

Regression Analysis for Attitudinal Variables

The questions targeted in this analysis asked the respondents how confident they were about their ability to recognize a psychiatric problem in a person with mental retardation, to use appropriate referral sources for a person with mental illness and mental retardation, talk with a client with mental retardation about a psychiatric problem and treat such a person for the problem. In addition, the respondents were asked how adequate they believed their professional training had been to treat clients for mental illness, mental retardation and co-existing symptoms of mental retardation and significant psychiatric impairment.

For differences in scores between mental health professionals only, those who felt more confident about using referral sources for a client with mental illness and mental retardation and who felt that their personal training had been very adequate in addressing the needs of clients with mental illness had significantly higher scores. As an interpretation, it seems reasonable to assume that those who had undertaken
exhaustive training in all aspects of mental health would necessarily also know more about the effects of mental illness on persons with mental retardation. Those who are more knowledgeable about the use of referral services for this type of client would probably have learned more about the client and his or her condition and also receive a higher score on that portion of the test. This is consistent with earlier results that showed significantly higher scores for mental health professionals who had taken more professional courses or workshops in mental retardation.

For the analysis that utilized data from the mental retardation professionals, only the ability to recognize a psychiatric problem in a person with mental retardation made a significant difference in test score. Those mental retardation professionals who could recognize these problems may have had more experience with this facet of mental retardation and subsequently scored higher on the knowledge inventory.

The same variables that accounted for significant amounts of variance for mental health and mental retardation professionals alone were also significant when the data from both groups was combined. A pattern of greater amounts of training and experience with clients who have mental illness and mental retardation has emerged as a significant determinant of higher scores. Those who believe that their training has been very adequate in addressing the mental health needs of clients received significantly higher scores as well as those who possessed greater confidence about using referral sources for clients who have mental illness and mental retardation.

These results complement those from the first series of regression analyses conducted on the demographic variables. In that analysis, greater amounts of reading on the topic of dual diagnosis and having clientele who demonstrate symptomology of mental illness and mental retardation resulted in significantly higher test scores.
Regression for Demographic & Attitudinal Variables Combined

The same variables that accounted for significant amounts of variance in the first two series of regression analyses also accounted for significant amounts when both groups of variables were analyzed together. To summarize then, the results from the regression analyses indicated that if a professional from either field had active cases who were simultaneously mentally ill and mentally retarded, their awareness and knowledge of the subject of mental illness in persons with mental retardation increased. Likewise, professionals in either field who had reportedly conducted some reading on this subject also received significantly higher scores. Greater direct experience with clients who had co-existing symptoms of mental illness and mental retardation then seemed to be correlated with higher scores. For mental health professionals, higher overall scores were also correlated with greater confidence in dealing with any type of client who had psychiatric problems and with greater confidence about using referral services for a client who was retarded and mentally ill.

For professionals in mental retardation, higher confidence in one's ability to recognize a psychiatric problem in a person with mental retardation was significantly related to higher overall test scores.

The one variable, however, that accounted for the greatest amount of variance in total scores was the primary independent variable of the study: field of practice. Part of this may be explained by the vast difference in knowledge about mental illness exhibited by the two groups. The mean score on this section for the professionals from mental health was almost twice as high as that of the professionals from mental retardation. For the section on mental retardation, however, there was no significant difference in mean score for the two groups. This can be partially explained by the greater homogeneity of the mental health respondents in terms of education.
and background. Almost all of these professionals (98%) possessed degrees in a human service area (social work, psychology, counseling or nursing) while less than half of the mental retardation professionals (45%) possessed a degree of this nature. Thus, the chances were good that the former group had taken at least one or more courses in mental health or related topics; whereas more than half of the latter group may never have been exposed to this type of material. The great variance in overall scores then may have been heavily related to this fundamental difference in the respondents' education.

While scoring much higher on the mental illness portion of the survey and about the same on the mental retardation portion, professionals from the field of mental health scored significantly lower on the questions relating to mental illness in persons with mental retardation as compared to professionals from mental retardation. This does not mean that the latter group was particularly knowledgeable about this subject, however, since their mean score was also under 50%.

Recommendations

The results suggest that neither mental health nor mental retardation professionals are sufficiently educated or knowledgeable to address the mental health needs of persons with mental retardation. The average means for both groups of professionals on the portion of the inventory that covered this issue were extremely low. Since professional instruction and additional reading on the subject of mental illness in persons
with mental retardation resulted in significantly higher scores it is highly recom-
mended that such training programs be implemented. It would appear, however, that
if both groups of professionals were to undergo training to learn more about the spe-
cialized needs and problems of this type of client, that training should differ in
marked ways. Mental health professionals obviously know their specialty, but may
need additional training in how to treat special populations for generic mental health
problems. For example, Lindenbaum (1989) has developed a model for the clinical
training and supervision of mental health professionals in the provision of psychother-
apy services to dual diagnosis clients.

Group, behavioral and psychotherapeutic techniques with proven efectiveness have
been developed for use with persons who are mentally retarded (e.g., Matson, 1984);
techniques that must now be disseminated to CMHCs and other locations that offer
generic mental health services. Recent articles for clinicians and practitioners to con-
sult on this topic include Levitas & Gilson (1989; psychodynamic psychotherapy with
retarded patients), Monfils (1989; group psychotherapy), and Hurley (1989a; behavioral
therapy). In addition, Schramski (1989) has developed a training program for direct-
care staff who work with persons who are mentally ill and mentally retarded and a
comprehensive management program for this population has been described by Evange-
lista (1989). The idea that the mental health needs of persons with mental retarda-
tion is the joint responsibility of mental health and mental retardation must be sup-
ported and encouraged.

For professionals in mental retardation the problem may be different. Their lack
of knowledge about mental illness suggests that greater training in generic mental
health issues may be beneficial. Stress on the importance of mental health for per-
sons with mental retardation would provide a context of relevance for practitioners
who work with clients with mental retardation on a regular basis. For instance, it could be emphasized that the mental health of persons with mental retardation is one of the most important determinants of whether they will become successfully integrated into the community. Mental retardation, by its very definition, has focused on the client's diagnosis and adaptation to intellectual deficits. Adaptive behavior notwithstanding, the goal of classification procedures has been to place the client within an IQ range (Mordock & Van Ornum, 1989).

In short, professionals in mental health should be taught to be more aware of the needs of persons with mental retardation and shown how clinical interventions can be modified with very positive outcomes. Use of the medical model in the mental health field has traditionally emphasized coping strategies and treatment plans that must now be adapted to these special populations. For professionals in mental retardation the importance of the clients' psychological well-being must be emphasized and take equal precedence with concern for their intellectual development. Simultaneously, such priorities must be incorporated into existing vocational and educational programs.

It is also recommended that a person be appointed to act as a liaison between mental health and mental retardation service systems to facilitate these changes. Such persons should be at both the state and local levels. It does not seem practical to recommend that each CMHC have a clinical specialist in mental illness/mental retardation but it would not be unreasonable to have one or two such persons available within each local mental health and MR/DD system to serve on a consulting basis. Perhaps a small committee of administrative and clinical professionals could be organized within each community to facilitate the planning, coordination and delivery of mental health services to persons with mental retardation. Such a committee could even be dictated by state law, much as the county boards are in Ohio.
Relationship to Past Research

The relevance of this study to past research is that it begins to compare two professions in terms of a problem that has serious implications for both, but which has rarely been viewed as such. Traditionally, most aspects of care for persons with mental retardation have remained the exclusive responsibility of the mental retardation field. But the mental health of all persons, normal intelligence or otherwise, should be of concern to the mental health profession. Because of this, an exploratory study was conducted to compare the knowledge base of each on a crucial subject that "bridges the gap" between them; persons with co-existing symptoms of mental illness and mental retardation.

During the past few years much has been written about this issue but few, if any, studies have directly compared these two groups in terms of their knowledge of this topic. Earlier, it was mentioned that social workers are involved in "boundary work". For too long artificial borders have existed between the areas of mental health and mental retardation and it has rarely had such a devastating effect as on persons who suffer from co-existing symptoms of mental illness and mental retardation. Perhaps this study can serve as a model for future research of a comparative nature, both in mental disabilities and other specialties. The aim of this study was to first highlight the reality and importance of the subject and then to compare the knowledge base of two disciplines: one that has traditionally been held responsible for persons afflicted with the condition and one that has not; with the aim of broadening awareness in both.
Labeling and the Nature of Dual Diagnosis

In this study, usage of the term "dual diagnosis" has meant co-existing symptoms of mental illness and mental retardation. Today, it is ambiguous to use this phrase without an accompanying explanation since it has also been identified with other conditions. In the mental health field "dual diagnosis" is a commonly used term for describing co-existing substance abuse and mental illness. In the mental retardation field it has also been used to describe persons with mental retardation who come in contact with the criminal justice system (Luckasson, 1989). Although it is convenient to use this term (the non-profit organization designed to promote work on mental health aspects of mental retardation is called The National Association for the Dually Diagnosed) "its simplicity and lack of precise meaning obscure the diverse service needs presented by those who are given the label" (Smull, 1989; p.395).

When it was first used as a descriptor for persons who were mentally ill and mentally retarded the term "dual diagnosis" was useful because it highlighted the fact that persons with mental retardation could simultaneously experience mental illness. Smull (1988) notes that:

At a time when many professionals were denying that persons with mental retardation could experience any mental illness, the label had a utility. Today, it is as likely to be used for a person with mild mental retardation who has a history of antisocial behavior as for a person with moderate mental retardation who exhibits an active psychosis. While specific labels that specify the conditions present may be less convenient than the simple label of dually diagnosed, they help to keep in focus the heterogeneous nature of both the services needed and the interventions required. (p.395-396)
Related to this has been usage of the term "primary diagnosis". Although originally intended to ensure the provision of appropriate services it has come to be used as an administrative gimmick for denying responsibility for specialized services that do not exist (Houston, 1984). Mental Health or Mental Retardation systems that do not have appropriate services for clients with mild mental retardation and extensive behavior problems have often used this label "for attributing the problem to a condition that is the responsibility of the other service system" (Smull, 1988; p395).

The point of labeling a condition as primary is to focus treatment and habilitation. When it is used to deny responsibility, the label serves no useful purpose and hides the real issue of lack of services.

Future Research and Implications for Practice

It must again be noted that the study conducted here was not an assessment of clinical skill or ability but rather a comparison of the knowledge base of two groups of professionals. It is submitted here, however, that knowledge about mental illness in persons with mental retardation should be one criterion in any evaluation of a practitioner's ability to effectively provide services to this population. In discussing a training program for social workers and psychologists who use psychotherapy with dually diagnosed patients, Lindenbaum (1989) supports this contention by stating that the development of such a program should involve 3 basic parts, one of which is "knowledge of developmental disabilities". In addition, he notes the importance of a
commitment in the service provider to the need for clinical services for dually diagnosed clients:

The clinician (psychologist or social worker) must be knowledgeable about the research literature; must be able to acknowledge that psychotherapy is the treatment of choice; that it is a viable modality in dealing with adjustment problems as well as the emotional problems of the dually diagnosed client. Only when the mental health professionals begin to view (and feel competent in) the role of a therapist who is providing short- and long-term treatment to the dually diagnosed population, rather than as simply a case manager, psychometrician, or behavior specialist, will there be a full acknowledgement and recognition of the need for mental health services. The clinician must maintain an attitude and approach that exemplifies a commitment to the psychotherapeutic treatment of the dually diagnosed population. (p. 231)

Future research will have to establish the link between knowledge and practice, however, but one would hypothesize that greater knowledge would be one of the key factors in more effective interventions. Such a hypothesis would have to be tested empirically through a comparison of interventions by practitioners who were more or less knowledgeable about the condition. In all likelihood, knowledge alone will not result in a competent practitioner; thus, the use of an inventory such as the one designed for this study would only comprise one facet of a more comprehensive evaluation program. An additional question is how is greater knowledge specifically reflected in one's practice?

A final issue to consider is the factionalism that continues to pervade the mental health and mental retardation systems. In the review of the literature it was noted that the normalization principle requires mental health services to "be available to the dually diagnosed individual in his or her community" and that "these individuals should be treated in mental health facilities in or near their home communities" (Swanson & Menolascino, 1984; p. 75). Deinstitutionalization has brought many indi-
viduals with co-existing symptoms of mental illness and mental retardation into the community and community resources, both in mental health and mental retardation, must now begin to address the specialized needs of these individuals. With these gains may come greater success and emotional well-being for our clients.
Appendix A

SURVEY INSTRUMENT
Section I

The questions in this first section are divided into 3 subsections according to content. The first subsection contains questions on mental illness. The second subsection contains questions on mental retardation and the third contains questions on mental illness as it specifically relates to the mentally retarded (dual diagnosis). We are interested in determining what mental health and mental retardation professionals know about these specific areas. Please answer all of these questions even if you do not regularly serve these populations.

Check one response for each statement in these three subsections. If you do not know the answer to a particular question or statement please circle the "Don't Know" response. Your contribution to this effort is greatly appreciated.
Subsection I - Mental Illness

1. Mood disorders are divided into 3 classifications: 1) Manic Disorders; 2) Depressive Disorders; 3) Bipolar Disorders.
   (1) True
   (2) False
   (3) Don't Know

2. Alzheimer's disease is not considered a mental disorder.
   (1) True
   (2) False
   (3) Don't Know

3. Schizophrenia cannot be diagnosed if it can be established that an organic factor initiated and maintained the disturbance.
   (1) True
   (2) False
   (3) Don't Know

4. The essential feature of this disorder is a maladaptive reaction to an identifiable psychosocial stressor or stressors, that occurs within 3 months after onset of the stressor, and has persisted for no longer than 6 months.
   (1) Adjustment disorder
   (2) Impulse control disorder
   (3) Factitious disorder
   (4) None of the above
   (5) Don't know
5. The essential feature of this type of schizophrenia is marked psychomotor disturbance, which may involve stupor, negativism, rigidity, excitement or posturing.

   (1) Paranoid Type
   (2) Disorganized Type
   (3) Catatonic Type
   (4) Undifferentiated Type
   (5) Don't Know

6. Kleptomania is a:

   (1) Personality disorder
   (2) Factitious Disorder
   (3) Adjustment disorder
   (4) None of the Above
   (5) Don't Know

7. Major Depression is estimated to be twice as common in females as in males.

   (1) True
   (2) False
   (3) Don't Know

8. This condition has a prodromal phase, an active phase and a residual phase.

   (1) Bipolar disorder
   (2) Schizophrenia
   (3) Sleep-Wake Schedule disorder
   (4) None of the Above
   (5) Don't Know

9. Alcohol dependence tends to cluster in families.

   (1) True
   (2) False
   (3) Don't Know
10. In this chronic mood disturbance there must be a two-year period (one year for children and adolescents) in which the person is never without hypomanic or depressed symptoms for two months.

(1) Organic Mood Syndrome
(2) Schizoaffective Disorder
(3) Cyclothymia
(4) None of the Above
(5) Don’t Know

11. The essential feature of this disorder is a pervasive pattern of indifference to social relationships and a restricted range of emotional experience and expression, beginning by early adulthood and present in a variety of contexts.

(1) Paranoid Personality Disorder
(2) Schizoid Personality Disorder
(3) Schizotypal Personality Disorder
(4) Antisocial Personality Disorder
(5) None of the Above
(6) Don’t Know

12. Autism is a:

(1) Somatoform Disorder
(2) Adjustment Disorder
(3) Personality Disorder
(4) Developmental Disorder
(5) None of the Above
(6) Don’t Know

13. Psychogenic Amnesia is an example of a Dissociative Disorder.

(1) True
(2) False
(3) Don’t Know
14. A disorder in which a traumatic event outside the range of usual human experience is persistently reexperienced and there is persistent avoidance of stimuli associated with that trauma is called a:

(1) Panic Disorder
(2) Simple Phobia
(3) Post-traumatic Stress Disorder
(4) Agoraphobia
(5) None of the Above
(6) Don't know

15. The manifestations of this condition are often recognizable by adolescence or earlier and continue throughout most of adult life, though they often become less obvious in middle or old age.

(1) Personality Disorder
(2) Impulse Control Disorder
(3) Factitious Disorder
(4) None of the Above
(5) Don't Know

16. The essential feature of schizophrenia is the existence within the person of 2 or more distinct personalities or personality states.

(1) True
(2) False
(3) Don't Know

17. All of these can be classified as organic mental syndromes and disorders except:

(1) Dementia
(2) Delirium
(3) Dysthymia
(4) Amnestic Syndrome
(5) All of the above are organic mental syndromes
(6) Don't Know
18. An obsessive-compulsive disorder falls under the larger category of:

(1) Anxiety disorder
(2) Personality disorder
(3) Dissociative disorder
(4) None of the Above
(5) Don't Know

19. The essential feature of this disorder is a delusional system that develops in a second person as a result of a close relationship with another person (the primary case) who already has a psychotic disorder with prominent delusions.

(1) Atypical psychosis
(2) Induced psychotic disorder
(3) Secondary psychotic disorder
(4) Familial psychotic disorder
(5) None of the Above
(6) Don't Know

20. A somatoform disorder in which there is an alteration or loss of physical functioning that suggests physical disorder, but instead is an expression of psychological conflict or need is called:

(1) Hypochondriasis
(2) Conversion disorder
(3) Somatization Disorder
(4) None of the above
(5) Don't know

Subsection II - Mental Retardation

1. Most individuals who are mentally retarded would be classified as:

(1) Severely retarded
(2) Moderately retarded
(3) Mildly retarded
(4) Profoundly retarded
(5) Don't know
2. Most retarded persons come from:
   (1) the highest socio-economic levels
   (2) the middle socio-economic levels
   (3) the lower socio-economic levels
   (4) all socio-economic levels, somewhat randomly distributed
   (5) don't know

3. The evidence of delinquent behavior among the retarded is:
   (1) considerably higher than in the normal population
   (2) less than the normal population
   (3) higher in the mildly retarded than the moderately retarded
   (4) equally distributed through the various levels of retardation
   (5) don't know

4. Mildly retarded persons who commit delinquent acts do so for the most part because:
   (1) they cannot distinguish right from wrong
   (2) they are by nature violent and aggressive
   (3) they have no control over their impulses
   (4) none of the above
   (5) don't know

5. Probably the most contributory factor to retarded intellectual development in the U.S. today is:
   (1) central nervous system damage
   (2) psycho-social deprivation
   (3) prematurity and complications of pregnancy
   (4) parental neglect and abuse
   (5) don't know

6. A retarded person's feelings of inferiority are derived from:
   (1) chronic frustration and failure
   (2) standards and expectations of the community
   (3) comparison of self with others
   (4) all of the above
   (5) don't know
7. A common characteristic of mentally retarded individuals is:
   (1) their insensitivity to what others think of them
   (2) their unconcern about wrong doings
   (3) their difficulty in planning ahead
   (4) their anti-social tendencies
   (5) don't know

8. I.Q. test scores of children should be viewed as:
   (1) a descriptor of present functioning level
   (2) predictors of later adult capacities
   (3) measures of daily life-problem solving ability
   (4) irrelevant to diagnostic procedures
   (5) don't know

9. Phenylketonuria (PKU) can be treated:
   (1) at any time before school age
   (2) by a special diet
   (3) by surgical procedures
   (4) by antibiotics
   (5) don't know

10. Down's Syndrome is for the most part caused by:
    (1) a thyroid dysfunction
    (2) an enzyme dysfunction
    (3) failure of 2 chromosomes to separate during gametogenesis
    (4) a hereditary factor
    (5) don't know

11. Successful adult adjustment of the mentally retarded is related most positively to:
    (1) the individual's attitude toward school
    (2) interpersonal and social skills
    (3) reading skills and I.Q.
    (4) work performance
    (5) don't know
12. An important principle in working with the retarded is that:

(1) intelligence is fixed at birth
(2) behavior can be modified
(3) they can learn as well as other people
(4) failure stimulates them to try harder
(5) don't know

13. The emerging philosophy of residential care stresses that:

(1) the institution as a place of last resort
(2) the institution as a permanent living arrangement for the retarded
(3) the institution as an integral part of community service
(4) the institution as a resource for the rehabilitation and training of all residents
(5) don't know

14. In extending help to mentally limited, disadvantaged parents, one should be guided by the principle:

(1) that a client cannot be helped unless they seek help of their own volition
(2) that these families will recognize their child’s limitations
(3) that unless aggressive reaching-out efforts are made to contact them, they tend to remain social isolates
(4) that they distrust community representatives and must be approached authoritatively
(5) don't know

15. Most mentally retarded children can become vocationally independent adults.

(1) True
(2) False
(3) Don’t know
16. Many mildly retarded children function acceptably as parents in adulthood.

(1) True
(2) False
(3) Don't know

17. About 75% of the retarded are not distinguishable by their physical appearance from the normal person.

(1) True
(2) False
(3) Don't know

18. Sensory handicaps, speech difficulties and neuromuscular impairments occur with equal frequency among the retarded and normal populations.

(1) True
(2) False
(3) Don't know

19. For the majority, mental retardation is a dynamic rather than a permanent condition.

(1) True
(2) False
(3) Don't know

20. Mentally retarded women nearly always give birth to mentally retarded children.

(1) True
(2) False
(3) Don't know
Subsection III - Mental Illness in the Mentally Retarded

1. When emotional disturbances are present in a retarded person the effects of the mental retardation are usually more debilitating and significant than the emotional problems.
   (1) True
   (2) False
   (3) Don't know

2. Mentally retarded people are more susceptible to mental illness than nonretarded individuals.
   (1) True
   (2) False
   (3) Don't know

3. What is the frequency rate of mental illness in the noninstitutionalized retarded?
   (1) Less than 10%
   (2) 10 to 20%
   (3) 20 to 35%
   (4) Over 35%
   (5) Don't know

4. Mentally retarded individuals are more susceptible to psychosis than are individuals of normal intelligence.
   (1) True
   (2) False
   (3) Don't know

5. Personality disorders are more frequent in the mentally retarded as compared to the nonretarded population.
   (1) True
   (2) False
   (3) Don't know
6. Personality disorders in the mentally retarded occur primarily because of:
   (1) Factors intrinsic to the person's mental retardation
   (2) Extrinsic factors
   (3) A combination of the two
   (4) None of the above
   (5) Don't know

7. Mentally retarded people are more prone to alcoholism than nonretarded people.
   (1) True
   (2) False
   (3) Don't know

8. Psychotherapy is not a viable treatment for the retarded.
   (1) True
   (2) False
   (3) Don't know

9. What frequency of institutionalized mentally retarded adults demonstrate psychotic symptomology?
   (1) 5 to 12%
   (2) 12 to 20%
   (3) 20 to 25%
   (4) Over 25%
   (5) Don't know

10. Mental illness in retarded children is no different in kind from that in normal children.
   (1) True
   (2) False
   (3) Don't know
11. Infantile autism is more common in the retarded population as compared to the nonretarded population.

(1) True
(2) False
(3) Don't know

12. Psychiatric disorders of persons with I.Q.s below 50 are likely to be associated with:

(1) Organic brain syndrome
(2) Autism
(3) Down syndrome
(4) None of the above
(5) Don't know

13. A factor that is highly associated with the development of psychiatric disorders of all types in the mentally retarded is:

(1) Emotional immaturity
(2) Educational failure
(3) Family pathology
(4) None of the above
(5) Don't know

14. An intellectually normal adult who becomes mentally ill can also become mentally retarded.

(1) True
(2) False
(3) Don't know

15. The suicide rate among retarded people is higher than that of the normal population.

(1) True
(2) False
(3) Don't know

This concludes the objective portion of the survey.
Section II This next section is designed to find out something about your professional practice.

1. What age group do the majority of your clients fall in? (Circle one.)
   A. 0 - 11
   B. 12 - 17
   C. 18 - 25
   D. 25 and above

2. Do you primarily deal with clients who are mentally retarded or non-retarded?
   A. Mentally Retarded
   B. Non-Retarded

3. How many active cases do you now carry that involve clients who are mentally retarded? (Check category.)
   none ______
   under 5 ______
   5 to 10 ______
   over 10 ______
   do not carry cases ______

4. How many active cases do you now carry that involve clients who have some psychiatric impairment? (Check category.)
   none ______
   under 5 ______
   5 to 10 ______
   over 10 ______
   do not carry cases ______

5. Over the years, what percentage of your clients have had the combined problems of mental retardation and a significant psychiatric disturbance? (Check category.)
   none ______
   51 to 75% ______
   0 to 25% ______
   26 to 50% ______
   76 to 100% ______
6. Does your agency have any formal policy on serving mentally retarded clients who have a psychiatric impairment? (Circle Number)

   1. DON'T KNOW

   2. NO

   3. YES

   If YES, is the policy to: (Circle number.)

   1. NOT SERVE THESE CLIENTS

   2. PROVIDE ONLY SPECIFIED SERVICES TO THESE CLIENTS
      (Please specify services provided)

   3. PROVIDE SERVICES TO THESE CLIENTS ONLY UNDER CERTAIN CONDITIONS (Please specify conditions)

   4. SERVE THESE CLIENTS WITHOUT RESTRICTIONS

7. Does your agency have any informal policy on serving mentally retarded clients who have a psychiatric impairment? (Circle number.)

   1. DON'T KNOW

   2. NO

   3. YES

   If YES, is the policy to: (Circle number.)

   1. NOT SERVE THESE CLIENTS

   2. PROVIDE ONLY SPECIFIED SERVICES TO THESE CLIENTS
      (Please specify services provided)

   3. PROVIDE SERVICES TO THESE CLIENTS ONLY UNDER CERTAIN CONDITIONS (Please specify conditions)

   4. SERVE THESE CLIENTS WITHOUT RESTRICTIONS
8. Whom would you consult about a psychiatrically disturbed retarded client in your current position? (Check one or more.)

co-worker _____ supervisor _____

psychiatric consultant _____ other _____ specify ________________

9. How confident do you feel on the whole about your ability to:
(Circle number.)

a. Recognize a psychiatric impairment in a mentally retarded client?
   1. VERY CONFIDENT
   2. SOMEWHAT CONFIDENT
   3. NOT VERY CONFIDENT

b. Use appropriate referral sources for mentally retarded clients with a psychiatric impairment?
   1. VERY CONFIDENT
   2. SOMEWHAT CONFIDENT
   3. NOT VERY CONFIDENT

c. Talk with mentally retarded clients about seeking help elsewhere for a psychiatric impairment?
   1. VERY CONFIDENT
   2. SOMEWHAT CONFIDENT
   3. NOT VERY CONFIDENT

d. Treat mentally retarded clients for a psychiatric impairment?
   1. VERY CONFIDENT
   2. SOMEWHAT CONFIDENT
   3. NOT VERY CONFIDENT

10. How much reading on mental illness in the mentally retarded would you say you have done? (Circle number.)

   1. None
   2. A Little
   3. Some
   4. A Lot
In this series of questions we would like to know the extent of your education and professional training in the areas of mental health, mental retardation and mental illness in the mentally retarded (dual-diagnosis).

11. Have you taken any courses on mental illness (e.g., courses in clinical psychology, psychopathology etc.) in any degree program? (Circle number.)
   1. No
   2. Yes ——— If Yes, about how many hours of credit did you take? (Write number.)
      ____ HOURS OF UNDERGRADUATE CREDIT
      ____ HOURS OF GRADUATE CREDIT
      ____ HOURS OF OTHER DEGREE CREDIT

12. Have you taken any courses on mental retardation in any degree program? (Circle number.)
   1. No
   2. Yes ——— If Yes, about how many hours of credit did you take? (Write number.)
      ____ HOURS OF UNDERGRADUATE CREDIT
      ____ HOURS OF GRADUATE CREDIT
      ____ HOURS OF OTHER DEGREE CREDIT

13. Have you taken any courses on mental illness as it relates to the mentally retarded (dual diagnosis) in any degree program? (Circle number.)
   1. No
   2. Yes ——— If Yes, about how many hours of credit did you take? (Write number.)
      ____ HOURS OF UNDERGRADUATE CREDIT
      ____ HOURS OF GRADUATE CREDIT
      ____ HOURS OF OTHER DEGREE CREDIT
14. Have you taken any professional courses or workshops that relate to mental illness other than in a degree program? (Circle number.)
   1. No
   2. Yes ------> If Yes, about how many hours of training would you say you've had?
      ______ HOURS OF TRAINING

15. Have you taken any professional courses or workshops on mental retardation other than in a degree program? (Circle number.)
   1. No
   2. Yes ------> If Yes, about how many hours of training would you say you've had?
      ______ HOURS OF TRAINING

16. Have you taken any professional courses or workshops on mental illness as it relates to the mentally retarded (dual diagnosis) other than in a degree program? (Circle number.)
   1. No
   2. Yes ------> If Yes, about how many hours of training would you say you've had?
      ______ HOURS OF TRAINING

17. Overall how adequate do you think your professional training has been in preparing you to deal with mentally ill clients? (Circle number.)
   1. Not at all adequate
   2. Minimally adequate
   3. Fairly adequate
   4. Very adequate
18. Overall how adequate do you think your professional training has been in preparing you to deal with mentally retarded clients? (Circle number.)

1. Not at all adequate
2. Minimally adequate
3. Fairly adequate
4. Very adequate

19. Overall how adequate do you think your professional training has been in preparing you to deal with mentally retarded clients who have psychiatric problems? (Circle number.)

1. Not at all adequate
2. Minimally adequate
3. Fairly adequate
4. Very adequate

Section III
Next, we would like to ask some demographic questions.

1. What is your job title? _________________

2. What is your age? (Check one.)
   25 or under ______
   26 to 35 ______
   36 to 45 ______
   over 45 ______

3. What is your sex? (Circle number.)
   1. Male
   2. Female
4. **Total years of experience in the field of mental health:** (Check one.)
   - less than 2 years
   - 2 to 5 years
   - 6 to 10 years
   - 11 to 15 years
   - more than 15 years
   - None

5. **Total years of experience in the field of mental retardation:** (Check one.)
   - less than 2 years
   - 2 to 5 years
   - 6 to 10 years
   - 11 to 15 years
   - more than 15 years
   - None

6. **How long have you been employed with this agency?** (Check one.)
   - less than 2 years
   - 2 to 5 years
   - 6 to 10 years
   - 11 to 15 years
   - more than 15 years

7. Please list your academic degrees and the year received
   
<table>
<thead>
<tr>
<th>Degrees</th>
<th>Year Received</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. **What is the educational major of your highest degree?**
   
   ______________________________
Section II

Finally, we would like to know your opinions on the subject of mentally ill-mentally retarded clients. Please be candid!

1. In your opinion, those professionals who are best able to treat psychiatric impairments in the mentally retarded are those whose primary training and experience is in:
   1. Mental Health
   2. Mental Retardation
   3. No Difference
   4. other _____________________

2. In terms of intervention or treatment of a dually diagnosed client, should this treatment originate in:
   1. a mental health agency or facility
   2. a mental retardation agency or facility
   3. can vary (please explain) ____________________________

3. In your opinion, should special training in the mental health needs of mentally retarded people be required of all QMHPs (Qualified Mental Health Professionals)?
   1. YES
   2. NO
   3. UNSURE

4. In your opinion, should special training in the mental retardation aspects of mentally ill people be required of all QMRP's (Qualified Mental Retardation Professionals)?
   1. YES
   2. NO
   3. UNSURE
Is there anything else you would like to tell us about your contacts with or beliefs about mentally ill-mentally retarded clients? If so, please use the space below for that purpose.

Also, any comments you wish to make that you think may help us in future efforts to understand this topic will be appreciated.

Thank you for your assistance.
Appendix B

ANSWER KEY AND REFERENCES FOR OBJECTIVE QUESTIONS

QUESTIONS RELATED TO MENTAL ILLNESS

Note: All of the questions in this section of the survey were derived from the following source:


As a reference guide the DSM-III-R page number is listed at the end of each correct answer.

1. Mood disorders are divided into 3 classifications: 1) Manic Disorders; 2) Depressive Disorders; and, 3) Bipolar Disorders.
   
   Correct Answer - "False" (p.214).

2. Alzheimer's disease is not considered a mental disorder.
   
   Correct Answer - "True" (p.119).
3. Schizophrenia cannot be diagnosed if it can be established that an organic factor initiated and maintained the disturbance.

Correct Answer - "True" (p.187).

4. The essential feature of this disorder is a maladaptive reaction to an identifiable psychosocial stressor or stressors, that occurs within 3 months after onset of the stressor, and has persisted for no longer than 6 months.

Correct Answer - "Adjustment disorder" (p.329).

5. The essential feature of this type of schizophrenia is marked psychomotor disturbance, which may involve stupor, negativism, rigidity, excitement or posturing.

Correct Answer - "Catatonic type" (p.196).

6. Kleptomania is a:

Correct Answer - "None of the Above" (p.322).

7. Major Depression is estimated to be twice as common in females as in males.

Correct Answer - "True" (p.229).

8. This condition has a prodromal phase, an active phase and a residual phase.

Correct Answer - "Schizophrenia" (p.190).
9. Alcohol dependence tends to cluster in families.
   Correct Answer - "True" (p.174).

10. In this chronic mood disturbance there must be a two-year period (one year for children and adolescents) in which the person is never without hypomanic or depressed symptoms for two months.
    Correct Answer - "Cyclothymia" (p.226).

11. The essential feature of this disorder is a pervasive pattern of indifference to social relationships and a restricted range of emotional experience and expression, beginning by early adulthood and present in a variety of contexts.
    Correct Answer - "Schizoid Personality Disorder" (p.339).

12. Autism is a:
    Correct Answer - "Developmental Disorder" (p.38).

13. Psychogenic Amnesia is an example of a Dissociative Disorder.
    Correct Answer - "True" (p.273).

14. A disorder in which a traumatic event outside the range of usual human experience is persistently re-experienced and there is persistent avoidance of stimuli associated with that trauma is called a:
    Correct Answer - "Post-traumatic Stress Disorder" (p.250).
15. The manifestations of this condition are often recognizable by adolescence or earlier and continue throughout most of adult life, though they often become less obvious in middle or old age.

Correct Answer - "Personality Disorder" (p.335).

16. The essential feature of schizophrenia is the existence within the person of 2 or more distinct personalities or personality states.

Correct Answer - "False" (p.187 & p.269).

17. All of these can be classified as organic mental syndromes and disorders except:

Correct Answer - "Dysthymia" (p.97).

18. An obsessive-compulsive disorder falls under the larger category of:

Correct Answer - "Anxiety disorder" (p.245).

19. The essential feature of this disorder is a delusional system that develops in a second person as a result of a close relationship with another person (the primary cause) who already has a psychotic disorder with prominent delusions.

Correct Answer - "Induced psychotic disorder" (p.210).

20. A somatoform disorder in which there is an alteration or loss of physical functioning that suggests physical disorder, but instead is an expression of psychological conflict or need is called a:

Correct Answer - "Conversion disorder" (p.257).
QUESTIONS RELATED TO MENTAL RETARDATION/DEVELOPMENTAL DISABILITIES

Note: All of the questions in this section of the survey were derived from the following source:


1. Most individuals who are mentally retarded would be classified as:
   
   Correct Answer - "Mildly retarded"

2. Most retarded persons come from:
   
   Correct Answer - "the lower socio-economic levels"

3. The evidence of delinquent behavior among the retarded is:
   
   Correct Answer - "considerably higher than in the normal population"

4. Mildly retarded persons who commit delinquent acts do so for the most part because:
   
   Correct Answer - "None of the above"
5. Probably the most contributory factor to retarded intellectual development in the U.S. today is:
   Correct Answer - "psycho-social deprivation"

6. A retarded person's feelings of inferiority are derived from:
   Correct Answer - "All of the above"

7. A common characteristic of mentally retarded individuals is:
   Correct Answer - "their difficulty in planning ahead"

8. I.Q. test scores of children should be viewed as:
   Correct Answer - "a descriptor of present functioning level"

9. Phenylketonuria (PKU) can be treated:
   Correct Answer - "by a special diet"

10. Down Syndrome is for the most part cause by:
    Correct Answer - "failure of 2 chromosomes to separate during gametogenesis"

11. Successful adult adjustment of the mentally retarded is related most positively to:
    Correct Answer - "interpersonal and social skills"
12. An important principle in working with the retarded is that:

Correct Answer - "behavior can be modified"

13. The emerging philosophy of residential care stresses:

Correct Answer - "the institution as an integral part of community service"

14. In extending help to mentally limited, disadvantaged parents, one should be guided by the principle:

Correct Answer - "that unless aggressive reaching out efforts are made to contact them, they tend to remain social isolates"

15. Most mentally retarded children can become vocationally independent adults.

Correct Answer - "True"

16. Many mildly retarded children function acceptably as parents in adulthood.

Correct Answer - "True"

17. About 75% of the retarded are not distinguishable by their physical appearance from the normal person.

Correct Answer - "True"
18. Sensory handicaps, speech difficulties and neuromuscular impairments occur with equal frequency among the retarded and normal populations.

Correct Answer - "False"

19. For the majority, mental retardation is a dynamic rather than a permanent condition.

Correct Answer - "True"

20. Mentally retarded women nearly always give birth to mentally retarded children.

Correct Answer - "False"
QUESTIONS RELATED TO MENTAL ILLNESS IN PERSONS WITH MENTAL RETARDATION

Note: Unless otherwise noted, all of the questions in this section of the survey were derived from the following sources:


As a reference guide the source and page number are listed at the end of each correct answer.

1. When emotional disturbances are present in a retarded person, the effects of the mental retardation are usually more debilitating and significant than the emotional problems.

Correct Answer – "False" (Reiss, Szyszko, 1983).

2. Mentally retarded people are more susceptible to mental illness than non-retarded individuals.


3. What is the frequency of mental illness in the noninstitutionalized retarded?

Correct Answer – "20 to 35%" (Handbook, p.36).
4. Mentally retarded individuals are more susceptible to psychosis than are individuals of normal intelligence.
   
   Correct Answer - "True" (Handbook, p.20).

5. Personality disorders are more frequent in the mentally retarded as compared to the nonretarded population.
   
   Correct Answer - "False" (Handbook, p.24).

6. Personality disorders in the mentally retarded occur primarily because of:
   
   Correct Answer - "Extrinsic factors" (Handbook, p.24).

7. Mentally retarded people are more prone to alcoholism than nonretarded people.
   
   Correct Answer - "False" (Handbook, p.26).

8. Psychotherapy is not a viable treatment for the retarded.
   
   Correct Answer - "False" (Matson, 1984).

9. What frequency of institutionalized mentally retarded adults demonstrate psychotic symptomology?
   
   Correct Answer - "5 to 12%" (Handbook, p.20).

10. Mental illness in retarded children is no different in kind from that in normal children.
    
    Correct Answer - "True" (Handbook, p.8).
11. Infantile autism is more common in the retarded population as compared to the nonretarded population.


12. Psychiatric disorders of persons with IQs below 50 are likely to be associated with:

Correct Answer - "Organic brain syndrome" (AAMD Manual, p.100).

13. A factor that is highly associated with the development of psychiatric disorders of all types in the mentally retarded is:


14. An intellectually normal adult who becomes mentally ill can also become mentally retarded.

Correct Answer - "False" (AAMD Manual).

15. The suicide rate among retarded people is higher than that of the normal population.

Correct Answer - "False" (Handbook, p.24).
Dear Mental Health Professional,

Experience has shown that people with mental retardation are vulnerable to the same types of behavior and emotional problems as people who are not retarded. Today, as more citizens with retardation become integrated into the community, there has arisen a pressing need for mental health services for this population.

As a Franklin County mental health professional your cooperation in completing the enclosed survey would be particularly useful and important. We are interested in determining how much professionals like yourself know about three critical areas: 1) mental illness; 2) mental retardation; and, 3) mental illness as it relates to the mentally retarded (dual diagnosis). This will be assessed through a series of objective questions on these three topics. We are also interested in your educational background and professional training and how these relate to your scores on the objective part of the questionnaire. Ultimately, your responses will be compared to those of comparable Franklin County professionals in the field of mental retardation. It is important to note that since we are only concerned with aggregate results, this survey will be completely anonymous. No identifiers of any kind will be used and no attempt will be made to link you with your answers.

The enclosed survey consists of questions related to your educational background, demographic data about you as an individual and a three-part section concerning your knowledge of mental illness, mental retardation and the one condition that requires knowledge of both areas: mental illness in the mentally retarded. Differences in scores on the first three subsections of the survey (the objective portions) will be analyzed in terms of the respondents' field of practice (mental health or mental retardation), their particular profession (psychology, social work etc.), and the nature and extent of their experience, education and training. Finally, at the end of the questionnaire there are a few questions that solicit your personal opinions about the care and treatment of dually-diagnosed clients as well as some space to write your own comments about this topic.

(continued on next page)
We would like to emphasize again that because of the anonymous nature of this survey you may be assured of complete confidentiality. If you have any questions about this study feel free to call Mr. Petruska at 291-0260. Thank you for your cooperation.

Sincerely,

Rich Petruska

Rich Petruska, MSW
doctoral candidate

Amy Riemenschneider, D.S.W.

Associate Professor

Dr. Robert Ryan, D.S.W.

Professor
Dear Mental Retardation Professional,

Experience has shown that people who are mentally retarded are vulnerable to the same types of behavior and emotional problems as people who are not retarded. Today, as more citizens with retardation become integrated into the community, there has arisen a pressing need for mental health services for this population.

As a Franklin County mental retardation professional your cooperation in completing the enclosed survey would be particularly useful and important. We are interested in determining how much professionals like yourself know about three critical areas: 1) mental retardation; 2) mental illness; and, 3) mental illness as it relates to the mentally retarded (dual diagnosis). This will be assessed through a series of objective questions on these three topics. We are also interested in your educational background and professional training and how these relate to your scores on the objective part of the questionnaire. Ultimately, your responses will be compared to those of comparable Franklin County professionals in the field of mental health. It is important to note that since we are only concerned with aggregate results, this survey will be completely anonymous. No identifiers of any kind will be used and no attempt will be made to link you with your answers.

The enclosed survey consists of questions related to your educational background, demographic data about you as an individual and a three-part section concerning your knowledge of mental retardation, mental illness and the one condition that requires knowledge of both areas: mental illness in the mentally retarded. Differences in scores on the first three subsections of the survey (the objective portions) will be analyzed in terms of the respondents' field of practice (mental health or mental retardation), their particular profession (psychology, social work etc.), and the nature and extent of their experience, education and training. Finally, at the end of the questionnaire there are a few questions that solicit your personal opinions about the care and treatment of dually-diagnosed clients as well as some space to write your own comments about this topic.

(continued on next page)
We would like to emphasize again that because of the anonymous nature of this survey you may be assured of complete confidentiality. If you have any questions about this study feel free to call Mr. Petruska at 291-0260. Thank you for your cooperation.

Sincerely,

Rich Petruska, MSW

doctoral candidate

Amy Riemenschneider, D.S.W.

Associate Professor

Dr. Robert Ryan, D.S.W.

Professor
Appendix D

PASS/FAIL RATES FOR EACH OF THE 55 OBJECTIVE QUESTIONS

Table 9 reports the percentage of professionals from the field of mental health who answered each of the 55 objective questions correctly. Likewise, Table 10 reports the percentage of professionals from the field of mental retardation who answered each of these questions correctly. The 2 tables are organized according to the 3 content areas of the objective portion of the survey: 1) mental illness; 2) mental retardation; and 3) mental illness as it relates to persons with mental retardation.
Table 9
Pass/Fail Rates for Mental Health Professionals

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Percent who answered correctly</th>
<th>Question Number</th>
<th>Percent who answered correctly</th>
<th>Question Number</th>
<th>Percent who answered correctly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>43.0</td>
<td>1</td>
<td>66.1</td>
<td>1</td>
<td>70.2</td>
</tr>
<tr>
<td>2</td>
<td>46.3</td>
<td>2</td>
<td>11.6</td>
<td>2</td>
<td>9.1</td>
</tr>
<tr>
<td>3</td>
<td>66.9</td>
<td>3</td>
<td>2.5</td>
<td>3</td>
<td>3.3</td>
</tr>
<tr>
<td>4</td>
<td>96.7</td>
<td>4</td>
<td>45.5</td>
<td>4</td>
<td>3.3</td>
</tr>
<tr>
<td>5</td>
<td>86.0</td>
<td>5</td>
<td>24.0</td>
<td>5</td>
<td>54.5</td>
</tr>
<tr>
<td>6</td>
<td>74.4</td>
<td>6</td>
<td>82.6</td>
<td>6</td>
<td>22.3</td>
</tr>
<tr>
<td>7</td>
<td>83.5</td>
<td>7</td>
<td>81.0</td>
<td>7</td>
<td>71.1</td>
</tr>
<tr>
<td>8</td>
<td>68.6</td>
<td>8</td>
<td>68.6</td>
<td>8</td>
<td>69.4</td>
</tr>
<tr>
<td>9</td>
<td>94.2</td>
<td>9</td>
<td>54.5</td>
<td>9</td>
<td>19.0</td>
</tr>
<tr>
<td>10</td>
<td>71.9</td>
<td>10</td>
<td>69.4</td>
<td>10</td>
<td>51.2</td>
</tr>
<tr>
<td>11</td>
<td>71.9</td>
<td>11</td>
<td>80.2</td>
<td>11</td>
<td>19.8</td>
</tr>
<tr>
<td>12</td>
<td>87.6</td>
<td>12</td>
<td>80.2</td>
<td>12</td>
<td>49.6</td>
</tr>
<tr>
<td>13</td>
<td>81.8</td>
<td>13</td>
<td>25.6</td>
<td>13</td>
<td>1.7</td>
</tr>
<tr>
<td>14</td>
<td>90.9</td>
<td>14</td>
<td>80.2</td>
<td>14</td>
<td>80.2</td>
</tr>
<tr>
<td>15</td>
<td>50.4</td>
<td>15</td>
<td>66.1</td>
<td>15</td>
<td>55.4</td>
</tr>
<tr>
<td>16</td>
<td>95.9</td>
<td>16</td>
<td>77.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>87.6</td>
<td>17</td>
<td>76.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>57.9</td>
<td>18</td>
<td>39.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>38.0</td>
<td>19</td>
<td>19.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>74.4</td>
<td>20</td>
<td>71.9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 10

Pass/Fail Rates for Mental Retardation Professionals

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Percentage who answered correctly</th>
<th>Question Number</th>
<th>Percentage who answered correctly</th>
<th>Question Number</th>
<th>Percentage who answered correctly</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>21.4</td>
<td>1</td>
<td>54.4</td>
<td>1</td>
<td>84.5</td>
</tr>
<tr>
<td>2</td>
<td>49.5</td>
<td>2</td>
<td>20.4</td>
<td>2</td>
<td>19.4</td>
</tr>
<tr>
<td>3</td>
<td>20.4</td>
<td>3</td>
<td>2.9</td>
<td>3</td>
<td>13.6</td>
</tr>
<tr>
<td>4</td>
<td>58.3</td>
<td>4</td>
<td>65.0</td>
<td>4</td>
<td>11.7</td>
</tr>
<tr>
<td>5</td>
<td>53.4</td>
<td>5</td>
<td>33.0</td>
<td>5</td>
<td>57.3</td>
</tr>
<tr>
<td>6</td>
<td>21.4</td>
<td>6</td>
<td>88.3</td>
<td>6</td>
<td>24.3</td>
</tr>
<tr>
<td>7</td>
<td>68.0</td>
<td>7</td>
<td>77.7</td>
<td>7</td>
<td>89.3</td>
</tr>
<tr>
<td>8</td>
<td>13.6</td>
<td>8</td>
<td>63.1</td>
<td>8</td>
<td>79.6</td>
</tr>
<tr>
<td>9</td>
<td>93.2</td>
<td>9</td>
<td>82.5</td>
<td>9</td>
<td>14.6</td>
</tr>
<tr>
<td>10</td>
<td>14.6</td>
<td>10</td>
<td>79.6</td>
<td>10</td>
<td>48.5</td>
</tr>
<tr>
<td>11</td>
<td>14.6</td>
<td>11</td>
<td>92.2</td>
<td>11</td>
<td>45.6</td>
</tr>
<tr>
<td>12</td>
<td>64.1</td>
<td>12</td>
<td>86.4</td>
<td>12</td>
<td>46.6</td>
</tr>
<tr>
<td>13</td>
<td>43.7</td>
<td>13</td>
<td>6.8</td>
<td>13</td>
<td>1.9</td>
</tr>
<tr>
<td>14</td>
<td>58.3</td>
<td>14</td>
<td>85.4</td>
<td>14</td>
<td>88.3</td>
</tr>
<tr>
<td>15</td>
<td>18.4</td>
<td>15</td>
<td>69.9</td>
<td>15</td>
<td>83.5</td>
</tr>
<tr>
<td>16</td>
<td>58.3</td>
<td>16</td>
<td>69.9</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>21.4</td>
<td>17</td>
<td>73.8</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>38.8</td>
<td>18</td>
<td>57.3</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>17.5</td>
<td>19</td>
<td>12.6</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>31.1</td>
<td>20</td>
<td>74.8</td>
<td>20</td>
<td></td>
</tr>
</tbody>
</table>
Appendix E

THE NATURE OF THE RESPONDENTS' PROFESSIONAL PRACTICE

Table 11 reports the nature of the respondents' professional practice, including their clients' age group and the nature of their disabilities.
Table 11

The Nature of the Respondents' Professional Practice

<table>
<thead>
<tr>
<th></th>
<th>Mental Health Professionals</th>
<th>Mental Retardation Professionals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td><strong>AGE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 to 11</td>
<td>2</td>
<td>1.7</td>
</tr>
<tr>
<td>12 to 17</td>
<td>8</td>
<td>6.6</td>
</tr>
<tr>
<td>18 to 25</td>
<td>3</td>
<td>2.5</td>
</tr>
<tr>
<td><strong>CLIENTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25+</td>
<td>107</td>
<td>88.4</td>
</tr>
<tr>
<td>md</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>121</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>CLIENTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retarded</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Non-retarded</td>
<td>121</td>
<td>0</td>
</tr>
<tr>
<td>md</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>121</td>
<td>100</td>
</tr>
<tr>
<td><strong># OF ACTIVE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>none</td>
<td>54</td>
<td>44.6</td>
</tr>
<tr>
<td>under 5</td>
<td>40</td>
<td>33.1</td>
</tr>
<tr>
<td>5 to 10</td>
<td>8</td>
<td>6.6</td>
</tr>
<tr>
<td>over 10</td>
<td>4</td>
<td>3.3</td>
</tr>
<tr>
<td>no cases</td>
<td>14</td>
<td>11.6</td>
</tr>
<tr>
<td>md</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>121</td>
<td>100.0</td>
</tr>
<tr>
<td><strong># OF ACTIVE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>none</td>
<td>4</td>
<td>3.3</td>
</tr>
<tr>
<td>under 5</td>
<td>15</td>
<td>12.4</td>
</tr>
<tr>
<td>5 to 10</td>
<td>10</td>
<td>8.3</td>
</tr>
<tr>
<td>over 10</td>
<td>77</td>
<td>63.6</td>
</tr>
<tr>
<td>no cases</td>
<td>13</td>
<td>10.7</td>
</tr>
<tr>
<td>md</td>
<td>2</td>
<td>1.7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>121</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>% OF</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>none</td>
<td>15</td>
<td>12.4</td>
</tr>
<tr>
<td>0 - 25%</td>
<td>97</td>
<td>80.2</td>
</tr>
<tr>
<td>26 to 50%</td>
<td>6</td>
<td>5.0</td>
</tr>
<tr>
<td>51 to 75%</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>76 to 100%</td>
<td>2</td>
<td>1.7</td>
</tr>
<tr>
<td>md</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td><strong>MI TOTAL</strong></td>
<td>121</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Appendix F

THE NATURE OF THE RESPONDENTS' COURSEWORK AND PROFESSIONAL TRAINING

Table 12 reports the nature of the respondents' coursework and professional training.
### Table 12

**Respondents' Coursework and Professional Training**

<table>
<thead>
<tr>
<th></th>
<th><strong>MENTAL HEALTH PROFESSIONALS</strong></th>
<th></th>
<th><strong>MENTAL RETARDATION PROFESSIONALS</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Frequency</strong></td>
<td><strong>Percent</strong></td>
<td><strong>Frequency</strong></td>
<td><strong>Percent</strong></td>
</tr>
<tr>
<td><strong>Course-Work</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>4</td>
<td>3.3</td>
<td>28</td>
<td>27.2</td>
</tr>
<tr>
<td>YES</td>
<td>115</td>
<td>95.0</td>
<td>74</td>
<td>71.8</td>
</tr>
<tr>
<td>md</td>
<td>2</td>
<td>1.7</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>121</td>
<td>100.0</td>
<td>103</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Course-Work</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>80</td>
<td>66.1</td>
<td>28</td>
<td>27.2</td>
</tr>
<tr>
<td>YES</td>
<td>41</td>
<td>33.9</td>
<td>74</td>
<td>71.8</td>
</tr>
<tr>
<td>md</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>121</td>
<td>100.0</td>
<td>103</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Course-Work</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>107</td>
<td>88.4</td>
<td>85</td>
<td>82.5</td>
</tr>
<tr>
<td>YES</td>
<td>14</td>
<td>11.6</td>
<td>17</td>
<td>16.5</td>
</tr>
<tr>
<td>md</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>121</td>
<td>100.0</td>
<td>103</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Profess. Training</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>5</td>
<td>4.1</td>
<td>38</td>
<td>36.9</td>
</tr>
<tr>
<td>YES</td>
<td>116</td>
<td>95.9</td>
<td>64</td>
<td>62.1</td>
</tr>
<tr>
<td>md</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>121</td>
<td>100.0</td>
<td>103</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Profess. Training</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>87</td>
<td>71.9</td>
<td>6</td>
<td>5.8</td>
</tr>
<tr>
<td>YES</td>
<td>34</td>
<td>28.1</td>
<td>96</td>
<td>93.2</td>
</tr>
<tr>
<td>md</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>121</td>
<td>100.0</td>
<td>103</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Profess. Training</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td>92</td>
<td>76.0</td>
<td>48</td>
<td>46.6</td>
</tr>
<tr>
<td>YES</td>
<td>29</td>
<td>24.0</td>
<td>54</td>
<td>52.4</td>
</tr>
<tr>
<td>md</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>121</td>
<td>100.0</td>
<td>103</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*md = missing data*
Appendix G

RESPONDENTS' PERSONAL BELIEF IN THE ADEQUACY OF THEIR OWN PROFESSIONAL TRAINING

Table 13 denotes how adequate the respondents believed their coursework and training has been in preparing them to address the needs of clients with: 1) mental illness; 2) mental retardation; and, 3) co-existing symptoms of mental retardation and significant psychiatric impairment.
Table 13

Respondents' Personal Belief in the Adequacy of their Professional Training

<table>
<thead>
<tr>
<th>Overall, how adequate do you believe your training has been in:</th>
<th>MENTAL HEALTH PROFESSIONALS</th>
<th>MENTAL RETARDATION PROFESSIONALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td><strong>MENTAL ILLNESS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>not at all adequate</td>
<td>5</td>
<td>4.1</td>
</tr>
<tr>
<td>minimally adequate</td>
<td>13</td>
<td>10.7</td>
</tr>
<tr>
<td>fairly adequate</td>
<td>49</td>
<td>40.5</td>
</tr>
<tr>
<td>very inadequate</td>
<td>52</td>
<td>43.5</td>
</tr>
<tr>
<td>md</td>
<td>2</td>
<td>1.7</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>121</td>
<td>100.0</td>
</tr>
</tbody>
</table>

| **MENTAL RETARDATION**                                        |           |         |           |         |
| not at all adequate                                           | 53        | 43.8    | 1         | 1.0     |
| minimally adequate                                            | 49        | 40.5    | 12        | 11.7    |
| fairly adequate                                               | 14        | 11.6    | 36        | 35.0    |
| very adequate                                                 | 4         | 3.3     | 53        | 51.5    |
| md                                                            | 1         | .8      | 1         | 1.0     |
| **TOTAL**                                                     | 121       | 100.0   | 103       | 100.0   |

| **CO-EXISTING SYMPTOMS OF MI & MR**                           |           |         |           |         |
| not at all adequate                                           | 62        | 51.2    | 29        | 28.2    |
| minimally adequate                                            | 38        | 31.4    | 44        | 42.7    |
| fairly adequate                                               | 18        | 14.9    | 27        | 26.2    |
| very adequate                                                 | 2         | 1.7     | 2         | 1.9     |
| md                                                            | 1         | .8      | 1         | 1.0     |
| **TOTAL**                                                     | 121       | 100.0   | 103       | 100.0   |

*md = missing data*
Appendix H

AGENCY POLICY ON CLIENTS WITH CO-EXISTING SYMPTOMS
OF MENTAL ILLNESS AND MENTAL RETARDATION

Table 14 describes the policy, both formal and informal, of each respondent's agency on the subject of serving clients who have co-existing symptoms of mental retardation and significant psychiatric impairment.
<table>
<thead>
<tr>
<th>Does Your Agency Have a Policy for Serving Mental Health Professionals?</th>
<th>Mental Health Professionals</th>
<th>n = 121</th>
<th>Mental Retardation Professionals</th>
<th>n = 103</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td><strong>Formal Policy?</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don't know</td>
<td>30</td>
<td>24.8</td>
<td>6</td>
<td>5.8</td>
</tr>
<tr>
<td>No</td>
<td>57</td>
<td>47.1</td>
<td>41</td>
<td>39.8</td>
</tr>
<tr>
<td>Yes</td>
<td>32</td>
<td>26.4</td>
<td>53</td>
<td>51.5</td>
</tr>
<tr>
<td>md</td>
<td>2</td>
<td>1.7</td>
<td>3</td>
<td>2.9</td>
</tr>
<tr>
<td>Total</td>
<td>121</td>
<td>100.0</td>
<td>103</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>If Yes,</strong> Is the Policy to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not serve these clients</td>
<td>1</td>
<td>.8</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>Specified services only</td>
<td>4</td>
<td>3.3</td>
<td>4</td>
<td>3.9</td>
</tr>
<tr>
<td>Under certain conditions</td>
<td>7</td>
<td>5.8</td>
<td>8</td>
<td>7.8</td>
</tr>
<tr>
<td>Without restriction</td>
<td>20</td>
<td>16.5</td>
<td>40</td>
<td>38.8</td>
</tr>
<tr>
<td>md</td>
<td>89</td>
<td>73.6</td>
<td>50</td>
<td>48.5</td>
</tr>
<tr>
<td>Total</td>
<td>121</td>
<td>100.0</td>
<td>103</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>Informal Policy?</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don't know</td>
<td>22</td>
<td>18.2</td>
<td>8</td>
<td>7.8</td>
</tr>
<tr>
<td>No</td>
<td>39</td>
<td>32.2</td>
<td>26</td>
<td>25.2</td>
</tr>
<tr>
<td>Yes</td>
<td>59</td>
<td>48.8</td>
<td>64</td>
<td>62.1</td>
</tr>
<tr>
<td>md</td>
<td>1</td>
<td>.8</td>
<td>5</td>
<td>4.9</td>
</tr>
<tr>
<td>Total</td>
<td>121</td>
<td>100.0</td>
<td>103</td>
<td>100.0</td>
</tr>
<tr>
<td><strong>If Yes,</strong> Is the Policy to:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not serve these clients</td>
<td>1</td>
<td>.8</td>
<td>2</td>
<td>1.9</td>
</tr>
<tr>
<td>Specified services only</td>
<td>6</td>
<td>5.0</td>
<td>3</td>
<td>2.9</td>
</tr>
<tr>
<td>Under certain conditions</td>
<td>14</td>
<td>11.6</td>
<td>8</td>
<td>7.8</td>
</tr>
<tr>
<td>Without restriction</td>
<td>38</td>
<td>31.4</td>
<td>52</td>
<td>50.5</td>
</tr>
<tr>
<td>md</td>
<td>62</td>
<td>51.2</td>
<td>38</td>
<td>36.9</td>
</tr>
<tr>
<td>Total</td>
<td>121</td>
<td>100.0</td>
<td>103</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 15 reports the distribution of responses to the portion of the survey that solicited the respondents' opinions on training, responsibility and treatment issues revolving around the mental health needs of persons with mental retardation.
<table>
<thead>
<tr>
<th>With whom would you consult about a client with MI/MR?</th>
<th>MENTAL HEALTH PROFESSIONALS</th>
<th>MR/DD PROFESSIONALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>co-worker</td>
<td>9</td>
<td>7.4</td>
</tr>
<tr>
<td>supervisor</td>
<td>29</td>
<td>24.0</td>
</tr>
<tr>
<td>psych. consult.</td>
<td>55</td>
<td>45.5</td>
</tr>
<tr>
<td>other</td>
<td>27</td>
<td>22.3</td>
</tr>
<tr>
<td>md</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>121</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Profession best able to treat clients with MI/MR?</th>
<th>MENTAL HEALTH PROFESSIONALS</th>
<th>MR/DD PROFESSIONALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>mental health</td>
<td>25</td>
<td>20.7</td>
</tr>
<tr>
<td>mental retard.</td>
<td>47</td>
<td>38.8</td>
</tr>
<tr>
<td>no difference</td>
<td>11</td>
<td>9.1</td>
</tr>
<tr>
<td>other</td>
<td>37</td>
<td>30.6</td>
</tr>
<tr>
<td>md</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>121</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Treatment for clients with MI/MR should originate in?</th>
<th>MENTAL HEALTH PROFESSIONALS</th>
<th>MR/DD PROFESSIONALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>MH agency</td>
<td>11</td>
<td>9.1</td>
</tr>
<tr>
<td>MR/DD agency</td>
<td>39</td>
<td>32.2</td>
</tr>
<tr>
<td>can vary</td>
<td>67</td>
<td>55.4</td>
</tr>
<tr>
<td>md</td>
<td>4</td>
<td>3.3</td>
</tr>
<tr>
<td>TOTAL</td>
<td>121</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Should special training in MR be required for all professionals in MH?</th>
<th>MENTAL HEALTH PROFESSIONALS</th>
<th>MR/DD PROFESSIONALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>78</td>
<td>64.5</td>
</tr>
<tr>
<td>NO</td>
<td>25</td>
<td>20.7</td>
</tr>
<tr>
<td>UNSURE</td>
<td>17</td>
<td>14.0</td>
</tr>
<tr>
<td>md</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>121</td>
<td>100.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Should special training in MH be required for all professionals in MR?</th>
<th>MENTAL HEALTH PROFESSIONALS</th>
<th>MR/DD PROFESSIONALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>86</td>
<td>71.1</td>
</tr>
<tr>
<td>NO</td>
<td>14</td>
<td>11.6</td>
</tr>
<tr>
<td>UNSURE</td>
<td>20</td>
<td>16.5</td>
</tr>
<tr>
<td>md</td>
<td>1</td>
<td>.8</td>
</tr>
<tr>
<td>TOTAL</td>
<td>121</td>
<td>100.0</td>
</tr>
</tbody>
</table>
LIST OF REFERENCES


Ohio Department of Mental Health (fiscal years 1987-1988). State mental health plan.


