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## Integrated dual disorders treatment: an archival study

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INTEGRATED DUAL DISORDERS TREATMENT: AN ARCHIVAL STUDY

Thesis

Submitted to

The College of Arts and Sciences of the

UNIVERSITY OF DAYTON

In Partial Fulfillment of the Requirements for

The Degree

Master of Arts in Psychology

By

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## ABSTRACT

### INTEGRATED DUAL DISORDERS TREATMENT: AN ARCHIVAL STUDY

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The present study examined whether participants in Integrated Dual Disorders Treatment (IDDT) had better outcomes than Traditional Case Management participants on the Ohio Mental Health Consumer Outcomes. Participants received either IDDT treatment (N=104) or traditional Case Management (N=54) and were given the Ohio Mental Health Consumer Outcomes scales at Intake, at six months of services, at one year of service, and then yearly thereafter. Data were analyzed for intake scales and 6 month scales to determine the level of changes experienced by participants in treatment. In general, results of repeated- measures analyses suggested reductions in symptom distress for the IDDT group but not for the Traditional Case Management group.

## ACKNOWLEDGEMENTS

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## CHAPTER I

### INTRODUCTION

The purpose of this study is to determine whether the Integrated Dual Disorder Treatment (IDDT) model participants have better outcomes on an Ohio Department of Mental Health scale (Ohio Outcomes- Appendix A). The participants in the Integrated Dual Disorder Treatment Model were compared with persons who are receiving traditional community support services while they are on a waiting list for the IDDT treatment.

This introduction is organized into four sections. In the first section, the IDDT model is described as well as the treatment components of the model, the ways in which it is routinely monitored and evaluated at mental health agencies in the community, and a brief history of the model. The second section provides a selective review of empirical research examining the model. IDDT implementation at Eastway Corporation is detailed in the third section. In the final section, the present study is described and hypotheses are presented.

## Description of the Model

### Components

The Integrated Dual Disorder Treatment (IDDT) model, also known as the New Hampshire-Dartmouth Model of Integrated Dual Disorder Treatment, is an evidence based practice model that combines treatment for mental illness with treatment for substance abuse. The difference between this model and previous models of treatment for these problems is that this model involves treating both disorders simultaneously with the same treatment team, as opposed to traditional models that treat the problems individually, usually focusing first on substance abuse and, then, once substance abuse issues are minimized, focusing on the mental health issues. It also differs from traditional models in that the person is served by the same treatment team for both disorders, rather than two separate teams, or even two separate agencies. This model places a strong emphasis on involvement of persons served and their families. There are several components of this model that promote its effectiveness (Mueser, Noordsy, Drake, & Fox, 2003; Case Western University, 2006).

*Multi-Disciplinary Team Approach.* The first factor is the use of a multi-disciplinary team approach in order to treat both issues (Mueser, Noordsy, Drake, & Fox, 2003; Case Western University, 2006). This team is typically made up of a Team Leader, Case Managers, Doctors, Nurses, Therapists, Housing, and Employment. These disciplines all have experience with both substance abuse and mental illness. They collaborate on all of the persons needs. They are able to provide treatment from a biopsychosocial perspective, thus enabling the person to have all aspects of treatment

worked on in a collaborative fashion by the same team.

*Stages of Change/Treatment.* A vital part of the IDDT model is the incorporation of stages of change (Connors, Donovan, & DiClemente, 2001). Stages of change are used to describe the persons' readiness for treatment. The interventions that are applied differ depending on the person's stage of change. The stages of change often coincide with the stages of treatment. The first stage of change is precontemplation, in which the person is not ready for change (Connors, Donovan, & DiClemente, 2001). He/She is not interested in change. The clinician's role is to educate the person served as to possible benefits of change. The next stage of change is contemplation, in which the person served is willing to think about the possibility of change (Connors, Donovan, & DiClemente, 2001). The clinician's role at this stage is to further educate the persons served about the benefits of a change, while also educating the person about the negative consequences associated with not making a change. The third stage is preparation, in which the person is getting ready to make a change (Connors, Donovan, & DiClemente, 2001). The clinician's role is to assist the consumer in developing a plan for change. The fourth stage of change is action, in which the person actually makes a change (Connors, Donovan, & DiClemente, 2001). The clinician's role is to assist the person served in making the change. The final stage of change is maintenance, in which the person continues to sustain the change (Connors, Donovan, & DiClemente, 2001). The clinician's role is to assist the person served in identifying ways to prevent relapse.

Similar to the stages of change, IDDT utilizes the concept of stages of treatment (Mueser, Noordsy, Drake, & Fox, 2003). The initial stage of treatment is Engagement, in which rapport is built with the consumer to begin to effect change. The second stage of

treatment is Persuasion in which consumer and staff work together in order to reduce substance abuse and engage in recovery. The third stage of treatment is Active Treatment, in which the person is actively seeking skills and recovery. The final stage of treatment associated with IDDT is Relapse Prevention, in which the goal is to maintain the person's recovery.

*Stage Wise Interventions.* Stage wise interventions are used to appropriately serve the person at the particular stage in the recovery process that the person is in (Mueser, Noordsy, Drake, & Fox, 2003; Case Western University, 2006). As the person served moves through the stages of treatment, the interventions change based on his/her needs. There are four stages of treatment associated with the IDDT model, as delineated above. These stages can vary for the person served based upon where the person presents, both for substance abuse treatment, and treatment for mental illness. A person can be in one stage for substance abuse treatment, yet in another stage for mental health treatment. The first stage of treatment, Engagement, involves forming a relationship between the person and the team. The person is interested in the program, yet may not yet be ready for change. The second stage of treatment is Persuasion, in which the person served is interested in treatment and recovery. The third stage of treatment is Active Treatment, in which the person is actively seeking treatment and acquiring the skills necessary to treat both disorders. The final stage of treatment is Relapse Prevention, in which the person has achieved stability, and the goal is to continue.

*Comprehensive Services.* Like the concept of the multi disciplinary team, the model relies heavily upon the person served to receive access to comprehensive services (Mueser, Noordsy, Drake, & Fox, 2003; Case Western University, 2006). All aspects of a

persons care are treated from a biopsychosocial perspective, including (but not limited to): medical services, housing, employment, family education, traditional case management, and substance abuse services. Thus, one team is working with the person to impact all areas of a person's life.

*Time Unlimited Services.* Another component of the model is time unlimited services (Mueser, Noordsy, Drake, & Fox, 2003; Case Western University, 2006) The person can receive the assistance of the team for as long as the need is there, as well as the person's desire to receive the IDDT team services. The services remain in place in order to accommodate the cycles that persons in recovery go through, including potential relapse. The model includes components of having more leeway in the discharge process as opposed to traditional treatment modalities. The person served is allowed to remain in the program for longer time periods relative to traditional case management and substance abuse treatment.

*Assertive Outreach.* As persons with substance abuse and mental illness may have difficulty continuing to engage in treatment, an assertive outreach program is an essential component of the model (Mueser, Noordsy, Drake, & Fox, 2003; Case Western University, 2006). This model encourages the team to meet with the person in the person's natural environment, rather than traditional models that typically involve office visits. When persons served are in the engagement stage of treatment, this assertive outreach becomes extremely important. The clinicians are actively attempting to engage the person in services by building rapport and relationships in the community.

*Motivational Interviewing.* Motivational Interviewing is a technique employed in the IDDT model in order to increase awareness and to assist the person on a path to

recovery by identifying his/her own goals (Mueser, Noordsy, Drake, & Fox, 2003; Case Western University, 2006). Several techniques are utilized in motivational interviewing in order to build rapport with the person, as well as to help him/her develop personal goals. These techniques include empathy, rolling with resistance, and avoiding argumentation. The majority of techniques involve the staff person being willing to meet the person at his or her recovery stage.

*Substance Abuse Counseling.* Substance abuse counseling is offered to persons who are in the active treatment and relapse prevention stages of change (Mueser, Noordsy, Drake, & Fox, 2003; Case Western University, 2006). This counseling offers people the skills that they need in order to identify use patterns, triggers, and consequences, while also providing the person with the skills needed in order to solve problems and reduce substance use.

*Group Treatment.* Another component of the IDDT model is the use of group treatment as a treatment modality (Mueser, Noordsy, Drake, & Fox, 2003; Case Western University, 2006). The belief is that people benefit from interaction with others with similar problems. The model is based on the idea that approximately 2/3 of people involved in IDDT treatment should attend group therapy on a regular basis.

*Family Psychoeducation.* Family psychoeducation is offered to participants in an IDDT treatment program (Mueser, Noordsy, Drake, & Fox, 2003; Case Western University, 2006). This allows the family to be educated on substance abuse and mental illness in order to be better support systems for the person who is in recovery.

*Self Help.* Once a person reaches the stage of active treatment or relapse prevention, participation in alcohol and drug self help groups, such as Alcoholics

Anonymous, Narcotics Anonymous, or Dual Recovery Anonymous are offered (Mueser, Noordsy, Drake, & Fox, 2003; Case Western University, 2006). These groups allow persons served to engage in conversation about their shared experiences in an environment that is peer driven.

*Pharmacology.* As the multi disciplinary team contains staff in the medical field, both the doctor and the nurse, pharmacological treatment is an important component of the IDDT model (Mueser, Noordsy, Drake, & Fox, 2003; Case Western University, 2006). IDDT pharmacological treatment is different from traditional pharmacological treatment in that the doctor continues to prescribe psychotropic medications for the person, despite substance use. Traditionally, doctors have discontinued medications if substance abuse was an issue. This model educates doctors and nurses on the use of non-addictive substances, as well as prescribing medications that assist with addictions. The doctor and the nurse play a vital role in educating the person served on the importance of medication adherence.

*Harm Reduction.* Individuals with co-occurring disorders often have less healthy lifestyles, due to the effects of the co-occurring disorders. A vital component of the IDDT model involves educating the person served on healthier lifestyle changes, in order to decrease health problems and avoid high risk situations. This aspect of the IDDT model can include exercise and nutrition education, housing assistance to place people in housing placements that offer an understanding of substance abuse and mental illness to decrease homelessness, and education on risky behaviors, such as promiscuity and driving while intoxicated (Mueser, Noordsy, Drake, & Fox, 2003; Case Western University, 2006).

*Secondary Interventions for Treatment Non-Responders.* The final component of the IDDT model is secondary interventions for non-responders to substance abuse treatment. This component involves identifying persons in the IDDT program who are not responding to the treatment. These people receive specialized interventions, such as increased monitoring of the person served, civil commitment, or payeeship (i.e. establishing a representative for the person who assumes legal responsibility for the persons finances) (Mueser, Noordsy, Drake, & Fox, 2003; Case Western University, 2006).

#### Adherence to Fidelity of the Model

In order for the model to be most effective, adherence to the fidelity of the model is measured in agencies that are participating in IDDT (Jerrell, Wilson, & Hiller, 2000). There are several features of the model that are measured on a yearly basis by a team trained to assess fidelity, using a scale of 1-5 (Mueser, Noordsy, Drake, & Fox, 2003). (See Table 1) The agency is scored on these features and higher scores represent higher fidelity to the model. There are twenty different items that are rated on the fidelity scale, all of which contribute to the overall success of the program.

Table I IDDT Fidelity Items- Mueser, Noordsy, Drake, & Fox, 2003	
1. Identification of Dual Disorders-	All persons served are assessed for both substance abuse and for mental health disorders. These assessments are found in the clinical record.
2. Integrated Assessment of Dual Disorders-	The person is assessed in an integrated fashion for both substance abuse and dual disorders. The existence of the two disorders is used to form a basis for treatment recommendations.
3. Comprehensive Mental Health Assessment-	Persons are assessed comprehensively and on a yearly basis for mental health needs.
4. Comprehensive Substance Abuse Assessment-	Persons are assessed on a yearly basis for substance abuse needs.
5. Integrated Treatment Plan-	The treatment plan written for the person served contains integrated interventions for both substance abuse and mental health, and is evidenced in the clinical record.
6. Integrated Crisis Plan-	The person served has a crisis plan for both mental health and substance abuse.
7. Integration of Services-	The persons is served by the same clinician or team of clinicians for both substance abuse and mental health treatment.
8. Comprehensiveness of Services-	The person has been offered different types of services that meet all of the persons needs. This indicates that the person is being served in a biopsychosocial fashion.
9. Time Unlimited Services-	The person is allowed to receive services for an unlimited time period, as long as the person desires to receive treatment.
10. Outreach Capability-	Services for the person are provided in the person's natural environment. The case manager spends time out in the field meeting with the person and providing him/her with assertive outreach.
11. Client-to Clinician Ratio-	The team maintains a low person to clinician ratio. This allows the clinician to provide multiple services to the person in order to meet all of the person's needs
12. Integrated Group Treatment for Dual Disorders-	Groups are offered that treat both disorders simultaneously. The person is able to engage in groups that treat both substance abuse and mental health issues at the same agency.
13. Group Treatment-	Groups aimed at persons with dual disorders are offered. There are six different types of groups, including: education, persuasion, active treatment, combined persuasion and active treatment, social skills training, and relapse prevention.
14. Individual Motivational Interviewing-	Clinicians working with the person served should be using motivational interviewing techniques, as evidenced by documentation in the chart.
15. Individual Cognitive-Behavioral Counseling-	This therapy allows the clinician and the person served to identify use patterns and to develop strategies and goals to counteract substance use and thought distortion.
16. Family Interventions-	These interventions are designed to educate the person's family and support system about dual disorders in order to assist them with supporting the person served.
17. Pharmacological Treatment of Mental Illness-	Medications are utilized in the treatment of dual disorders. Physicians continue to prescribe despite substance use, and use newer medications designed to inhibit cravings and assist the person in his/her recovery.
18. Self-Help Liaison-	The persons served by the program are referred to self help programs in order to gain peer support.
19. Stage-Wise Treatment-	The individual's phase of treatment is taken into account as to which treatment stage and treatments associated will be implemented.
20. Reduction of Negative Consequences-	Encouraging the person to reduce situations/actions that have negative consequences.

## Brief History of Model's Development

The New Hampshire Dartmouth Model of Integrated Dual Disorder Treatment (IDDT) was developed by Robert Drake of Dartmouth College in the late 1980s. The movement to create a new model of integrated treatment was spawned by research indicating that other methods of treating dual disorders were generally ineffective. There were two previous standard models of treatment, sequential treatment and parallel treatment (Mueser, Noordsy, Drake, & Fox, 2003). Sequential treatment consists of treating the individual disorders independently, with little cooperation among clinicians. These involved completely treating either the substance abuse or the mental illness independent of the other disorder. One disorder was treated at a time, until the disorder being treated first was in remission. At that point, treatment would be initiated with the other type of disorder. Typically, substance abuse was treated first, and once the person was thought to be completely in recovery, only then would treatment for mental health issues begin. This model is where several of the principles of IDDT were developed, mainly the principles involving medical personnel. In past treatment modalities, physicians would cease to prescribe medications for mental illness if a person was using substances. This tended to exacerbate symptomatology of mental illness and had the potential to increase tendencies toward more self-medication.

Parallel treatment is another method traditionally used to treat the two disorders. This method involves treating both disorders at the same time. However, it was never attempted with the same integrated treatment team, and it often involved treatment at two separate agencies. The effect on the person served is that he/she had to be indoctrinated into treatment at two separate facilities, telling his/her story repeatedly, with little

coordination among the teams. From this approach emerged the concept of the integrated team of clinicians working together at a single agency to assist the person with his/her recovery. This also enacted the principle of treating the person in a biopsychosocial fashion, involving not only medical staff, case managers and therapists, but also incorporating housing and employment specialists to affect all areas of a person's life that may be distressed due to substance abuse and mental illness.

## Review of Outcome Research

In the review of outcome research, both IDDT programs as well as other integrated treatment models are reviewed. Each of the various components of IDDT has empirical research to suggest its effectiveness. In addition, there are several bodies of research that show that the various components of the IDDT model work together in order to create a successful treatment environment. Interventions are designed both to assist the person in his/her recovery from both mental illness and substance abuse disorders (Barrowclough, Haddock, Tarrier, Lewis, Moring, O'Brien, Schofield, & McGovern, 2001; Haddock, Barrowclough, Tarrier, Moring, O'Brien, Schofield, Quinn, Palmer, Davies, Lowens, McGovern, Lewis, 2003). Research also shows that there are numerous positive outcomes associated with IDDT, including decreased hospitalizations, increased housing stability, and decreased rates of incarceration (Mangrum, Spence, & Lopez, 2006; Mueser, Noordsy, Drake, & Fox, 2003; Drake, Bartels, Teague, Noordsy, & Clark, 1993; Judd, Thomas, Schwartz, Outcalt, & Hough, 2003; Case Western University, 2006)

A number of comprehensive reviews of IDDT and other integrated treatment programs are available (Drake, Mercer-McFadden, Mueser, McHugo & Bond, 1998; Drake & Mueser, 2000; Drake, Bartels, Teague, Noordsy, & Clark, 1993; Drake, Essock, Shaner, Carey, Minkoff, Kola, Lynde, Osher, Clark, Rickards, 2001; Drake, Mueser, Brunette, & McHugo, 2004) and each one emphasized the importance of the following treatment components: Assertive Outreach, Stages of Intervention, and Motivational Interviewing.

In addition, some individual studies (Drake, Mercer-McFadden, Mueser,

McHugo, & Bond, 1998; Drake, Bartels, Teague, Noordsy, & Clark, 1993; Drake & Mueser, 2000; Drake, Essock, Shaner, Carey, Minkoff, Kola, Lynde, Osher, Clark, Rickards, 2001; Clark, 2001) emphasize the importance of the following program features: Longitudinal Perspective, Comprehensive services, and Family Interventions.

Several other components of the IDDT model have been the subject of empirical research. Drake and Mueser (2000) and Drake, Bartels, Teague, Noordsy, and Clark (1993) discuss the importance of housing to the integrated treatment program. Dilk and Bond (1996) discussed the effectiveness of skills training with consumers. Drake and Mueser (2000) describe the use of psychiatric medications during the treatment process. James, Preston, Koh, Spencer, Kisely, and Castle (2004) studied the effects of group interventions. Jerrell and Ridgely (1999) also studied the effects of both behavioral skills training and intensive case management to treat dual diagnoses.

For the sake of illustration, one comprehensive, well respected study by Drake, Yovetich, Bebout, Harris and McHugo (1997) will be reviewed to demonstrate the principles of integrated treatment and the effectiveness with the dually diagnosed population. They longitudinally studied two groups of dually diagnosed persons who were also homeless, a feature not uncommon to people who have long histories of both substance abuse and chronic mental illness. The integrated team was composed of a case manager, substance abuse counselors, and housing support staff, thus utilizing the IDDT concept of a Multi Disciplinary Team (Mueser, Noordsy, Drake, & Fox, 2003; Case Western University, 2006). The integrated team was also divided into two groups, one that used cognitive behavioral therapy and one that utilized social network approaches, thus applying the IDDT concept of Group Treatment for dually diagnosed individuals

(Mueser, Noordsy, Drake, & Fox, 2003; Case Western University, 2006). Due to the various disciplines on the team, the integrated team was able to provide the comprehensive services that the model calls for (Mueser, Noordsy, Drake, & Fox, 2003; Case Western University, 2006). The integrated team provided services that were time-unlimited, another IDDT concept, as represented by the length of the study (Mueser, Noordsy, Drake, & Fox, 2003; Case Western University, 2006). The team was also able to offer consumers substance abuse counseling within the team (Mueser, Noordsy, Drake, & Fox, 2003; Case Western University, 2006).

The control group received parallel services composed of substance abuse treatment, mental health services and housing, but there was no integration of services. The persons in the control group were involved in mental health programs, housing programs, and substance abuse programs that were neither provided by the same team, nor even by the same organization. Parallel services are a traditional way of treating persons who are dually diagnosed with substance abuse and mental health disorders. The services often take place at differing organizations, are offered by different groups of people, and there is typically no integration of treatment concepts. Each disorder is treated independent of the other disorder by independent groups of individuals. Typically, the services are time-limited by nature of the differing programs providing treatment to the individual. There is very little coordination of services, and the services offered are not comprehensive for the individual.

The groups consisted of 158 individuals in the integrated treatment group and 59 individuals in the control group, which received parallel treatment services. The groups were similar in race, in that approximately 10% of each group was composed of

Caucasian participants, 89% was composed of African American participants, and 1% were self described as other races. The educational levels of the participants were also similar for both groups, with the majority of participants in both groups having a high school education or less. The average age for participants in the integrated treatment group was 36.2, and the average age for participants in the control group was 34.4, with the age range for all participants between 18 and 50. The groups were made up of participants who were diagnosed with schizophrenia, schizoaffective disorder, bipolar disorder, major depression, and other mental health disorders. The integrated group had a higher percentage of participants who were diagnosed with schizophrenia (41.8%), and the control group had a higher percentage of persons diagnosed with major depression (49.2%). All participants were also diagnosed with substance abuse.

The study took place over the course of 18 months. Participants were surveyed at baseline, 6 months, 12 months, and 18 months. At baseline, participants were interviewed using the Uniform Client Data Inventory, to assess demographics and clinical history, the Alcohol Dependence Scale, to assess alcohol dependence, the Addiction Severity Index (ASI), to assess functioning related to substance abuse, the Personal History Form (PHF), to assess housing, the Quality of Life Interview (QOLI), to assess quality of life, and the Brief Psychiatric Rating Scale (BPRS), to assess psychiatric symptoms (Drake, Yovetich, Bebout, Harris & McHugo, 1997) At 6 month, 12 month, and 18 month follow up, the ASI, PHF, QOLI, and BPRS were again assessed. In addition, the Treatment Services Interview (TSI) was given to participants. Results of this study indicated that both groups had reductions in the average number of days in homeless settings. Specifically, the integrated group increased their days in stable

housing more than the control group. The days spent in institutions was decreased for those in integrated treatment, while the control group remained unchanged. Both groups reduced alcohol and drug use, but, those in the integrated group improved more than the control group if they were diagnosed with alcohol use disorder. Those with drug abuse disorders improved similarly for both groups. At the final 18 month assessment, the integrated group showed greater improvement in housing and alcohol abuse, and they were farther along in recovery from substance abuse.

Overall, the research, such as the study reviewed in detail above, suggests that IDDT is (a) effective in treating individuals with dual diagnoses and (b) more effective than routine treatment or a variety of treatments implemented separately.

#### Implementation at Eastway Behavioral Healthcare

Torrey, Drake, Cohen, Fox, Lynde, Gorman, and Wyzik (2002) described the factors influencing successful implementation and sustaining an IDDT program. They promote the idea of involving stakeholders in implementing the program. Stakeholders can include consumers and families who can assist in implementing programs. Clinicians must be involved because they are learning new ways to treat dual diagnoses in an integrated fashion. Finally, program leaders and policy makers are involved in successful implementations.

Implementation of the IDDT model began at Eastway Behavioral Healthcare as a result of a county-wide implementation program sponsored by the local Alcohol Drug Addiction and Mental Health Services Board (ADAMHS) of Montgomery County. IDDT teams were developed at each of the major community mental health centers as well as at a substance abuse treatment center. There continues to be an external steering

committee that meets on a monthly basis for all of the agencies involved to discuss IDDT related implementation and issues that emerge. Also, at Eastway, we developed an internal steering committee, composed of the Leadership of the Organization, the Chief Executive Officer, Chief Financial Officer, Chief Administrative Officer, Chief Operating Officer, Human Resources, and Director of Communications, as well as the Director of Housing and Employment, Director of Information Systems, Director of Forensic Services, Director of Quality Improvement, and the Clinical Administrators of Adult Recovery Services. In addition to the individuals employed by the agency, a liaison from the Ohio Substance Abuse and Mental Illness Coordinating Centers of Excellence (SAMI CCOE) met to assist the agency with implementation. These individuals met on a monthly basis during implementation, and continue to meet on a quarterly basis to discuss progress, as well as improvement processes.

On a yearly basis, fidelity to the IDDT model is measured by the SAMI CCOE to determine adherence to the model. Each of the fidelity areas are rated on a scale of 1 to 5, where 1=no evidence of implementation, and 5 =full implementation. Initially, prior to implementation, a baseline fidelity score was assessed, using the aforementioned fidelity criteria. The baseline score was low, considering the agency did not have a dual services program at the time, nor did it offer substance abuse services for the persons served by the agency. Persons were referred out to other agencies in order to receive substance abuse treatment, as in previously mentioned parallel treatment models. The agency was rated on a yearly basis using the fidelity scale and scores increased over time.

Additional variables are measured to assess the level of progress consumers are making on mental health and substance abuse issues. Data has been gathered since 2001

using the Ohio Outcomes Measures (Appendix A), a series of 62 questions asked of the person at intake, 6 months in treatment, and yearly thereafter. The data is collected both from the person served, as well as from the provider of record. The data is sent through the local ADAMHS Board to the Ohio Department of Mental Health where it is pooled in aggregate form to make up the Ohio Outcomes Datamart. Subscales are computed from the raw data based on different questions contributing to each of the subscales.

A waiting list is maintained for consumers who are eligible for IDDT services, but in order to maintain fidelity to the model, caseload sizes are limited to under 20 consumers per provider. This wait list is updated on a monthly basis and maintained in order to allow persons to enter IDDT treatment. These consumers continue to receive standard community support services while they are on the waiting list. The wait list is based on both consumer need and choice of treatment. If the person no longer desires to participate in the IDDT program, he/she is removed from the waiting list.

### The Present Study

The present study focused on the IDDT team at Eastway Corporation. This group was followed during their treatment course over a four year period. Their scores on the Ohio Outcome Measures were compared to scores on the same measures completed by a wait list control group. The wait list control group was made up of persons who were dually diagnosed and interested in receiving the IDDT. Those on the wait list received traditional community support treatment.

Overall, in this longitudinal study, a significant interaction between group (IDDT versus Control) and time (evaluation periods) was hypothesized for each outcome measure. In other words, greater positive changes were expected in outcome measures over time for the IDDT group than for the control group.

## CHAPTER II

### METHOD

#### Participants

All of the participants in the study were consumers of outpatient mental health case management services at Eastway Behavioral Healthcare in Dayton Ohio. All of the consumers participating had at least one primary mental health diagnosis and at least one secondary substance abuse diagnosis. Persons participating in IDDT services received the IDDT treatment (N=104), while those who were on the waiting list received standard case management services (N=54). All consumers were eligible to participate in pharmacological services, therapy services, employment services, as well as housing services.

#### Measures

The statewide Ohio Outcomes measure were utilized (Ohio Department of Mental Health, 2009) (Appendix A) This measure was devised of 62 questions that were used to formulate a series of subscales. All questions, with the exception of demographics were scored on either a four or five point Likert Scale. Several of the individual items were reverse scored (Ohio Department of Mental Health, 2008).

There were 9 subscales that were utilized for the study:

*Quality of Life-Financial Status.* This subscale involved a client's perception of his/her financial status. The score on this scale was made up of individual items 2-4 on the questionnaire. This item was scored on a five point Likert Scale, the scores were

summed, then averaged, with higher scores indicating more positive feelings towards the individual's financial status (Ohio Department of Mental Health, 2008).

*Empowerment-Self Esteem/Self-Efficacy.* This subscale involved a client's perception of self esteem. This scale was made up of items 38, 39, 42, 45, 47, 51, 52, 57, and 59 on the questionnaire. The items were reverse scored on a four point Likert Scale, the scores were summed, then averaged, with higher scores on this subscale indicating higher self esteem/self-efficacy (Ohio Department of Mental Health, 2008).

*Empowerment-Power/Powerlessness.* This subscale measured the amount of power or powerlessness a client feels. This subscale was composed of questions 40, 41, 43, 49, 50, 54, 55, and 56 on the questionnaire. This item was scored on a five point Likert Scale, the scores were summed, then averaged, with high scores on this subscale indicating more feelings of power, with lower scores indicating that the client feels powerless (Ohio Department of Mental Health, 2008).

*Empowerment-Community Activism and Autonomy.* This subscale measured a client's level of community activism and feelings of autonomy. This subscale was composed of questions 36, 44, 53, 58, 60, and 61 on the consumer questionnaire. This subscale was reverse scored on a four point Likert Scale, summed, then averaged, with higher scores on this subscale indicative of higher levels of activism and autonomy (Ohio Department of Mental Health, 2008).

*Empowerment-Optimism & Control Over the Future.* This subscale measured a client's feelings about optimism and control of the future. This subscale consisted of questionnaire items 34, 35, 46, and 60. The scores were summed and then averaged. This subscale was reverse scored on a four point Likert Scale, with higher scores

indicating more optimism and feeling more in control of the future (Ohio Department of Mental Health, 2008).

*Empowerment- Righteous Anger.* This subscale measured a client's perception of the amount of righteous anger that he/she experienced. This subscale contained questionnaire items 37, 40, 43, and 48. Item number 48 was reverse scored, while the others were scored on a standard four point Likert Scale. The scores were summed and then averaged. Higher scores on this subscale indicated a higher level of righteous anger (Ohio Department of Mental Health, 2008).

*Empowerment-Overall.* This subscale provided an overall measure of empowerment. It consisted of questions 34-61, with some of the items being reverse scored, and others scored on a standard four point Likert Scale. The scores were summed, then averaged. Higher scores on this scale indicated higher levels of feeling empowered (Ohio Department of Mental Health, 2008).

*Symptom Distress-Overall.* This subscale measured the amount of symptom distress that a client experienced. This scale consisted of items 17-31 which were scored on a four point Likert Scale, and a sum of the questions was calculated. Higher scores on this scale indicated higher amount of symptom distress (Ohio Department of Mental Health, 2008).

*Quality of Life-Overall.* This subscale measured a client's feelings about his/her quality of life. This subscale consisted of items 1-12 which were scored on a five point Likert Scale. The sum of the responses was averaged. Higher scores on this scale indicated a perception of higher quality of life (Ohio Department of Mental Health, 2008).

### Reliability and Validity

The three major scales, Empowerment, Symptom Distress, and Quality of Life have been analyzed to provide for reliability and validity information. The Quality of Life scale had good internal consistency (Cronbach's  $\alpha=.86$ , Ohio Department of Mental Health, 2008). The Symptom Distress Scales had excellent internal consistency (Cronbach's  $\alpha=.93$ , Ohio Department of Mental Health, 2008). Finally, the Empowerment Scale, which was derived from The Making Decisions Empowerment Scale (Rogers, Chamberlin, Ellison & Crean, 1997) also had good internal consistency (Cronbach's  $\alpha=.86$ , Ohio Department of Mental Health, 2008).

### Procedure

#### Ohio Outcome Measures

Data for the Ohio Outcomes measures were gathered from the consumer on a yearly basis, if the person had been in treatment for over a year. For consumers who had been in services for less than one year, data was gathered at intake, at six months in service, and then yearly thereafter. All consumers received the Ohio Outcomes measures at discharge (Ohio Department of Mental Health, 2008).

#### Plans for Statistical Analysis

This was a longitudinal study that compared outcomes for mental health consumers in the IDDT group versus those in routine (community support) treatment and on the waiting list for the IDDT group.

For each outcome measure, an Analysis of Variance (ANOVA) was employed, with one between-subjects factor (IDDT group versus routine/wait list control group) and one within-subjects factor (time). For each significant interaction, two follow-up t tests

were employed in order to determine the level of significance of time within each specific group.

## CHAPTER III

### RESULTS

As illustrated in Table 2, a 2 x 2 ANOVA was performed upon each of nine subscales on the Ohio Outcomes Measures, with one between subjects factor, group, and one within subjects factor, time. There were significant effects found on three of the subscales. First, for the Quality of Life- Financial Status Subscale, there was a significant increase in quality of life related to financial status over time with groups collapsed  $F(1,17) = 4.39, p = .05$ . In addition, the Quality of Life-Overall with groups collapsed had a significant effect with an increase in perceived quality of life over time  $F(1,17) = 4.44, p = .05$ . Finally, with groups collapsed, there was a significant effect on the Symptom Distress Scale, with a decrease in symptom distress over time  $F(1,17) = 8.45, p = .01$ . Given the *apriori* hypothesis that change in the IDDT treatment group was significant, post hoc analyses were employed. A paired sample T test was performed upon both the IDDT treatment group as well as the control group. As illustrated in Table 2, the IDDT treatment group improved  $t(9) = 4.12, p = .003$ , while the change among the control group is not significant,  $t(8) = 1.26, p = .24$ .

Table 2 Results of Analyses of 9 Subscales of Ohio Outcomes

***Subscale 1 Quality of Life- Financial Status***

Group <sup>1</sup>	Time <sup>2</sup>		
	Intake	6 Months	Overall
IDDT (N = 10)	2.20 (1.25)	2.47 (1.11)	2.33 (.83)
Community (N = 9)	1.30 (.45)	1.81 (1.07)	1.56 (.80)
Overall	1.77 (1.04)	2.16 (1.11)	
<sup>1</sup> F <sub>Group</sub> (1,17) = 3.21, <i>p</i> = .09; <sup>2</sup> F <sub>Time</sub> (1,17) = 4.39, <i>p</i> = .05 <i>F</i> <sub>Group x Time</sub> (1,17) = .45, <i>p</i> = .51			

***Subscale 2 Empowerment- Self-Esteem /Self-Efficacy***

Group <sup>1</sup>	Time <sup>2</sup>		
	Intake	6 Months	Overall
IDDT (N = 10)	2.61 (.33)	2.60 (.65)	2.61 (.62)
Community (N = 9)	2.42 (.56)	1.19 (.66)	2.30 (.73)
Overall	2.52 (.45)	2.40 (.67)	
<sup>1</sup> F <sub>Group</sub> (1,17) = 2.15, <i>p</i> = .16; <sup>2</sup> F <sub>Time</sub> (1,17) = .63, <i>p</i> = .44 <i>F</i> <sub>Group x Time</sub> (1,17) = .52, <i>p</i> = .48			

***Subscale 3 Empowerment- Power/Powerlessness***

Group <sup>1</sup>	Time <sup>2</sup>		
	Intake	6 Months	Overall
IDDT (N = 10)	2.59 (.28)	2.59 (.24)	2.59 (.44)
Community (N = 9)	2.44 (.56)	2.63 (.52)	2.54 (.54)
Overall	2.52 (.43)	2.61 (.38)	
<sup>1</sup> $F_{\text{Group}}(1,17) = .12, p = .74$ ; <sup>2</sup> $F_{\text{Time}}(1,17) = .64, p = .43$ $F_{\text{Group} \times \text{Time}}(1,17) = .64, p = .43$			

***Subscale 4 Empowerment- Community Activism & Autonomy***

Group <sup>1</sup>	Time <sup>2</sup>		
	Intake	6 Months	Overall
IDDT (N = 10)	2.30 (.71)	1.93 (.54)	2.12 (.80)
Community (N = 9)	2.15 (.38)	2.00 (.46)	2.07 (.54)
Overall	2.23 (.57)	1.96 (.49)	
<sup>1</sup> $F_{\text{Group}}(1,17) = .05, p = .83$ ; <sup>2</sup> $F_{\text{Time}}(1,17) = 2.63, p = .12$ $F_{\text{Group} \times \text{Time}}(1,17) = .47, p = .50$			

***Subscale 5 Empowerment-Optimism & Control Over the Future***

Group <sup>1</sup>	Time <sup>2</sup>		
	Intake	6 Months	Overall
IDDT (N = 10)	2.48 (.52)	2.40 (.66)	2.44 (.72)
Community (N = 9)	2.36 (.61)	2.44 (.53)	2.40 (.72)
Overall	2.42 (.55)	2.42 (.58)	
<sup>1</sup> $F_{\text{Group}}(1,17) = .03, p = .87$ ; <sup>2</sup> $F_{\text{Time}}(1,17) = .00, p = .98$ $F_{\text{Group} \times \text{Time}}(1,17) = .23, p = .64$			

***Subscale 6 Empowerment- Righteous Anger***

Group <sup>1</sup>	Time <sup>2</sup>		
	Intake	6 Months	Overall
IDDT (N = 10)	2.68 (.44)	2.55 (.38)	2.61 (.59)
Community (N = 9)	2.33 (.54)	2.58 (.38)	2.46 (.50)
Overall	2.51 (.51)	2.57 (.35)	
<sup>1</sup> $F_{\text{Group}}(1,17) = 1.01, p = .33$ ; <sup>2</sup> $F_{\text{Time}}(1,17) = .24, p = .63$ $F_{\text{Group} \times \text{Time}}(1,17) = 2.20, p = .16$			

***Subscale 7 Empowerment- Overall***

Group <sup>1</sup>	Time <sup>2</sup>		
	Intake	6 Months	Overall
IDDT (N = 10)	2.53 (.33)	2.43 (.33)	2.48 (.40)
Community (N = 9)	2.37 (.45)	2.34 (.30)	2.36 (.39)
Overall	2.45 (.39)	2.39 (.31)	
<sup>1</sup> $F_{\text{Group}}(1,17) = .86, p = .37$ ; <sup>2</sup> $F_{\text{Time}}(1,17) = .49, p = .49$ $F_{\text{Group} \times \text{Time}}(1,17) = .19, p = .70$			

***Subscale 8 Symptom Distress- Overall***

Group <sup>1</sup>	Time <sup>2</sup>		
	Intake	6 Months	Overall
IDDT (N = 10)	50.20 (11.72)	39.50 (11.08)	44.85 (8.22)
Community (N = 9)	49.89 (10.88)	42.33 (13.41)	46.11 (17.92)
Overall	50.05 (11.01)	40.84 (11.97)	
<sup>1</sup> $F_{\text{Group}}(1,17) = .08, p = .78$ ; <sup>2</sup> $F_{\text{Time}}(1,17) = 8.45, p = .01$ $F_{\text{Group} \times \text{Time}}(1,17) = .25, p = .62$			

***Subscale 9 Quality of Life-Overall***

Group <sup>1</sup>	Time <sup>2</sup>		
	Intake	6 Months	Overall
IDDT (N = 10)	2.54 (.74)	2.88 (.51)	2.71 (.56)
Community (N = 9)	2.32 (.74)	2.81 (.82)	2.57 (1.09)
Overall	2.44 (.73)	2.85 (.65)	
<sup>1</sup> $F_{\text{Group}}(1,17) = .33, p = .57$ ; <sup>2</sup> $F_{\text{Time}}(1,17) = 4.44, p = .05$ $F_{\text{Group} \times \text{Time}}(1,17) = .13, p = .72$			

\*Numbers in parenthesis represent Standard Deviations

## CHAPTER IV

### DISCUSSION

The finding that the IDDT group experienced a significant decrease in symptom distress is consistent with several other previous studies (Barrowclough et al., 2001, Haddock et al., 2003, James et al., 2004, Jerrell & Ridgely, 1995, Jerrell & Ridgely 1999). These studies, as well as the present study, have all indicated that IDDT treatment is effective at reducing the amount of symptomology experienced by the participants. This effect was observed in the data analyzed during the course of the first six months of treatment.

There are several recommendations for future analyses on this rich data set. The internal outcome measures collected by Eastway have yet to be analyzed. These measures include: Days in employment, days in housing, number of hospitalizations, days in hospitalizations, number of times arrested, and days incarcerated. Previous preliminary research has indicated that all of these factors may be influenced by the IDDT model of treatment (Drake, Yovetich, Bebout, Harris & McHugo, 1997 ; Drake & Mueser ,2000; Drake, Bartels, Teague, Noordsy, & Clark ,1993; Mangrum, Spence, & Lopez , 2006; Mueser, Noordsy, Drake, & Fox, 2003; Judd, Thomas, Schwartz, Outcalt, & Hough, 2003; Case Western University, 2006). Thus, it is

important to conduct analyses of this data in order to determine the extent to which the preliminary findings can be replicated.

Further analyses are needed to answer questions such as: *For Whom does IDDT cause reductions in distress and other symptoms? Why and how does the IDDT treatment model lead to reductions in symptom distress and other symptoms?* In making recommendation for future research, it is important to distinguish between moderating variables and mediating variables. Confusion exists in the literature regarding moderator and mediating variables; therefore, Frazier, Tix, and Barron (2004) clarify these issues.

A moderator variable "...alters the direction or strength of the relation between a predictor and an outcome" (Frazier et al., 2004, p. 116). Moderator variables attempt to answer questions of "when" or "for whom" a variable has a given effect. In other words, a moderating effect is "... an interaction whereby the effect of one variable depends on the level of another" (Frazier et al., 2004, p. 116). Examples of variables that potentially moderate the effect of IDDT on distress and other symptoms include: type of diagnosis (e.g., anxiety disorders, depressive disorders, or personality disorders); severity of diagnosis (perhaps as reflected in DSM's Global Assessment of Functioning Scale); the extent to which the substance use disorder is primary or secondary to other mental disorders; and number of cases per case manager (i.e., level of attention of case manager per client).

In contrast, a mediator "... explains the relation between a predictor and an outcome" (Frazier et al., 2004, p. 116). That is, a mediator variable attempts to answer "how" or "why" a predictor causes an outcome variable. A mediating variable is the "... mechanism through which a predictor influences an outcome variable" (Frazier et al., 2004, p. 116). Examples of variables

that potentially mediate the effect of IDDT on distress and other symptoms include changes in social support, family communication or structure, self-efficacy, hope, or empowerment. In other words, these are examples are potential mechanisms through which IDDT produces beneficial results.

Another set of recommendations for further research involves the utilization of factor analysis. For instance, the Assessment of Fidelity Scale (see Table 1) includes 20 items, with each item rated on 1-to-5 Likert-like scale. However, some of these items may not be independent (e.g., Individual Motivational Interviewing and Individual Cognitive-Behavioral Counseling). Therefore, it would be interesting to apply factor analysis to a large data set in order to determine the extent to which there is a smaller number of underlying factors in this scale. As another example, the Ohio Outcome Measures includes nine scales (Quality of Life-Financial Status, Empowerment-Self-Esteem/Self-Efficacy, Empowerment-Power/Powerlessness, Empowerment-Community Activism and Autonomy, Empowerment-Optimism and Control Over the Future, Empowerment-Righteous Anger, Empowerment-Overall, Symptom Distress-Overall, Quality of Life-Overall). Utilization of factor analysis or other similar statistical approaches could be helpful in determining if these scales “boil down” to a small number of underlying factors.

The limitations of this study include the sample size. As the population that is being studied is often very transient and difficult to locate, hence the concept of assertive outreach in IDDT, data is often difficult to collect on this population. The sample size for the analyses was limited, thus limiting the ability to analyze data other than the intake data and six month follow up. Recommendations for future studies include gathering additional data on participants in the

IDDT group. In addition, additional case managers are going to be added to the IDDT team at Eastway Behavioral Healthcare, thus there will be a greater population of participants from which to collect data.

The findings of this study reinforce the clinical implications and use of the IDDT model of treatment. The finding that symptom distress is better relieved in the first six months of treatment than traditional case management offers additional support for the use of the IDDT model when treating persons who are suffering from mental health and substance abuse problems.

To conclude, the present study examined whether participants in Integrated Dual Disorders Treatment (IDDT) had better outcomes than traditional Case Management participants on the Ohio Mental Health Consumer Outcomes scales. Data were analyzed for intake scales and 6 month scales to determine change for the individuals on the symptom distress scales during the first six months of either IDDT treatment versus traditional case management. Results indicate that as a whole, persons receiving treatment lowered scores on the symptom distress scale from intake to 6 months, indicating less symptom distress to the person. Further analyses indicated that persons who participated in IDDT treatment received greater relief from symptom distress than those in traditional Case Management during their first six months of the treatment.

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APPENDIX A  
OHIO MENTAL HEALTH CONSUMER OUTCOMES SYSTEM  
ADULT CONSUMER FORM

## Appendix A

Today's Date \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Name \_\_\_\_\_

Date of Birth \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Gender (check one): Male Female

Agency Use Only

Client's Medical Record Number  
\_\_\_\_\_

We are very interested in how you are doing, and how our services may or may not be helping you. Please answer all of the questions below, then give the questionnaire to your case manager or another staff person at the mental health agency.

## Part 1

Below are some questions about how satisfied you are with various aspects of your life in the past 6 months. For each question, checkmark .. the answer that best describes how you feel.

How do you feel about:

## 1. The amount of friendship in your life?

Terrible

Mostly dissatisfied

Equally satisfied/dissatisfied

Mostly satisfied

Very pleased

## 2. The amount of money you get?

Terrible

Mostly dissatisfied

Equally satisfied/dissatisfied

Mostly satisfied

Very pleased

## 3. How comfortable and well-off you are financially?

Terrible

Mostly dissatisfied

Equally satisfied/dissatisfied

Mostly satisfied

## Appendix A

Very pleased

4. How much money you have to spend for fun?

Terrible

Mostly dissatisfied

Equally satisfied/dissatisfied

Mostly satisfied

Very pleased

5. The amount of meaningful activity in your life  
(such as work, school, volunteer activity,  
leisure activity)?

Terrible

Mostly dissatisfied

Equally satisfied/dissatisfied

Mostly satisfied

Very pleased

6. The amount of freedom you have?

Terrible

Mostly dissatisfied

Equally satisfied/dissatisfied

Mostly satisfied

Very pleased

7. The way you and your family act toward each  
other?

Terrible

Mostly dissatisfied

Equally satisfied/dissatisfied

Mostly satisfied

Very pleased

Does not apply

□

8. Your personal safety?

## Appendix A

Terrible

Mostly dissatisfied

Equally satisfied/dissatisfied

Mostly satisfied

Very pleased

9. The neighborhood in which you live?

Terrible

Mostly dissatisfied

Equally satisfied/dissatisfied

Mostly satisfied

Very pleased

10. Your housing/living arrangements?

Terrible

Mostly dissatisfied

Equally satisfied/dissatisfied

Mostly satisfied

Very pleased

11. Your health in general?

Terrible

Mostly dissatisfied

Equally satisfied/dissatisfied

Mostly satisfied

Very pleased

12. How often do you have the opportunity to spend time with people you really like?

Never

Seldom/rarely

Sometimes

Often

Always

## Appendix A

## Part 2

The next few items ask you about your health and medications within the past 6 months.

13. How often does your physical condition interfere with your day-to-day functioning?

Never

Seldom/rarely

Sometimes

Often

Always

14. Concerns about my medications (such as side effects, dosage, type of medication) are addressed:

Never

Seldom/rarely

Sometimes

Often

Always

Not applicable/no medications

The next two items deal with how you have been treated by other people.

15. I have been treated with dignity and respect at this agency.

Never

Seldom/rarely

Sometimes

Often

Always

16. How often do you feel threatened by people's reactions to your mental health problems?

Never

## Appendix A

seldom/rarely

Sometimes

Often

Always

## Part 3

The following questions ask you about how much you were distressed or bothered by some things during the last seven days. Please mark the answer that best describes how you feel.

During the past 7 days, about how much were you distressed or bothered by:

## 17. Nervousness or shakiness inside

Not at all

A little bit

Some

Quite a bit

Extremely

□

## 18. Being suddenly scared for no reason

Not at all

A little bit

Some

Quite a bit

Extremely

## 19. Feeling fearful

Not at all

A little bit

Some

Quite a bit

Extremely

## 20. Feeling tense or keyed up

## Appendix A

Not at all  
A little bit  
Some  
Quite a bit  
Extremely

## 21. Spells of terror or panic

Not at all  
A little bit  
Some  
Quite a bit  
Extremely

## 22. Feeling so restless you couldn't sit still

Not at all  
A little bit  
Some  
Quite a bit  
Extremely

## 23. Heavy feelings in arms or legs

Not at all  
A little bit  
Some  
Quite a bit  
Extremely

## 24. Feeling afraid to go out of your home alone

Not at all  
A little bit  
Some  
Quite a bit  
Extremely

## Appendix A

## 25. Feeling of worthlessness

Not at all  
A little bit  
Some  
Quite a bit  
Extremely

## 26. Feeling lonely even when you are with people

Not at all  
A little bit  
Some  
Quite a bit  
Extremely

## 27. Feeling weak in parts of your body

Not at all  
A little bit  
Some  
Quite a bit  
Extremely

## 28. Feeling blue

Not at all  
A little bit  
Some  
Quite a bit  
Extremely

## 29. Feeling lonely

Not at all  
A little bit  
Some  
Quite a bit  
Extremely

## Appendix A

30. Feeling no interest in things

Not at all

A little bit

Some

Quite a bit

Extremely

31. Feeling afraid in open spaces or on the streets

Not at all

A little bit

Some

Quite a bit

Extremely

□

32. How often can you tell when mental or emotional problems are about to occur?

Never

Seldom/rarely

Sometimes

Often

Always

33. When you can tell, how often can you take care of the problems before they become worse?

Never

Seldom/rarely

Sometimes

Often

Always

Part 4

Below are several statements relating to one's view about life and having to make decisions.

## Appendix A

Please check the response that is closest to how you feel about the statement. Check the word or words that best describes how you feel now.

34. I can pretty much determine what will happen in my life.

Strongly agree

Agree

Disagree

Strongly Disagree

35. People are limited only by what they think is possible.

Strongly agree

Agree

Disagree

Strongly Disagree

36. People have more power if they join together as a group.

Strongly agree

Agree

Disagree

Strongly Disagree

37. Getting angry about something never helps.

Strongly agree

Agree

Disagree

Strongly Disagree

38. I have a positive attitude toward myself.

Strongly agree

Agree

Disagree

Strongly Disagree

39. I am usually confident about the decisions I make.

## Appendix A

Strongly agree

Agree

Disagree

Strongly Disagree

40. People have no right to get angry just because they don't like something.

Strongly agree

Agree

Disagree

Strongly Disagree

41. Most of the misfortunes in my life were due to bad luck.

Strongly agree

Agree

Disagree

Strongly Disagree

42. I see myself as a capable person.

Strongly agree

Agree

Disagree

Strongly Disagree

43. Making waves never gets you anywhere.

Strongly agree

Agree

Disagree

Strongly Disagree

□

44. People working together can have an effect on their community.

Strongly agree

Agree

## Appendix A

Disagree

Strongly Disagree

45. I am often able to overcome barriers.

Strongly agree

Agree

Disagree

Strongly Disagree

46. I am generally optimistic about the future.

Strongly agree

Agree

Disagree

Strongly Disagree

47. When I make plans, I am almost certain to make them work.

Strongly agree

Agree

Disagree

Strongly Disagree

48. Getting angry about something is often the first step toward changing it.

Strongly agree

Agree

Disagree

Strongly Disagree

49. Usually I feel alone.

Strongly agree

Agree

Disagree

Strongly Disagree

50. Experts are in the best position to decide what people should do or learn.

## Appendix A

Strongly agree

Agree

Disagree

Strongly Disagree

51. I am able to do things as well as most other people.

Strongly agree

Agree

Disagree

Strongly Disagree

52. I generally accomplish what I set out to do.

Strongly agree

Agree

Disagree

Strongly Disagree

53. People should try to live their lives the way they want to.

Strongly agree

Agree

Disagree

Strongly Disagree

54. You can't fight city hall (authority).

Strongly agree

Agree

Disagree

Strongly Disagree

55. I feel powerless most of the time.

Strongly agree

Agree

Disagree

## Appendix A

Strongly Disagree

56. When I am unsure about something, I usually go along with the rest of the group.

Strongly agree

Agree

Disagree

Strongly Disagree

57. I feel I am a person of worth, at least on an equal basis with others.

Strongly agree

Agree

Disagree

Strongly Disagree

□

58. People have a right to make their own decisions, even if they are bad ones.

Strongly agree

Agree

Disagree

Strongly Disagree

59. I feel I have a number of good qualities.

Strongly agree

Agree

Disagree

Strongly Disagree

60. Very often a problem can be solved by taking action.

Strongly agree

Agree

Disagree

Strongly Disagree

61. Working with others in my community can

## Appendix A

help to change things for the better.

Strongly agree

Agree

Disagree

Strongly Disagree

## Part 5

Please tell us some things about yourself.

62. What was the last school grade you completed?

Less than 1st grade 10th grade

1st grade 11th grade

2nd grade High school diploma/GED

3rd grade Trade/Tech school

4th grade Some college

5th grade 2 yr college/Associate degree

6th grade 4 yr college/Undergraduate degree

7th grade Graduate school courses

8th grade Graduate degree

9th grade Post-graduate studies

Further special studies

63. Race (check all that apply):

White Hispanic/Latino

Native American/Pacific Islander Asian

Black/African American Other \_\_\_\_\_

64. What is your marital status?

Never married

Married

Separated

Divorced

Widowed

## Appendix A

## Living together

65. What is your current living situation?

Your own house/apartment

Friend's home

Relative's home

Supervised group living

Supervised apartment

Boarding home

Crisis residential

Child foster care

Adult foster care

Intermediate care facility

Skilled nursing facility

Respite care

MR intermediate care facility

Licensed MR facility

State MR institution

State MH institution

Hospital

Correctional facility

Homeless

Rest home

Other \_\_\_\_\_

66. What is your employment status?

Employed full time

Employed part time

Sheltered employment

Unemployed

Student

Homemaker

Retired

R002574653

## Appendix A

Disabled

Inmate of institution

67. Are you in treatment because you  
want to be?

Yes

No

□