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Ph.D. (Psychology)	2002
TITRE DE LA THÈSE / TITLE OF THESIS:	
WORKER CONTRIBUTIONS TO THE PSYCHOLOGICAL WELL-BEING OF PERSONS WITH A SEVERE MENTAL ILLNESS	

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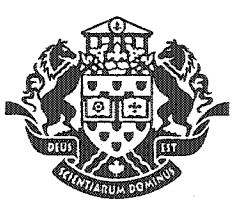

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GRADE - DEGREE

Psychology

FACULTÉ, ÉCOLE, DÉPARTEMENT - FACULTY, SCHOOL, DEPARTMENT

TITRE DE LA THÈSE - TITLE OF THE THESIS

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Worker contributions to the psychological well being of persons with a severe mental illness

by
Yvanna Kroitor

A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF
REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
in the School of Psychology

UNIVERSITY OF OTTAWA

ACKNOWLEDGMENTS

Firstly, I would like to extend my sincere appreciation and thanks to my thesis supervisor, Dr. Gary Gerber. His unfailing support and help with the thesis project, in addition to the encouragement he offered through the completion of the program, have been invaluable to me. As I hope you know, Gary, I couldn't have done it without you. For their inspiration and guidance, I would like to thank my committee members Dr. Tim Aubry, Dr. Henry Edwards, and Dr. Robert Flynn. I believe they embody the best of the spirit of community psychology. In addition, I owe debt of gratitude to Dr. Robert Flynn for his help with the statistical analyses, and a thank you to Dwayne Schindler, who clarified several statistical questions.

The staff of the three Assertiveness Community Treatment Teams all contributed valuable time and energy to help with the implementation of this research, and for this I am grateful. In particular, I would like to acknowledge the assistance of Gail Robinson, who helped to coordinate the data collection and answered many questions about the ACT service.

No great endeavour can be undertaken and completed without a lot of support. The backing and love of my family, who have been there through the hard times and the successes, has meant the world to me. In addition, for their unfailing friendship and encouragement, I would like to thank Annie, Chantal, Debbie, Isabelle, Lori, Marlène, Monica, Pete, Phillip, and Stacey. I hope you all know how special you are to me and how grateful I am that you are behind me.

Finally, to the men and women who allowed me into their homes and who shared their experiences with me, I extend my profound gratitude and respect.

ABSTRACT

Due to the deinstitutionalization movement which began over thirty years ago, community treatment programs for persons with severe mental illness have had to be developed to replace the services and support that were previously available in psychiatric hospitals. Apart from the Assertive Community Treatment (ACT) model, which has been much studied and shown to be superior both to other types of treatment and to controls, few consistent differences have been found among the different community treatment models. This may be partially due to the fact that the contribution of worker characteristics to client well being has not previously been taken into account. The effect that the individual worker has on the client and on treatment outcomes is comparable to therapist effects in the psychotherapy literature. This study was designed to examine the effects of worker characteristics on the well being of persons with severe mental illness living in the community. A sample of 65 people served by an ACT program were interviewed to obtain self-reports of subjective quality of life, symptoms and the relationship with their worker. The workers also rated their clients' level of functioning and each completed a self-report measure of attitudes toward mental illness. In addition, supervisors were asked to rate workers' competence on a newly-developed Competency Rating Scale. It was hypothesized that greater worker competency, a more positive attitude to mental illness, and a greater number of years working in the mental health field would have both direct and indirect effects (through the working alliance) on client well being in the form of better quality of life, fewer symptoms and improved functioning. It was found that a closer working alliance was associated with greater client well being in the form of greater quality of life and better functioning. Surprisingly, the strongest association found was between a greater number of worker years in

mental health and quality of life, with workers who had more years experience in the field of mental health having clients who reported a lower subjective quality of life. It was suggested that workers who started in the field earlier may have learned and adopted a more restrictive philosophy about mental health treatment than that which is currently being taught.

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CHAPTER 1: INTRODUCTION

Deinstitutionalisation has been the focus of mental health reform in many Western countries since the 1960s for individuals with developmental disabilities as well as those with psychiatric disabilities (Mechanic & Rochefort, 1990). Effective community support for the seriously mentally ill has become very important as there are approximately 40,000 individuals in Canada released into the community who meet the criteria of disorder (major mental disorder), duration (chronic course), and disability (experiencing impairment in at least one area of functioning) to be labelled seriously mentally ill (Rochefort, 1992). A central tenet of deinstitutionalisation, as well as of community support programs, has been the (re)integration of persons with persistent mental illness into the community (Segal & Aviram, 1978).

At the time of deinstitutionalization, community support and service coordination were needed to replace the services that had been previously available to patients in psychiatric hospitals. These services were also needed to improve programs for individuals with severe mental illness who had managed to stay in the community, but who had inadequate community support. As community treatment programs proliferated, research in program efficacy increased, due to the shrinking availability of public funding for health and the resultant increased demand for accountability. Based on a variety of different models, these programs ranged from those that focused specifically on service coordination to those that directly provided a wide range of services, such as crisis intervention, medication monitoring, vocational counselling, and psychotherapy. Studies have examined many different program variables, as well as different outcome measures, in an effort to establish the efficacy of the existing programs to achieve accountability and to provide the best services to clients.

Despite efforts to determine which program model is the most effective for maintaining persons with severe mental illness in the community, reviews (Rubin, 1992; Solomon, 1992) have found few or no systematic differences in efficacy between different types of community support programs. Research comparing programs has been hampered by methodological difficulties, such as poor descriptions of the goals and essential elements of the program, failure to measure fidelity to the planned program, and the use of different outcome measures (Holloway, Oliver, Collins & Carson, 1995; Rubin, 1992). Another explanation for the lack of consistent findings of specific differences between programs has been offered by Ryan, Sherman and Judd (1994), who suggest that the inability to identify superior models of community support may be partially due to confounding "case manager effects". According to them, in addition to the type of program in question, community support workers possess particular qualities or competencies that influence the well being of the client. The authors conclude that an important gap in the literature would be filled by examining the contribution of provider effects to outcome effectiveness.

A parallel body of literature that supports the importance of examining worker effects is the process-outcome literature in psychotherapy. This literature looks at the factors that affect outcome. Comparisons of the efficacy of different therapies have found that there is more variance between therapists than between different therapies (Beutler, Machado, & Neufeldt, 1994; Lambert, 1989). This finding has led to research into the effects of therapists on therapy outcome. Many types of therapist factors have been studied, such as age, sex, ethnicity, values and attitudes, expectancies, skill level, as well as match in age and gender. Some of these factors will be explored in the present study.

One of the most consistent findings in this literature is that there is a common factor among therapies that accounts for more of the variance in outcome than do differences in the type of intervention. This common factor has been termed working alliance, therapeutic alliance, or helping alliance (Beutler, Crago & Arizmendi, 1986; Beutler, Machado & Neufeldt, 1994). It consists of the client/therapist relationship, which comprises both affective and task-oriented components (Bordin, 1979). It would be of interest to determine if the working alliance is also important in the relationship between persons with severe mental illness and case managers, as well as to determine whether the working alliance is related to outcome. This study will look at the respective contribution of worker characteristics and working alliance to the psychological well being of individuals with severe mental illness.

The next section contains a brief description of the types of community programs that have been developed to assist individuals with severe mental illness to remain in the community as well as a review of the outcome studies that have been conducted to assess their efficacy. Following this, the literature on the contributions of worker characteristics and working alliance to client outcomes will be reviewed. Finally, this chapter will end with the presentation of a conceptual model to explain the relationship between these variables and a description of the study, research questions and the hypotheses that will be used to test the model.

Community Treatment for Persons With Psychiatric Disabilities and its Relationship to Outcome

As previously stated, community programs for individuals with severe mental illness were set up (some think belatedly) in response to deinstitutionalisation. In addition to the development of antipsychotic drugs, an important contributing factor to the removal of long term patients from

the hospitals and to their relocation in the community was the advent of normalization theory in North America. This is the view, introduced by Wolfensberger, that leading a life as close to 'normal' as possible is best for disadvantaged individuals, such as those with mental retardation. Specifically, Wolfensberger (1972) described normalization as the "utilization of means which are as culturally normative as possible, in order to establish and/or maintain personal behaviors and characteristics that are as culturally normative as possible " (p. 28). This view carries with it the assumptions that most persons with severe mental illness are better off in the community if they are provided with sufficient support services and that those services can be provided in the community (Bachrach, 1981). Normalization provides benefits both to clients, who want to lead more normalized lives, and health officials, who are encouraging deinstitutionalisation. In the context of the theory, life satisfaction, self-esteem, and personal competencies are seen as results of interaction with mainstream society. It is argued that there will be more opportunities for interaction with others outside the hospital, as well as more opportunities for growth and development and for the development of greater independence. If this more 'natural' alternative can be maintained, there should be fewer hospitalizations, thereby costing less and helping to promote deinstitutionalisation.

There have been many community outreach programs established, although the literature in this area has been characterized by confusion about the contents and components denoted by the different labels used. For example, case management is a term that has been frequently used but there have been so many different meanings attributed to it that it is becoming ambiguous. Case management has been variously used as an overarching category (e.g, Holloway et al., 1995), as a synonym for 'all programs other than Assertive Community Treatment (ACT) programs' (e.g.,

Rubin, 1992) and by still others as the label to a specific type of outreach program (e.g., Baronet & Gerber, 1998). In this paper, community outreach will be used to designate all programs that have been set up to treat persons with severe mental illness in the community. Holloway and colleagues (Holloway et al., 1995) point out that the common components of a community outreach program are broadly agreed upon and include: (a) the assessment of client need, (b) the development of a comprehensive service plan, (c) the arrangement of service delivery, (d) the monitoring and assessment of services, and (e) evaluation and follow up. These authors distinguished two types of models: service brokerage models, in which the case manager acts as a coordinator and broker of services, and clinical case management models, in which the case manager is more directly involved with most aspects of the clients' lives and more often provide direct delivery of services (Holloway et al., 1995). They described three main types of clinical case management programs. The first is the Rehabilitation Model (e.g., Goering, Wasylenki, Farkas, Lancee, & Ballantyne, 1988), which provides rehabilitation assessment and planning, coordination and linkage of patients with services, monitoring of progress and advocacy. The Strengths Model (e.g., Rapp & Wintersteen, 1989) focuses on the clients' strengths rather than on illness, and provides support to move toward realistic goals with an emphasis on the client case manager relationship. The ACT model (e.g., Stein & Test, 1980), differs from other programs in that it provides most services directly, provides 24 hour a day coverage for the clients, uses a team approach and operates on a philosophy of assertive outreach. Participants for the current study received services from an ACT program.

ACT has also been referred to as the Madison Model (Burns & Santos, 1995; Drake & Burns, 1995). The Madison Model is based on a community intervention developed by Stein and Test

(1980) in Madison, Wisconsin, to provide an alternative to hospitalization for persons with severe mental illness. The key elements of assertive community treatment are as follows: (1) A multi disciplinary team takes full responsibility for the care of a fixed caseload of persons with severe mental illness. This includes the 24 hour a day, 7 day a week availability of services such as support, treatment, rehabilitation, and education, on a continuous basis and for an unlimited time. (2) Treatment is provided in naturalistic settings, such as the client's home or workplace, and the client is followed throughout his or her contact with other social services and during hospitalizations. Finally, (3) an assertive approach is used, which involves bringing services to clients and encouraging them to be more active as opposed to waiting for clients to request services (Drake and Burns, 1995). In addition, contact with family and other service-providers is made when it is deemed to be of benefit to the client.

The concept underlying ACT is that if a community-based team can provide a full range of medical, psychosocial, and rehabilitative services akin to the services available in a hospital, then community tenure will be prolonged and the chances of rehospitalization will diminish (Essock & Kontos, 1995). The assertive approach means that clients are seen on a regular basis in their own homes as initiated by the worker, as opposed to waiting for the client to ask for help. This preventive approach may help to reduce the risk of the client becoming ill, with the resultant consequences. The use of teams as opposed to a single community support worker encourages clients to develop relationships with more than one staff member, which both buffers the effects of staff turnover and also decreases the chance of clients developing dependence on one staff member. ACT also exposes the client to the expertise of workers from a broad range of disciplines (typically nurses, social workers, and occupational and rehabilitation therapists).

Group problem solving and a team approach to clients decrease the likelihood of clients falling through the cracks (Essock & Kontos, 1995). Treatment is offered in the home or other natural setting to increase the retention and generalization of the skills learned, as well as to decrease missed appointments. There have been many studies which have addressed the effectiveness of Assertive Community Treatment programs. Comparisons of ACT to other types of treatment and to controls have consistently shown the superiority of ACT programs (e.g., Baronet & Gerber, 1998; Burns & Santos, 1995)

Early studies showed greater improvement of ACT clients compared with clients in the control group in the areas of clinical status, independent living, social functioning, employment status and medication adherence, as well as reduced use of inpatient services and cost effectiveness (Stein & Test, 1980). In a review of studies of ACT conducted since 1990, Burns and Santos (1995) found consistent evidence of a decrease in number of days in hospital (but not in the number of hospitalizations), high rates of treatment adherence, as well as high rates of client and family satisfaction. These findings are consistent with those of a more recent review conducted by Baronet & Gerber (1998), who also found evidence for the superiority of ACT over other treatment models in the areas of symptomatology and service use patterns, as well as social functioning, satisfaction with services, and cost effectiveness.

Worker Contributions to Outcome in Community Treatment

Burns and Santos (1995), in noting the high rate of client and family satisfaction with ACT, suggest that an effective component of ACT may well be the intense, respectful and rewarding aspects of the relationship between clinicians and patients. It has been suggested (e.g., Ryan et al., 1994) that the worker does have an effect on the individual client through his or her skills,

knowledge and abilities. As with the client/therapist relationship in psychotherapy, the alliance between the client with severe mental illness and his or her worker may play a role in outcome. In research done on this subject (Gehrs & Goering, 1994; Solomon, Draine, & Delaney, 1995), it was found, as predicted, that there was a relationship with client outcome. A better client/worker relationship has been shown to be associated with better levels of client quality of life, satisfaction with treatment, and symptomatology (Solomon et al., 1995) and rehabilitation goals (Gehrs & Goering, 1994). In the following sections, the predictor variables and outcome variables to be used in the current study will be reviewed and a conceptual model of the relationships between worker characteristics, working alliance and client psychological well being will be presented.

Predictor Variables

Therapist Factors Affecting Outcome in Psychotherapy Literature

One body of literature that may help in identifying the worker characteristics that affect client outcome is the psychotherapy literature, because the client/therapist relationship is similar to the client/worker relationship, and because it is an area that has been well studied (Beutler et al., 1986, 1994). First, findings of therapist effects found in treatment efficacy studies in psychotherapy will be reviewed, and then similar results from client satisfaction surveys will be presented.

A large number of treatment efficacy studies have found no difference in outcome for different modalities but significant differences across therapists (e.g., Lambert, 1989; Luborsky, McLellan, Woody, O'Brien & Auerbach, 1985). For instance, Luborsky et al. (1985) looked at the differential outcome of opiate dependent clients seen by nine therapists. The therapists used

manual guided interventions for drug counselling and either cognitive behavioural therapy or supportive-expressive therapy. The researchers found no significant differences across therapy styles, but there was a significant difference in outcome between therapists. This finding was highlighted by Lambert (1989) who concluded that "[d]espite careful selection, training, monitoring, and supervision, therapists can have highly divergent results" (p .475). This suggests that it would be fruitful to examine the contribution of therapist effects to client outcome in psychotherapy.

Comprehensive reviews of studies examining therapist variables in psychotherapy have been conducted by Beutler and colleagues (Beutler et al., 1986, 1994). They categorized therapist variables that had been systematically studied according to the following taxonomy: objective, cross-situational traits (age, sex, ethnicity); objective, therapy-specific traits (professional background, therapeutic styles, and therapist interventions); subjective, cross-situational traits (personality and coping patterns, emotional well being, values attitudes and beliefs, and cultural attitudes); and finally, subjective, therapy specific traits (therapeutic relationships, social influence attributes, expectancies, and therapeutic philosophy orientation).

Among those therapist variables in psychotherapy that have been most consistently found to influence the client/therapist relationship and client outcome are therapeutic alliance, therapist attitudes and beliefs about persons with psychiatric disabilities, as well as expectancies about whether or not they are capable of change (Lambert, 1989). In a study done by Luborsky and colleagues (1985), the therapists were divided into two groups: those with 'good' and those with 'bad' client outcomes. There were three differences found between good and bad therapists: (a) adjustment, skill, and interest in helping patients, (b) purity of the treatment offered, and (c)

quality of patient/therapist relationship (Luborsky et al., 1985).

Interpersonal skill, and in particular the ability of the therapist to form a relationship with the client, is a robust variable that has been consistently found to be related to positive client outcome. In a review of studies on the therapist contribution to client outcome in therapy, Horvath and Symonds (1991) found that working alliance (WA) was moderately but consistently positively correlated with client outcome across all studies considered. Strong correlations have been found between therapist interpersonal skill and client outcome across a wide variety of patient populations (e.g., persons with schizophrenia (Goering & Stylianos, 1988); persons with substance use disorders (Najavits & Weiss, 1994); and persons with developmental disabilities (Burchard, Pine, & Gordon, 1990), and for different therapeutic approaches (e.g., psychodynamically oriented psychotherapy (Conte, Ratto, Clutz & Karasu, 1995); and psychosocial rehabilitation (Goering & Stylianos, 1988)). Interpersonal skills of the worker are therefore expected to be positively correlated with client outcome. There is also evidence that similar attributes are important elements of client satisfaction among individuals with severe mental illness. In a study looking at the effective ingredients of an ACT program for clients with severe mental illness, McGrew, Wilson and Bond (1996) had the case managers ask clients to list those aspects of the program that are most important to them. The five highest ranked categories related to therapist attributes and the helping relationship.

Competencies

It has been suggested by Lambert and Bergin (1994), among others, that there are common factors across psychotherapy models that account for a fairly large portion of the variance in outcome studies, making it difficult to find evidence for the superiority of one therapy over

another. A component of those common factors can be attributed to therapist effects. Looking at worker competencies would help in the identification of variables that are associated with therapist effects. Beutler and colleagues (1986) identified competence as the "adequacy or skill with which the therapist applies the procedures relative to some external, critical standard" (p. 292). They suggested two main ways that have been used to study competence. The first one is to identify competencies based on theory or a panel of experts, and the second one is to compare improvement rates.

Model For Identifying Competencies For Working With Persons With Severe Mental Illness. As pointed out by Thousand, Burchard and Hasazi (1986), identifying competencies became important in the context of the deinstitutionalisation movement, as the number of persons with developmental disabilities living in the community brought with it a corresponding increase in the need for appropriately trained community service providers. This need is highlighted by the evidence that client outcome may partially depend on staff characteristics (Intagliata, Willer & Wicks, 1981). In a study of factors affecting the community adjustment of people with developmental disabilities, it was found that caregiver characteristics were more significantly related to community adjustment than were client or residence characteristics. In order to select and train people to work with special populations, the personal attributes, knowledge and skills required to best help clients need to be identified.

Thousand and her colleagues (Thousand, 1984; Thousand et al., 1986) used the panel of experts method to look at the contribution of provider effects to client well being. This work identified core competencies for working with persons with developmental disabilities. They used a multiple-informant, multiple method technique to generate a list of competencies for

community workers with persons with developmental disabilities. The competency items were grouped into seven categories which centered around two main concepts, normalization and technical skills. The normalization cluster included items related to care-provider attitudes, attributes and interpersonal skills which were value-based and person-oriented, as well as normalization competencies and values. The technical skill cluster combined items in the areas of knowledge of teaching procedures and behaviour management, ability to design and manage residential training programs, and practical skills related to managing a home for persons with a developmental disability. The two clusters were found to be associated with different outcome measures; however, within each of these two clusters, the competencies were highly related and were predictors of the same outcome measures. Technical skills were related to the production of Independent Program Plans (IPPs) and Data Based Plans, whereas the normalization competencies (sensitivity to client needs and interpersonal skills) were related to community integration (as measured by frequency of community activities). In addition, both manager competence and community integration were significantly positively related to client satisfaction. Higher levels of worker competencies and client community integration were associated with greater levels of client satisfaction. This method for identifying competencies for working with persons with developmental disabilities will be replicated for the field of psychiatric disabilities.

In a previous study (Aubry, Flynn & Gerber, 2000), a list of competencies for working with clients with psychiatric disabilities was generated using the same multi informant multiple method approach used by Burchard and colleagues for persons with developmental disabilities (Burchard, Widrick, & Creedon, 1985; Burchard et al., 1990). This measure will be used in the current study in an effort to relate worker competencies to client outcomes for persons with

severe mental illness.

Attitudes and Beliefs About Mental Illness

Early research on the stigma of mental illness consistently showed that among disabilities it was ranked lowest on social desirability scales. It was also found that being an ex-mental patient was more of a liability than being an ex-convict in the pursuit of housing, jobs, and friends (Rabkin, 1974). In one such study, Tringo (1970) used a version of the social distance scale to measure public attitudes toward persons with a mental illness. A hierarchy of preferences among various categories (disabled, ill, and stigmatized) was established by asking the public to rate twenty-one disability groups on a nine-point scale from "would marry" to "would put to death". Physical disability was rated as the 'most preferred' disability, whereas the four disabilities which were ranked lowest were ex-convict status, mental retardation, alcoholism and finally mental illness. Thornton and Wahl (1996) also linked stigmatization of the mentally ill with difficulty in finding jobs, obtaining housing and making friends.

More recent studies indicate that although early attitudes are improving, persons with severe mental illness continue to be stigmatized (e.g., Wolff, Pathare, Craig & Leff, 1996). Given that they have chosen their career, it would seem reasonable to assume that mental health workers, who work with persons with severe mental illness, have positive attitudes toward mental illness. Research has shown that psychiatric workers have been found to be more comfortable with and have better attitudes toward persons with psychiatric disabilities than do the general public, although there is evidence that this gap is narrowing (Wahl & Axelson, 1985).

There have been studies looking at the difference in attitudes toward persons with severe mental illness among different types of mental health workers (e.g., Good, Berenbaum, &

Nisenson, 2000; Murray & Steffen, 1991), but few studies have linked attitudes to behaviour and fewer still have linked attitudes to client outcomes. On the question of whether attitudes can be used to adequately predict behaviour, Rabkin (1974) concludes that "despite longstanding awareness of the discrepancies between what people say and what they do, the link between attitudes and behaviour has been deemed sufficiently meaningful to warrant extensive research regarding public attitudes toward mental illness" (p. 9). An early study by Cohen and colleagues looking at VA hospitals (Cohen & Struening, 1964) found that hospital wards differed in their atmospheres and that atmosphere was best predicted by the attitudes of the aides and nurses who worked in direct contact with the patients. The atmosphere on the ward affected the outcome for the patients as a group. The authors found that patients who were admitted onto wards with a strong authoritarian - restrictive atmosphere spent significantly less time in the community in the six months following admission than did those admitted towards with a less restrictive atmosphere. This suggests that attitudes that are more restrictive towards persons with a mental illness are associated with a greater number of days spent in the hospital.

Negative attitudes of mental health workers toward persons with Severe mental illness have been associated with employees' feelings of helplessness and futility, and may be linked to resistance against providing adequate treatment (Cohen, 1990). Specific ways in which attitudes might affect client outcome have been identified by Antonak and Livneh (1988). They posit that people with disabilities, including those with mental illness, are influenced by the attitudes of rehabilitation workers in several ways. First, rehabilitation workers are often the first and primary providers of information and services and may have a considerable impact on the individual's adjustment to disability. Second, as professionals, they may influence the attitudes

of others in the client's circle, as well as those in the outside world, through their interactions. It is also hypothesized that worker attitudes and beliefs about the limitations and capabilities about persons with severe mental illness will influence the focus, breadth, depth, and effectiveness of intervention. For instance, if the worker does not believe persons with severe mental illness are capable of gainful employment, then he or she is unlikely to seek to develop vocational skills. Attitudes will also affect the type and strength of advocacy efforts that will be made for the client with outside agencies and individuals. It is therefore expected that worker attitudes toward persons with severe mental illness will be positively correlated with client outcome in the areas of quality of life, symptoms and functioning.

Worker Experience

There is mixed evidence for the theory that the experience of the therapist or case manager is predictive of outcome. Stein and Lambert (1984) conducted a meta-analysis of studies including information on therapist experience and concluded that number of years of experience by itself is not a strong or significant predictor of outcome. However, they did find that more experienced therapists had higher retention rates and that more disturbed clients fared better if they were seen by experienced therapists. Mallinckrodt and Nelson (1991), however, found that the number of years of therapist experience was related to the quality of the therapeutic alliance.

In reviewing therapist factors that are associated with outcome in psychotherapy, Beutler and colleagues (Beutler et al., 1994) point out that studies often confound level of training, amount of experience, and professional discipline. The authors raise the question of whether years of experience is the most appropriate construct to be measuring, and note that "[t]he assumption that exposure and practice alone, in the absence of specifically targeted skills and systematic methods

of instruction, result in the acquisition of skill has been criticized"(p.250) and propose that years in training or skill level achieved (i. e., competencies) may be equally or more relevant. This study will measure both competencies and years of experience to further address the relationship between these two factors.

Alliance

Although the concept of alliance can be traced back to Freud (Horvath & Luborsky, 1993), the current conceptualization was proposed by Bordin (1979). Based on psychoanalytic theory, he developed a tripartite model of alliance, which he identified as being the component of the change relationship that is common to all therapies. As discussed previously, alliance is the most commonly cited factor in research on the client/therapist relationship, and it is variously referred to as the therapeutic, working, or helping alliance. Bordin (1979) termed it the working alliance and described it as being composed of bond, goal, and task components. He defined bonds as the positive attachments between the therapist and the client, which include mutual trust, acceptance and confidence. Goals are the target of the intervention, which must be mutually endorsed and valued by therapist and client. Finally, tasks refer to the cognitions and behaviours that make up the therapy intervention. Bordin's concept of working alliance was a departure from earlier formulations of the essential components of the relationship, such as that propounded by client-centered therapist Carl Rogers (1957) who posited three therapist contributions (ability to show unconditional positive regard, empathy, and congruence) as necessary and sufficient conditions for therapy. Firstly, Bordin (1979) emphasized the collaborative aspect of the relationship, and secondly, he stressed that working alliance takes into account the capacity of the client and the therapist to negotiate a contract appropriate to the depth and breadth of the therapy. He suggested

that it was a pantheoretical construct, with no one therapy style more closely related to the alliance - outcome relationship than any other (Horvath & Luborsky, 1989).

Alliance and Outcome in Psychotherapy. The demonstrated positive relationship between alliance and outcome in psychotherapy is one that has been replicated many times. In a meta-analysis by Horvath and Symonds (1991) of 24 studies across therapy types and alliance measures, an average effect size of .26 was found between alliance and the therapy outcome measures. This is a small but significant effect that has been replicated across various therapies and across different raters (client, therapist, and observer). Outcomes studied include symptoms, termination, self-concept, and psychological functioning, using both post-therapy questionnaires and overall ratings. The authors, looking at additional attributes of alliance, found that client ratings of the working alliance are the best predictors of outcome; however, observer, and, to a lesser extent, therapist ratings are also predictive. Furthermore, this result is found regardless of who rates the outcome. Horvath and Symonds (1991) found that there was no significant difference between alliance outcome ratings that are homogeneous (rated by the same informant) versus heterogeneous (rated by different informants), although there was a trend for homogeneous effect sizes to be slightly higher, which they posited may be inflated due to a halo effect. An examination of the time of measuring the alliance (early, late, or averaged across sessions) showed a trend toward the averaged alliance score being a poorer predictor of outcome than early or late alliance scores, although this difference did not reach statistical significance. Finally, there was no significant difference found in the effect size of alliance across the different types of therapy.

More recently, an updated meta analysis based on 79 studies of the relationship between

alliance and therapy outcome was performed by Martin, Garske and Davis (2000). As had Horvath and Symonds (1991), Martin et al. (2000) also concluded that the research showed a modest but consistent relationship between alliance and outcome (effect size = .22). They reported that the reliability of the various measures across different informants was good. The most common outcome measures found in the studies were global scales of functioning such as the Global Assessment Scale, followed by specific scales such as ratings of drug use, symptom scales such as the Symptom Checklist - 90 - R (Derogatis, Lipman & Covi, 1973), termination status (ending therapy before both therapist and client agreed it was time), and finally mood scales, such as the Beck Depression Inventory (Beck, Ward, Mendelson, Mock & Erbaugh, 1961). Examining those attributes addressed by Horvath and Symonds in order to highlight any differences found, Martin and colleagues (2000) found no significant differences between raters of alliance or outcome, time of alliance rating, or type of psychotherapy. Although most studies examined clients who were seeking outpatient therapy, some (n=18) included patients who had psychotic disturbances or severe personality disorders. The fact that the results were similar for this group lends support to the idea that the alliance relationship found between persons with severe mental illness and their case managers may be similar to that found between psychotherapy patients and their therapists.

Alliance and Therapist Experience. Mallinckrodt and Nelson (1991) examined the effect of training on working alliance, and reported greater improvement in alliance ratings by clients of advanced trainees and experienced counselors than for clients of novice therapists. They found this difference applied to the task and goal portions of the alliance, but not to the bond (interpersonal relationship) component, which was not found to differ across the three groups.

They suggested that this was due to the order of teaching skills to therapy trainees. The skills necessary to develop a good bond are taught early and therefore novice trainees should have skills similar to more experienced therapists. Dunkle and Friedlander (1996), contrary to Mallinckrodt and Nelson, found that client ratings of goals and tasks (the targets of intervention) were not associated with therapist experience.

Alliance and Outcome with Persons with a Mental Illness. When early enthusiasm about the promise of individual psychotherapy in treating schizophrenia proved to be unwarranted (e.g., Rogers, Gendlin, Kiesler & Truax, 1976), it called into question the ability of persons with schizophrenia, and perhaps those with other psychiatric disabilities, to form and benefit from the relationship with therapist or case manager (Goering and Stylianos, 1988). Several studies have reported that clients of programs for persons with a mental illness rate the therapeutic relationship to be an important component of case management with the seriously mentally ill, suggesting that the concern about their ability to form a relationship was unfounded. In a correlational study of ACT clients, McGrew and colleagues (McGrew et al., 1996) asked clients to list those ingredients of ACT they considered to be the most important. They found that the majority of clients listed the relationship with their worker as being of primary importance. In a similar study, Prince, Demidenko, and Gerber (2000) also found that clients of an ACT team listed a helping relationship as an essential component of treatment.

In their evaluation of the applicability of the Psychiatric Rehabilitation Model for persons with schizophrenia, Goering and Stylianos (1988) noted that most clients interviewed spoke of the importance of "having someone there for me and feeling understood" (p. 272). In fact, researchers have hypothesized that the relationship might be the most important therapeutic

factor within community programs for individuals with severe mental illness (Goering, Wasylenki, Farkas, Lancee & Ballantyne, 1988; McGrew et al., 1996), with implications for better outcomes (Onyett, 2000). In addition, research has shown (Frank & Gunderson, 1990; Goering & Stylianos, 1988) that people with schizophrenia can form an alliance with others in their environment.

Frank and Gunderson (1990) conducted a study of 143 clients between the ages of 18 and 35 admitted to a hospital who met the criteria for schizophrenia, and followed their course of therapy for two years. Of the patients who remained in therapy, those who had established a good alliance with their therapist by six months (as opposed to the one month it typically takes with clients who have less severe disorders) had better outcomes. Higher levels of 'active engagement' predicted a higher rate of medication compliance and fewer symptoms of psychopathology. Another study examining the working alliance between clients with psychiatric disabilities and their case managers was conducted by Gehrs and Goering (1994). They found a significant positive correlation between the accomplishment of rehabilitation goals at follow-up and therapist ratings of the working alliance. Similarly, in a study comparing consumer and non-consumer case managers, after two years both worker and client ratings of working alliance were found to be positively related to quality of life, symptomatology, attitude toward medication and satisfaction with treatment (Solomon et al., 1995).

In the preceding sections the evidence that worker characteristics influence the working alliance between patients and therapists and that the strength of alliance can affect the success of treatment, as measured across many variables, was reviewed. There is also evidence that persons with severe mental illness are able to form working alliances with their support workers and that

this alliance is related to outcome. The predictor variables that will be used in the study were presented. The following section will describe the outcome variables that will be used.

Outcome Variables

Difficulties in choosing the most appropriate outcome variables and measures have been noted in program evaluation. Ideally, studies in a particular domain would use the same constructs, using the same variables and measures. However, reviews of outcome studies of case management for persons with severe mental illness have found that most studies measure different outcome constructs, thus making comparisons difficult (Chamberlain & Rapp, 1991). Even when nominally similar content areas are assessed, (e.g., quality of life), the foci of the measures used are often different. In addition, old measures may no longer be appropriate to evaluate the evolving focus of community mental health reform.

The dependent variables in evaluations of case management programs for persons with mental illness most frequently address client well being. One of the oldest and most common components of well being measured is that of symptomatology or level of distress (Cyr, McKenna-Foley, & Peacock, 1985; Stroebe & Stroebe, 1996), where well being is equated with the absence of psychopathology. Initially, most outcome studies evaluating community treatment programs for the seriously mentally ill focused on the effects the program had on symptomatology and rehospitalization rates alone (Nelson, Hall & Walsh-Bowers, 1997; Solomon, 1992). These were found to be insufficient indicators for understanding a person's adaptation to community life, as they focus primarily on the illness and ignored the individual's overall subjective experience, which may include negative symptoms as well as positive experiences. In addition, these measures do not evaluate effectiveness in terms of objectives of

social policy, which addresses the degree of normalization (Burchard, Hasazi, Gordon & Yoe, 1991).

Increasingly, the variables used in studies involving persons with psychiatric illnesses include measures that address the clients' subjective experience on a broad scale, such as their subjective quality of life and community integration or functioning. Subjective quality of life, symptoms, and community functioning will be the outcome variables used in this study and will each be reviewed in the following sections.

Subjective Quality of Life

It is widely acknowledged that quality of life is an important aspect of well being. Accordingly, quality of life has been the key outcome to evaluate treatment programs for many years. The significant relationship between health/mental health status and subjective quality of life is one of the strongest and most consistent findings in this literature (Baker and Intagliata, 1982). Despite the robustness of the finding of a positive relationship between quality of life and mental health, the former is a concept that has proven difficult to define.

Quality of life is typically divided into subjective and objective components. Subjective approaches focus on the subjective cognitive appraisal of well being, satisfaction, and happiness made by an individual (Baker & Intagliata, 1982). Objective approaches focus on more concrete factors such as living conditions, and economic indicators of well being or obtaining the necessary conditions for happiness in a given society or region. Objective quality of life will not be examined in this study because it is most closely related to variables such as housing and financial status, both of which are at best indirectly within the sphere of control of community support providers. Subjective quality of life, on the other hand, is hypothesized to be within the

sphere of influence of the support provider (Baker & Intagliata, 1982) and will be examined in this study.

Symptoms

Symptoms and well being have been assessed by measures that rate anxiety, depression, and unpleasant emotions. For persons with a severe mental illness, level of symptoms has been inversely associated with tenure in the community, well being, and quality of life. One of the most commonly used measures of symptoms has been the Symptom Check List-90-R (SCL-90-R) (Derogatis et al., 1973). Research conducted on the SCL-90-R suggests that the factor structure of the SCL-90-R lends itself to a 5-factor solution rather than to the 9-factor solution originally proposed (Hoffman & Overall, 1978). Cyr and colleagues (Cyr et al., 1985) have suggested that the scale is more reliable and valid when used as a measure of general distress than of more specific symptoms. Based on Hoffman and Overall's (1978) findings, a 10-item measure, the Symptom Checklist - 10 (SCL-10) (Nguyen, Attkisson, & Stegner, 1983) was constructed by selecting items from the three subscales which were found to account for most of the variance (Depression, Somatization, and Phobic Anxiety) (Nguyen et al., 1983). This measure has been found to be both reliable and valid when used as a global symptom checklist.

Functioning

A measure of client functioning that encompasses more than simply the level of symptoms experienced by the client, by allowing for comparisons between levels of functional disability would have several benefits (Zani, McFarland, Wachal, Barker & Barron, 1999). It would have clinical use for treatment planning and also for use in research to demonstrate the outcomes of care. In addition, policy makers could use the information to compare the costs and benefits of

different types of health care systems.

A commonly accepted definition of severe mental illness is based on Tessler and Goldman's (1982) three dimensions of diagnosis, duration, and disability. Thus, the the term persons with a severe mental illness refers to those who are diagnosed with a longstanding mental health problem which interferes with their ability to function in behavioural, social and/or occupational domains. As previously mentioned, the focus of outcome measures for community adjustment has been broadened to meet the requirements of social policy (Burchard et al., 1991). The Multnomah Community Abilities Scale (Barker, Barron, McFarland, & Bigelow, 1994) addresses the criteria of normalization, functioning and social competence. It is currently being used in Ontario in studies addressing the efficacy of case management and will be used in the current study.

Study Objectives, Research Questions, and Hypotheses

Conceptual Model

The model proposed here to explain the relationship between worker characteristics, working alliance and psychological well being for persons with a serious mental illness is presented in Figure 1.

The model posits that, parallelling findings in the psychotherapy literature (e.g., Beutler et al., 1994), there are characteristics of support workers, such as their competencies and tenure in the mental health field, and their relationship with clients, that are associated with the psychological well being of clients with severe mental illness living in the community. It is proposed that the worker's competencies in promoting normalization, in interpersonal relationships, and in teaching and training enhance the community adjustment of persons with severe mental illness

both directly and indirectly through their effects on the working alliance between the client and the worker.

The current study addresses factors that affect the community adjustment of persons with severe mental illness receiving community support services. By assessing the validity of key competencies of support workers, the project will attempt to contribute to our knowledge about effective ingredients of community treatment services for persons with severe mental illness.

Preliminary Analysis

The Competency Rating Scale was recently developed for evaluation of the skills needed to work with persons with severe mental illness. In order to be able to interpret the results obtained with this measure, the validity and reliability of the Competency Rating Scale need to be addressed.

1) Does the Competency Rating Scale exhibit adequate reliability in this study?
2) The validity of the Competency Rating Scale can be examined by examining its correlation with related constructs.
   (a) What is the relationship between worker competencies and attitudes toward the mentally ill?
   (b) What is the relationship between worker competencies and number of years experience in mental health?

Objective

The main purpose of this study was to determine whether community worker characteristics and the working alliance are related to the psychological well being of clients with severe mental illness, and whether the working alliance acts as a mediator between these worker characteristics

and clients' psychological well being.

Research Question 1:

Are worker characteristics (competencies, attitudes and years experience in mental health) related to working alliance?

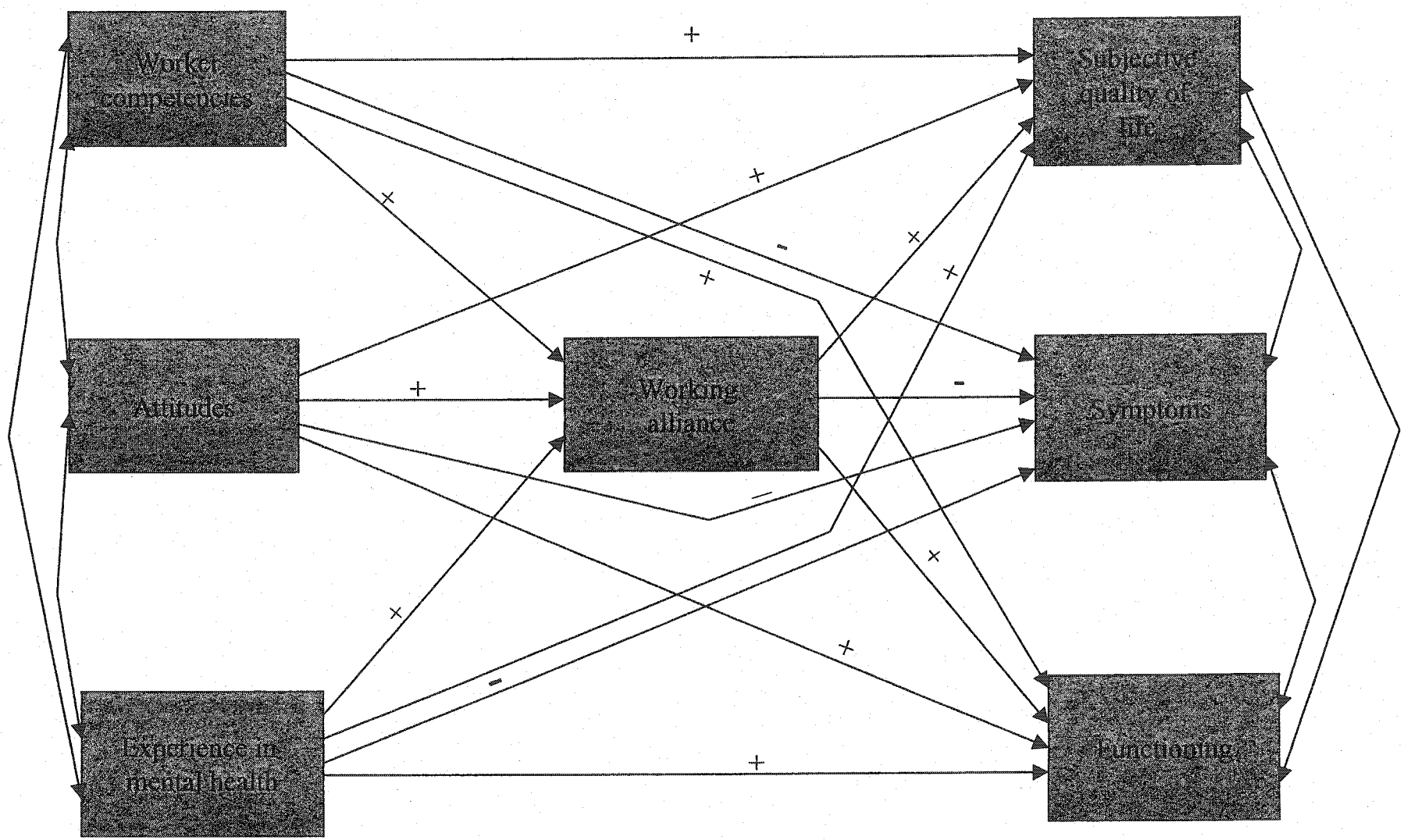
Hypothesis 1a: It was hypothesized that workers who are rated as high in *competencies* would form a better *working alliance* with their clients.

Justification: Research with persons with developmental disabilities (Thousand et al., 1986) has shown that worker competencies identified as essential include those that are related to developing a therapeutic relationship with clients. It was therefore predicted that in populations with severe mental illness as with the others, higher scores on worker competencies would be associated with a better working alliance between the client and worker.

Hypothesis 1b: It was predicted that workers who express liberal and accepting *attitudes* toward persons with mental illness would form closer working alliances with their clients.

Justification: The literature has shown that patients are affected by the attitudes of their caregivers (Cohen & Struening, 1964). Negative attitudes of mental health workers toward persons with severe mental illness have been associated with the workers' feelings of helplessness and futility, and have been linked to resistance against providing adequate treatment (Cohen, 1990). Workers also have an impact on clients through helping with their adjustment to disability, their education, and modelling attitudes for their close family and friends (Antonak & Livneh, 1988). A positive attitude toward persons with severe mental illness is expected to be associated with better agreement with the client on goals and tasks of treatment, and also with a closer bond because the client will feel more liked and respected.

Figure 1: Path model for effect of worker characteristics and alliance on client well being



Hypothesis 1c: It was predicted that workers who had greater *experience* in the field of mental health would form closer working alliances with their clients.

Justification: Workers who have had more experience with persons with severe mental illness have more experience forming therapeutic relationships with their clients (Mallinckrodt & Nelson, 1991). On the other hand, Dunkle and Friedlander (1996) have found that therapist experience did not predict outcome.

Research Question 2:

Are worker characteristics related to the psychological well being of clients?

Hypothesis 2a: It was hypothesized that workers who had high levels of *competencies* would have clients who reported a higher *subjective quality of life.*

Hypothesis 2b: It was predicted that workers who had high levels of competencies would have clients who reported fewer *symptoms.*

Hypothesis 2c: It was predicted that workers who had high levels of competencies would have clients who were higher *functioning.*

Justification: Workers who score high on the competency scale would be expected to have better skills and knowledge to help assess and meet the needs of clients, which would help the latter to feel better about their lives, encouraging them to take medication and to engage in a lifestyle aimed at managing symptoms and improving their functioning.

Hypothesis 2d: It was hypothesized that workers who have more liberal and accepting *attitudes* toward the mentally ill would have clients who reported a higher *subjective quality of life.*

Hypothesis 2e: It was predicted that workers who have more liberal and accepting attitudes

toward the mentally ill would have clients who reported fewer *symptoms*.

Hypothesis 2f: It was predicted that workers who have more liberal and accepting attitudes toward the mentally ill would have clients who were higher *functioning*.

Justification: Workers with more positive attitudes are likely to convey this attitude to their clients and to focus on more positive and progressive outcomes. They are less likely to expose clients to a negative and restrictive atmosphere which could affect clients negatively.

Hypothesis 2g: It was hypothesized that workers who have more *experience* working in the mental health field would have clients who reported a higher *subjective quality of life*.

Hypothesis 2h: It was predicted that workers who have more experience working in the mental health field would have clients who reported fewer *symptoms*.

Hypothesis 2i: It was predicted that workers who have more experience working in the mental health field would have clients who were higher *functioning*.

Justification: It is assumed that workers with more experience have had more exposure and practice in the field thereby increasing the skills needed to help clients to maximize their subjective quality of life and level of functioning while minimizing client symptom.

Research Question 3:

Does working alliance mediate the relationship between worker characteristics and client psychological well being?

Hypothesis 3a: It was predicted that *working alliance* would play a mediating role between worker competencies and client *subjective quality of life*. Thus workers with high levels of competency were expected to have closer working alliances with their clients who would in turn report better subjective quality of life.

Hypothesis 3b: It was hypothesized that working alliance would play a mediating role between worker competencies and client *symptoms*. Thus workers with high levels of competency were expected to have closer working alliances with their clients who would in turn report fewer symptoms.

Hypothesis 3c: It was predicted that working alliance would play a mediating role between worker competencies and client *functioning*. Thus workers with high levels of competency were expected to have closer working alliances with their clients who would in turn be rated as higher functioning.

Hypothesis 3d: In regard to worker *attitudes,* it was predicted that working alliance would play a mediating role between worker attitudes and client *subjective quality of life*. Thus workers with more liberal and accepting attitudes toward mental illness were expected to have closer working alliances with their clients who would in turn report better subjective quality of life.

Hypothesis 3e: It was hypothesized that working alliance would play a mediating role between worker attitudes and client *symptoms*. Thus workers with more liberal and accepting attitudes toward mental illness were expected to have closer working alliances with their clients who would in turn report fewer symptoms.

Hypothesis 3f: It was predicted that working alliance would play a mediating role between worker attitudes and client *functioning*. Thus workers with more liberal and accepting attitudes toward mental illness were expected to have closer working alliances with their clients who would in turn be rated as higher functioning.

Hypothesis 3g: It was predicted that working alliance would play a mediating role between *experience* and client *subjective quality of life*. Thus workers with more experience in mental

health were expected to have closer working alliances with their clients who would in turn report better subjective quality of life.

Hypothesis 3h: In regard to worker experience, it was hypothesized that working alliance would play a mediating role between workers with experience and client *symptoms*. Thus workers with more experience in mental health were expected to have closer working alliances with their clients who would in turn report fewer symptoms.

Hypothesis 3i: In regard to worker experience, it was predicted that working alliance would play a mediating role between experience and client *functioning*. Thus workers with more experience in mental health were expected to have closer working alliances with their clients who would in turn be rated as higher functioning.

Justification: The working alliance has been shown to be an essential component of treatment that affects outcome (Horvath & Symonds, 1989). It is hypothesized that a closer working alliance would enhance the effects that worker experience would have on clients' quality of life, symptoms, and functioning.

CHAPTER 2: METHOD

Description of Service

Brockville Psychiatric Hospital is a long-term care facility providing services to seriously mentally ill adults in Eastern Ontario. It serves a catchment area of almost 1 million people, most of whom live in the Ottawa-Carleton area. In 1990, the hospital introduced a community-based program in Ottawa to provide community care to seriously mentally ill clients. The Assertive Community Treatment Team (ACTT) was set up to better meet the needs of the hospital's clients. The goals of the Assertive Community Treatment Team are to address the needs of heavy users of the mental health system, to improve their quality of life, and to decrease the frequency and length of hospitalization. Client care is planned by all staff members, and there are meetings every morning where the day's schedule as well as any new concerns or changes in a client's status are discussed. In addition, a case conference is held for each client once every two months to review their progress and to determine if the treatment plan needs to be modified or updated. Services provided by the ACTT include medication therapy, assistance in finding housing, assistance with finances (e.g., budgeting), individualized rehabilitation, counselling, and contacts with families and community services. In addition, crisis and emergency services are provided on evenings and weekends by a staff member carrying a pager so that someone from the team can be contacted at all times. ACT was designed to use a team approach, so clients are seen by any one worker no more than 30% of the time and all workers carry out the same treatment plan. When the Brockville ACT team (the team from which clients were recruited) was set up, it had a more individualized approach. Each client has one primary case worker with whom they negotiate their

treatment plan and with whom they may form a closer alliance. This allowed for the testing of the relationship between worker competency, working alliance, and the psychological well being of the client.

Participants

A sample of 74 clients with severe psychiatric illness who receive services from the Assertive Community Rehabilitation Program (ACTT) in Brockville and its satellite teams in Casselman and Cornwall were interviewed to test the relationship between worker characteristics, working alliance, and client psychological well being. As mentioned earlier, the clients served by the ACTT have a serious mental illness and are heavy users of the mental health system (Surles & McGurrin, 1987). Heavy use is defined as three or more hospitalizations within the past two years, or a total of at least 90 days in the hospital. Referrals come from area hospitals and are directed to Brockville Psychiatric Hospital. There were three exclusion criteria: (1) having a brain injury, (2) having a dual diagnosis where one of the diagnoses is mental retardation, and (3) being over the age of 65. Of the 74 interviews conducted, only 65 were kept for analysis, as 7 clients had been with their worker for less than the six-month requirement for entry in this study. For inclusion, clients had to be receiving services from their primary worker for at least six months.

Procedure

Initial contact was made with the community workers and supervisors of the Brockville ACT team, and the study was explained to them. The workers and the supervisors all completed consent forms. Clients who were judged to be unable to complete the interview due to current illness were identified by the ACT team as a whole and were not invited to participate in the study. The decision on which clients should be excluded was made by the complete group of

workers in order to minimize the possibility of selection bias by workers (e.g., approaching only their most satisfied or happy clients). Each client was approached by a worker who described the project and asked if he or she would give permission to be contacted by the primary researcher. Those who agreed were telephoned and given an opportunity to ask questions. They were assured that participation was entirely voluntary and that refusal to do so would in no way affect the treatment they received from the ACTT. In addition, both workers and clients were assured that all information would be kept confidential, that only researchers would see the completed questionnaires and that all identifying information would be removed from the questionnaires. Appointments were then made for the primary investigator to interview clients in their home or at the ACT office, according to their preference. Before beginning the interview, the clients were asked to sign a consent form indicating the voluntary nature of their participation and assuring the confidentiality of their responses. In particular, they were assured that no one from ACTT would see their responses. Each person was interviewed by the primary researcher, who asked questions about alliance with his or her primary worker, about symptoms, and about quality of life. Clients were paid an honorarium of $10 for participation in the study. A copy of the consent forms can be found in Appendix A.

Ratings of competencies for each community support worker were obtained from his or her supervisor. This was a measure of support providers' competencies for working with clients with a severe mental illness, developed in a previous study (Aubry et al., 2000). (The procedure followed for the construction of the measure is elaborated in the measures section below). In addition, each worker completed a measure addressing his or her attitude toward mental illness as well as a measure of community functioning for the clients for whom he or she were the primary

worker. It is to be noted that each of the three supervisors completed ratings of multiple workers, and each of the workers completed ratings on each of their clients who participated in the study. The structure of the program is outlined in Figure 2.

Measures

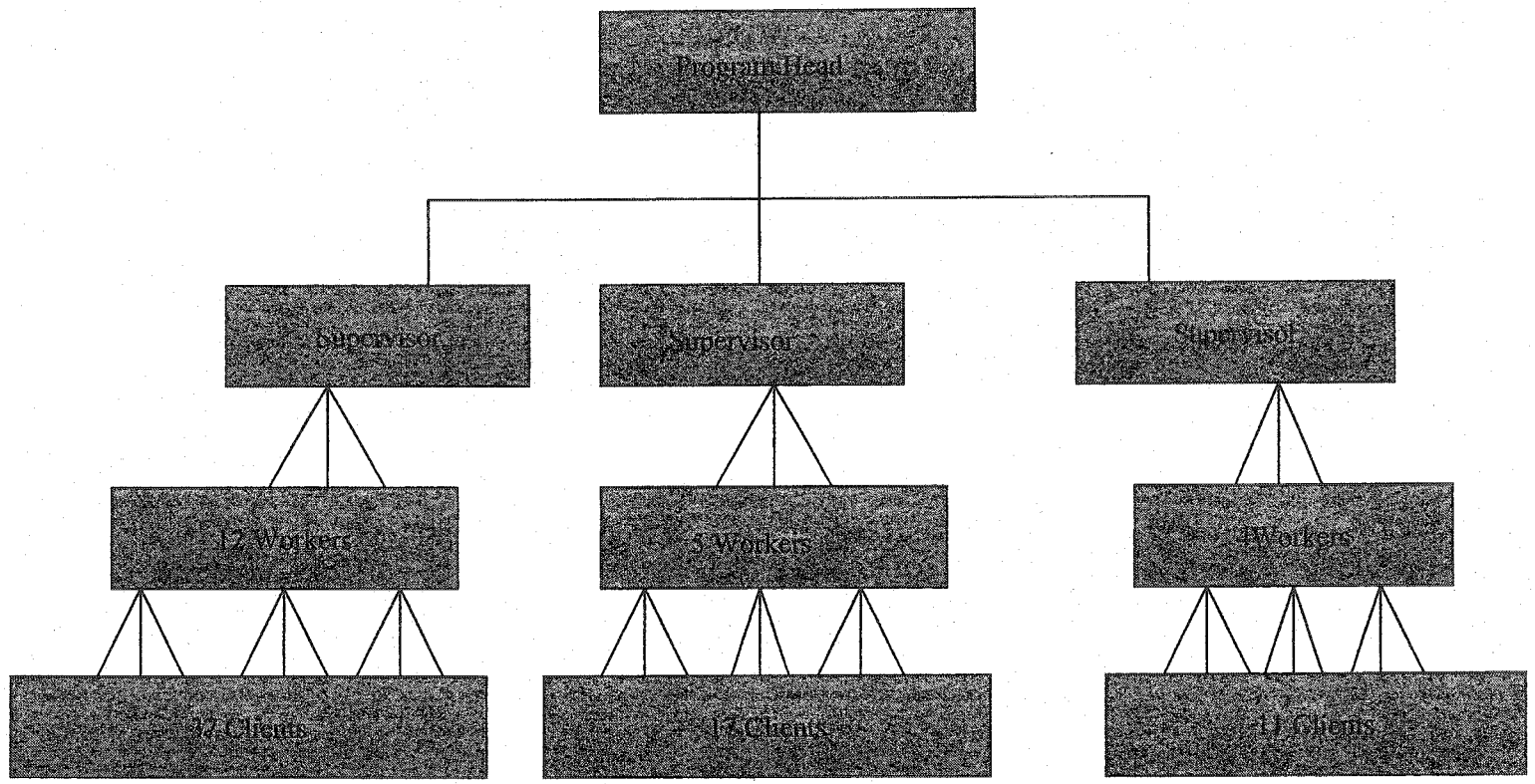
Sociodemographics

Demographic information for clients, including age, gender, number of days in hospital in the past year, length of time receiving services from ACTT and length of time with current worker, was gathered from clients and program records.

Worker Competency (Competency Rating Scale: Aubry, Flynn, & Gerber, 2000)

This measure was developed in an earlier study (Aubry et al., 2000) and is currently being validated. The measure lists 59 competencies for working with seriously mentally ill clients. It was constructed using a methodology similar to that used by Burchard, Thousand and colleagues (Burchard, Pine, & Gordon, 1990; Thousand, 1984) to identify competencies for working with persons with developmental disabilities. A convenience sample of people with severe mental illness being supported by community support workers as well as the workers themselves participated in interviews. Each person was asked to list the competencies that he or she felt were important in a support provider. Individuals were then asked to rate each quality as to its importance based on the following choices: (a) not necessary, (b) desirable, or (c) absolutely necessary. The answers were then tabulated and those qualities receiving an average rating of "desirable" to "absolutely necessary" were retained for the measure. The qualities were grouped into three categories: personal attributes; knowledge; and skills. Each item was scored on a 5-point scale according to the community support worker's performance on the specific competency

Figure 2: Diagram of Levels of ACT Program Study Participants



3 Supervisors

19 Workers

65 Clients

(1 = low performance/bottom 20% to 5 = high performance/top 20%). The potential range of scores is 59 - 295, with higher scores indicating greater competency. A global worker score was calculated for each community support worker by adding the scores for each competency, and this score was used in the analyses. In addition, as this was an exploratory study, subscale scores were calculated to examine trends in correlations with other variables.

In previous research, the competency rating scale was found to have high internal consistency (Cronbach's alpha = . 97 to .99) (Aubry et al., 2000). Concurrent validity of the competency measure was found with certain aspects of quality of life, social support as it relates to family, and satisfaction with services. In the current study, Cronbach's alphas ranged from .92 to .98. (Personal Attributes = .92, Knowledge = .94, Skills = .96, and Overall Scale = .98).

Attitudes [Community Attitudes Toward the Mentally Ill (CAMI): Taylor & Dear, 1981]

The attitudes of support workers toward persons with a mental illness were assessed by means of this 40-item questionnaire. The potential range of scores is 40-200, with a higher score indicating a more positive attitude to mental illness. The items have been found to load onto four main factors. These are: Authoritarianism, Benevolence, Social restrictiveness, and Community mental health ideology. In a study of 1,090 residents of Toronto by Taylor and Dear (1981), alphas ranged from .68 (satisfactory) to between .76 and .88 (very good). In the current study, Cronbach's alpha for the total score was found to be .87.

Working Alliance [Working Alliance Inventory (WAI); Horvath & Greenberg, 1989]

This is a 36-item questionnaire designed to measure the generic variables affecting success in counseling. It measures three components of the working alliance between worker and client (bonds, goals, and tasks). Based on previous research which shows that, on this measure, client

report is most closely associated with therapeutic outcome (Horvath & Symonds, 1991), the client version of the WAI was used as a measure of the cooperative relationship between the worker and client developed to accomplish specific therapeutic goals. The potential range of scores is 36 - 252, with a higher score indicating a closer working alliance. The total WAI score given to a worker by his or her client was calculated to establish a global worker WAI score, which was used in the analyses. In addition, as this was an exploratory study, subscale scores were calculated to examine trends in correlations with other variables.

In a study of 29 counselor-client dyads engaged in short-term counselling, Horvath & Greenberg (1989) reported the reliability of the WAI to be between .85 to .88 for the client's version and from .68 to .87 for the worker's version. In a study of 90 case management clients, Solomon, Draine and Delaney (1995) found the WAI reliability to range from .89 to .96 for both the client and case manager versions. In the current study the reliability of the subscales was found to be adequate and the reliability of the overall scale was .90.

Subjective Quality of Life [Satisfaction with Life Scale (SWLS); Diener, Emmons, Larsen, & Griffin, 1985]

The SWLS is a global measure of an individual's overall judgment of the quality of his or her life and allows the individual to weigh the various domains of life according to his or her own values as opposed to those of the researchers. It is a 5-item scale with responses on a 7-point scale from (1) = strongly disagree to (7) = strongly agree. The potential range of scores is 7 - 35, with a higher indicating a greater subjective quality of life.

This scale has been shown to have strong internal reliability (coefficient alpha = .87) and moderate temporal stability, with a 2-month test-retest coefficient of .82. (Pavot & Diener, 1993).

In terms of discriminant validity, psychiatric patients, inmates, and abused women, as well as other disadvantaged groups, typically score lower on the SWLS than the general population. This finding is expected, given that the experiences of people in these groups would likely be less than ideal. The SWLS has been shown to be negatively correlated with distress and depression (e.g., Beck Depression Inventory). In addition, Diener (Diener et al., 1985) reported moderate convergent validity with other measures of subjective well being and life satisfaction (e.g., Cantril's (1965) Self-Anchoring Ladder; Campbell, Converse, and Rodgers' (1976) Semantic Differential like scale). In the current study, Cronbach's alpha was .72.

Symptoms [Symptom Check List - 10 (SCL-10); Nguyen, Attkisson, & Stegner, 1983]

This is 10-item questionnaire derived from the Symptom Check List 90 (SCL-90) of Derogatis, Lipman and Covi (1973) represents the symptoms component in the model. It combines items from the three factors accounting for the most variance in a general psychiatric clinic outpatient population (Depression, Somatization, & Phobic Anxiety). The items are scored on a 5-point scale from 0 (not at all) to 4 (extremely) for the question "how much were you distressed by [symptom listed] in the past week?". The totals are summed to yield a global score for symptoms. The potential range of scores is 0 - 40, with higher scores indicating a greater number and severity of symptoms. The SCL-10 has good reliability and internal consistency (coefficient alpha = .88) according to Nguyen and colleagues (Nguyen et al., 1983). In the current study, the coefficient alpha was found to be .84.

Functioning [Multnomah Community Abilities Scale (MCAS); Barker, Barron, McFarland, & Bigelow, 1994]

This is a 17-item scale designed to rate the functioning of persons with a severe psychiatric

disability. This scale was filled out by the worker to obtain a baseline measure of functioning of the client for comparison purposes. There are four subscales: (a) interference with functioning; (b) adjustment to living; (c) social competence; and (d) behavioural competence. In the current study only the first three subscales were used because the final subscale is retrospective over 9 months, which was judged to be too long a period for the latter to be used as an outcome measure. The version used thus had 13 items as opposed to the four subscale version which has 17. An overall functioning score based on the three subscales was calculated by adding the scores for each item and this was the score used in the analyses. The potential range of scores is 13 - 85, with higher scores indicating better functioning.

The MCAS has been shown to be sensitive to differences within a population of persons with severe psychiatric disabilities. The interrater reliability of the total score has been found to be .85 (with subscales ranging from .70 to .78), and the two week test-retest reliability was .83 (with subscales from .70 to .82) in a study by Barker and colleagues (1994). The validity of the MCAS was tested by Zani and colleagues (Zani, et al., 1999) who found that the rehospitalization rate of people who have higher MCAS scores is significantly lower than those with lower scores. Scores correlate .78 with a global rating of functioning, and have also been shown to be predictive of future rehospitalization within two years (Barker et al., 1994). In the current study, the internal consistency was found to be .87, with subscale alphas ranging from .57 to .80. (Adjustment to Living = .57, Interference with Functioning = .75, and Social Competence = .80). Interrater reliability was not measured in the current study. As this was an exploratory study, scores for the three subscales were also calculated in order to detect trends in correlations with other variables.

CHAPTER 3: RESULTS

The findings of the study will be presented in the following sections. In the first two sections, descriptions of the data preparation steps and the characteristics of the research participants will be detailed. Following this, the results of the analyses will be presented.

Data Screening

Prior to analysis, the distribution of each variable was screened through various SPSS programs to check for accuracy of data entry, missing values, the presence of outliers, and fit between its distribution and the assumptions of path analysis. The variable 'days in hospital in past year' was severely skewed. However, this was not considered to be important as it was not used in the analyses.

One missing value was found for an item on the functioning scale; it was replaced with the mean for that subscale. Missing values were found for two cases on the alliance measure. Because each had missing values on more than 50% of the items, these 2 cases were removed from those path analyses which included the working alliance measure, resulting in an N of 63 for these analyses. The reason for both cases of missing data was refusal by the participants to complete the measure.

Standardized scores for all variables were examined. Using a cutoff point of ± 3.67 ($p < .001$), no univariate outliers were found. Examination of Mahalanobis distance revealed a multivariate outlier on alliance and satisfaction. Examination of Cook's distance using a cutoff point of $\pm$ 1.00 (Stevens, 1986) indicated that the case was not an influential one. In order to explore the effect of this multivariate outlier, the path analyses were conducted with this case

included, and then repeated with the case removed. The results remained unchanged when this case was removed and thus the case was retained. Inspection of skewness and kurtosis values, frequency histograms, residual scatterplots, and collinearity diagnostics statistics showed that all variables met path analytic assumptions concerning normality, linearity, homogeneity of variance, multicollinearity and singularity (Tabachnick & Fidell, 1989).

Participants

The characteristics of clients in the study are presented in Table 1. The final sample included 65 individuals, 27 males and 38 females, with a mean age of 42.38 years (range 20 - 62 years). (Two subjects were missing scores on the Working Alliance Inventory, such that for analyses that included this measure the sample size was 63). The mean number of years clients had been with ACTT was 4.05, with a range of .50 to 10 years. Most of the clients (73%) had not been hospitalized in the past year. The mean number of days in hospital for clients over the past year (from January 1st, 1999 to December 31st, 1999) was 7.02, with a range of 0 to 88 days. Of the 31% of clients (N = 20) who had been hospitalized in the past year, the mean length of stay was 22.80 days. The characteristics of clients are presented in Table 1. Statistical comparisons between characteristics of the current sample and the overall population of clients served by ACTT showed no significant differences along the dimensions of age and gender. The population of clients served by ACTT consisted of 148 clients, 52% of whom were males, with an average age of 45.24 and a range of 20 to 73. The clients' primary diagnoses are presented in Table 2. Descriptive information for the measurement scales used in the study are presented in Table 3.

Table 1
Demographics of Sample

	Mean	Standard Deviation	Range
Age	42.38 years	10.47	(20 - 62)
Age (males)	41.85 years	10.06	(25 - 62)
Age (females)	42.76 years	10.87	(20 - 61)
Years with ACTT	4.05 years	3.08	(.50 - 10)
Years with worker	2.98 years	2.64	(.50 - 10)
Days in hospital in past year	7.02 days	15.44	(0 - 88)

Table 2
Clients' Primary Diagnoses

Diagnosis	Percentage(%)	N (63)
Schizophrenia	52	33
Bipolar disorder	13	8
Schizoaffective disorder	12	8
Personality disorder	8	5
Anxiety disorder	8	5
Other	7	4

Table 3
Descriptive Information on the Measurement Scales Used in the Analyses

Scale	N	Number of items	Potential range of scores	Obtained range of scores	M	SD	Cronbach Alpha
Competency Rating Scale	65	59	59 - 295	202 - 285	252.48	25.32	.98
Attitude Toward Mental Illness	65	40	40 - 200	150 - 188	170.14	10.89	.87
Working Alliance (WAI)	63	36	36 - 252	109 - 248	196.61	26.98	.90
Subjective Quality of Life (SWLS)	65	5	7 - 35	7 - 35	20.28	7.06	.72
Symptoms (SCL-10)	65	10	0 - 40	0 - 32	12.15	8.83	.84
Functioning (MCAS)[a]	65	13	13 - 85	23 - 56	42.15	8.82	.87

[a] 3 subscales of MCAS (Interference with Functioning, Adjustment to Living, and Social Competence)

Data Analysis

Correlations Among Variables. The correlations between the main variables are presented in Table 4. Increased age was found to be associated with fewer symptoms ($r = -.34$, $p < .001$). Being female was associated with higher alliance total scores, suggesting that females form closer alliances with support workers than do males. Females also reported experiencing more symptoms than did males.

Higher levels of competencies were related to more positive attitudes, so that workers who were rated as more competent by their supervisor reported more positive attitudes toward people with a mental illness ($r = .27$ - $.47$, $p = .03$ -$.000$). On the personal attributes subscale of the competency rating scale, more positive attributes were associated with greater number of years experience in mental health ($r = .36$, $p < .01$).

Closer working alliance was related to a higher subjective quality of life ($r = .27$, $p = .05$). Higher levels of task and goal scores were also related to a higher subjective quality of life, but the bond subscale was not. In addition, higher levels of working alliance were related to better functioning ($r = .30$, $p < .05$), such that clients who reported having better alliances with their workers were rated as higher functioning.

Higher subjective quality of life was related to fewer symptoms, so that, as would be expected, clients who felt they had a better subjective quality of life reported fewer symptoms ($r = -.34$, $p < .01$). Contrary to expectations, functioning was not significantly related to either symptoms or to subjective quality of life.

Path Analysis. In order to test the main hypotheses in the study, the various paths in the model presented in Figure 1 were subjected to path analyses. This is a process which uses

Table 4
Intercorrelations Between Demographic Information and All Other Variables in the Model

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Demographics																		
1. Age (clients)	1.00	.04	.19	.05	.10	.07	.04	.20	.13	.14	.01	.11	.02	-.38**	.12	.07	.03	.16
2. Gender (clients) (Male=1, Female=2)	–	1.00	-.06	.16	.07	.17	.19	.07	.27*	.29*	.21	.25*	-.13	.27*	.15	.03	.09	.23
3. Worker's experience in mental health (yrs) a	–	–	**1.00**	**.16**	**.36****	**.19**	**-.05**	**.12**	**-.01**	**.08**	**-.09**	**-.02**	**-.36****	**.05**	**.15**	**-.01**	**.28***	**.18**
Competency measure																		
4. Total score b	–	–	–	**1.00**	**.81****	**.97****	**.86****	**.39****	**.16**	**.22**	**.08**	**.14**	**-.11**	**.22**	**.06**	**.00**	**-.09**	**.17**
5. Personal Attributes	–	–	–	–	1.00	.89**	.72**	.32**	.16	.25	.07	.12	-.22	.24	.08	-.03	-.04	.20
6. Skills	–	–	–	–	–	1.00	.89**	.27*	.15	.20	.10	.11	-.00	.19	.05	.04	-.12	.14
7. Knowledge	–	–	–	–	–	-	1.00	.47**	.19	.24	.11	.17	-.11	.20	.10	.03	-.06	.21
8. Attitude Toward Mental Illness	–	–	–	–	–	–	–	**1.00**	**.17**	**.12**	**.18**	**.16**	**-.05**	**-.00**	**.14**	**.00**	**.04**	**.27***
Working Alliance																		
9. Total score b	–	–	–	–	–	–	–	–	**1.00**	**.71****	**.82****	**.81****	**.27***	**-.12**	**30***	**.32***	**.11**	**.27***
10. Bond	–	–	–	–	–	–	–	–	–	1.00	.68**	.67**	.07	-.06	.26*	.23	.07	.29*
11. Tasks	–	–	–	–	–	–	–	–	–	–	1.00	.81**	.30*	-.11	.22	.22	.07	.22
12. Goals	–	–	–	–	–	–	–	–	–	–	–	1.00	.33*	-.13	.32*	.40**	.15	.22
13. Subjective Quality of Life	–	–	–	–	–	–	–	–	–	–	–	–	**1.00**	**-.34****	**.09**	**.20**	**-.01**	**.02**
14. Symptoms	–	–	–	–	–	–	–	–	–	–	–	–	–	**1.00**	**-.09**	**-.26***	**.02**	**.05**
Functioning																		
15. Total score b	–	–	–	–	–	–	–	–	–	–	–	–	–	–	**1.00**	**.61****	**.55****	**.64****
16. Interference with Functioning	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1.00	.47**	.58**
17. Adjustment to Living	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1.00	.54**
18. Social Competence	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1.00

* $p < .05$; ** $p < .01$; - two-tailed
a Highlighted variables are those included in the path analysis
b The correlations between total scores and subscale scores have been corrected for part-whole artifacts

regression techniques to obtain path coefficients to measure the direct and indirect effects that one variable has on another (Asher, 1976). Four separate standard multiple regressions (with the independent variables entered all together) were performed to determine the direct and indirect effects of the independent variables on the dependent variables. There was one regression for each dependent variable: working alliance, subjective quality of life, symptoms, and functioning. These are presented in Tables 5 - 8. Table 5 presents the regression of working alliance on worker competency, attitudes and experience in mental health. Table 6 presents the regression of subjective quality of life on worker competency, attitude, experience in mental health and working alliance. Table 7 presents the regression of symptoms on worker competency, attitude, experience in mental health and working alliance. Table 8 presents the regression of functioning worker competency, attitude, experience in mental health and working alliance.

Based on the results from the regression analyses shown in Tables 5 - 8, Figure 3 presents the full model of the effects of worker characteristics and working alliance on client psychological well being. The *direct path coefficients (β)* shown in Figure 3 are the standardized beta weights for each predictor obtained from the multiple regression analyses. These beta weights allow for an evaluation of the relative importance of each predictor variable. The *residual path (e)*, or error terms, shown for each of the four dependent variables were also calculated from information yielded by the regression analyses. Specifically, the path coefficient from a residual to a dependent variable is equal to the square root of $1 - \underline{R}^2$, where $\underline{R}^2$ is equal to the variance attributable to the predictors included in the regression equation for each dependent variable (Pedhazur, 1982). In essence, the residual path *(e)* is the amount of variance that remains to be explained by other variables not included in the model.

Table 5

Regression of Working Alliance on Worker Competency, Attitudes and Experience in Mental Health

Variable	Standardized Beta Coefficient	t	p
1) Worker Competency	.12	.85	.40
1) Attitudes	.13	.92	.36
2) Experience in mental health	-.05	-.38	.70

R^2= .04, $F(3,59)$ =.84, p = .48

Table 6

Regression of Subjective Quality of Life on Worker Competency, Attitudes, Experience in Mental Health and Working Alliance

Variable	Standardized Beta Coefficient	t	p
1) Worker Competency	-0.04	-0.32	0.75
2) Attitudes	-0.02	-0.17	0.87
3) Experience in mental health	-0.42	-3.67	0.00***
4) Working Alliance	0.27	2.40	0.02*

$R^2 = .26$, $F(4,58) = 5.11$, $p = .001$
* $p < .05$
*** $p < .001$

Table 7

Regression of Symptoms on Worker Competency, Attitudes, Experience in Mental Health and Working Alliance

Variable	Standardized Beta Coefficient	t	p
1) Worker Competency	-0.22	1.59	0.12
2) Attitudes	-0.08	-0.56	0.58
3) Experience in mental health	0.07	0.54	0.60
4) Working Alliance	-0.14	-1.07	0.29

$R^2 = 0.06$, $F(3,59) = 1.00$, $p = 0.42$

Table 8

Regression of Functioning on Worker Competency, Attitudes, Experience in Mental Health and Working Alliance

Variable	Standardized Beta Coefficient	t	p
1) Worker Competency	-0.05	-0.40	0.70
2) Attitudes	0.09	0.65	0.52
3) Experience in mental health	0.16	1.29	0.20
4) Working Alliance	0.30	2.36	0.02*

$R^2 = 0.12$, $F(4,58) = 2.04$, $p = 0.10$

* $p < .05$

Figure 3: Path model for effect of worker characteristics and alliance on client well being

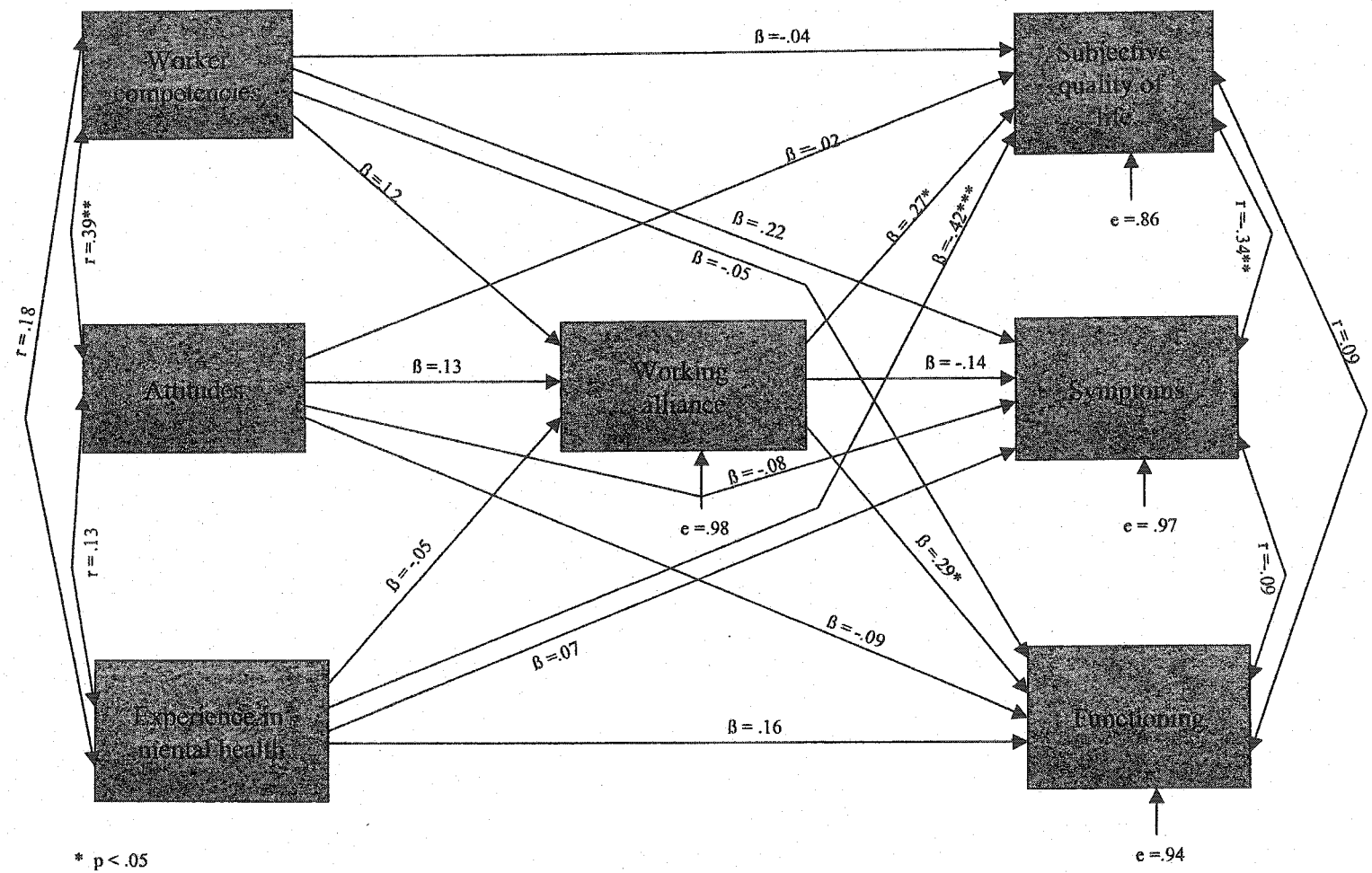


Figure 3 shows that in the model proposed to explain how worker characteristics and working alliance are related to the psychological well being of clients with severe mental illness were found to be significant. None of the three worker characteristics examined had significant direct effects on the working alliance. This also meant that they could not have any indirect effects on the outcome measures through the mediation of working alliance. Of the worker characteristics examined, only years of experience in mental health had a direct effect on client outcome. Experience in mental health had a significant direct effect on subjective quality of life ($\beta = -.42$, $p < .001$). Working alliance had a significant direct effect on subjective quality of life ($\beta = .27$, $p < .05$), and on functioning ($\beta = .29$, $p < .05$).

Preliminary Analysis

As the Competency Rating Scale was recently developed for evaluating workers in the field of severe mental illness, one of the goals of this study was to further test the measure. It is important to examine the reliability and validity of the Competency Rating Scale.

1) *Does the Competency Rating Scale exhibit adequate reliability in this study?*

The Competency Rating Scale exhibits excellent reliability, with Cronbach alpha ranging from .92 -.96 for the subscales to .98 for the full scale. Each of the subscales of the competency measure correlated significantly with the overall scale: personal attributes ($r = .88$, $p < .01$), knowledge ($r = .99$, $p < .01$), and skills ($r = .91$, $p < .01$).

2) *The validity of the Competency rating scale can be examined by examining its correlation with related constructs.*

   (a) *What is the relationship between worker competencies and attitudes toward the mentally ill?*

Each of the subscales of the competency measure were significantly correlated with worker attitude: total score ($r = .39$, $p < .01$), personal attributes ($r = .32$, $p < .01$), knowledge ($r = .47$, $p < .01$), and skills ($r = .27$, $p < .05$). Workers who were rated as having higher competencies had more positive attitudes persons with a mental illness.

(b) What is the relationship between worker competencies and number of years experience in mental health?

Number of years in mental health correlated significantly with the workers' personal attributes subscale of the competency measure ($r = .36$, $p < .01$). Workers who had been in the field of mental health longer had higher competency skills in the area of personal attributes.

Research Question 1:

Hypotheses 1a-c:

Are worker characteristics associated with a better working alliance?

Table 5 presents the regression of working alliance on worker competency, attitude and experience in mental health. As can be seen, none of the worker characteristics in this study were found to be related to working alliance.

Research Question 2:

Hypotheses 2 a-c:

Are worker characteristics associated with the subjective quality of life of clients?

Table 6 presents the regression of subjective quality of life on worker competency, attitude, experience in mental health, and working alliance. Worker characteristics in the form of worker competencies and worker attitudes toward mental illness were not found to be related to subjective quality of life of clients, as evidenced in Table 6. A greater number of years in mental health,

contrary to predictions, was found to be related to a *lower* subjective quality of life ($\beta = -.42$, $p<.001$). Clients who reported a higher subjective quality of life had workers with fewer years experience working in mental health.

Hypotheses 2d-f:

Do worker characteristics influence the level of symptoms of clients?

Table 7 presents the regression of symptoms on worker competency, attitude, experience in mental health and working alliance. Worker characteristics in the form of worker competencies, worker attitudes toward mental illness, and experience in mental health were not found to be related to level of symptoms of clients, as can be seen in Table 7.

Hypotheses 2g-i:

Do worker characteristics influence the level of functioning of their clients?

Table 8 presents the regression of functioning on worker competency, attitude, experience in mental health and working alliance. It is apparent from Table 8 that worker competencies, worker attitudes toward mental illness, and experience in mental health were not found to be related to level of functioning of their clients.

Research Question 3:

Hypotheses 3a-i:

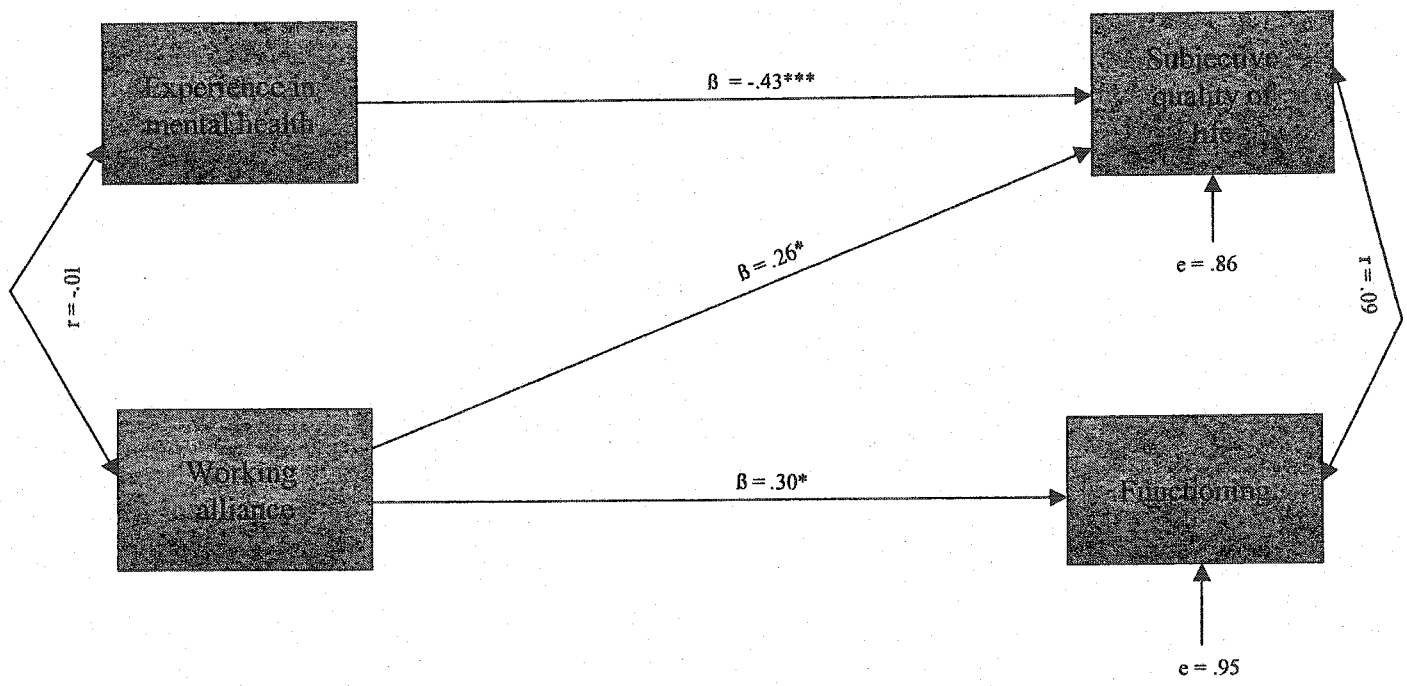
Does working alliance mediate the relationship between worker characteristics and client psychological well being in the form of subjective quality of life, symptoms, or functioning?

Working alliance did not mediate the relationship between worker characteristics and client psychological well being as none of the worker characteristics were found to be related to working alliance, as is shown in Table 5. However, as can be seen from Tables 6 and 8, higher levels of

working alliance was found to be related to a higher client subjective quality of life ($\beta = 0.27$, $p = .02$) and a higher level of client functioning ($\beta = 0.29$, $p = .02$).

The trimmed model of the effects of worker characteristics and working alliance on client psychological well being is presented in Figure 4. The model was trimmed by eliminating the non-significant paths and recalculating the direct path coefficients *(β)*. The direct path coefficients were recalculated by performing regressions of: a) satisfaction with life on alliance and years in mental health and b) functioning on alliance. These standardized beta weights allow for an evaluation of the relative importance of each predictor variable (Burt, 1973). Figure 4 demonstrates that in this model, experience in mental health is the most closely associated with subjective quality of life, with working alliance also associated with subjective quality of life. In addition, it shows that working alliance has a direct relationship with client functioning.

Figure 4: Trimmed path model of the effects of worker characteristics and alliance on client well being



* p < .05
** p < .01
*** p < .001

CHAPTER 4: DISCUSSION

The purpose of the present study was to test a model of the relationships between worker characteristics, working alliance, and client psychological well being for persons with severe mental illness. The objectives were threefold: (a) to further understand the contribution of the worker to client outcomes in community treatment programs, (b) to test the mediational role of working alliance in community treatment programs for persons with severe mental illness, and (c), to further test a competency rating scale developed for use with persons with severe mental illness. In the first four sections the findings on worker characteristics and working alliance are discussed within the context of their respective literatures. In the final section of the discussion, 0the limitations of the present study and the implications for future research are presented.

Findings

Worker Competency Findings. The Competency rating scale showed good internal consistency, as was also evident in the findings of Aubry and colleagues (Aubry et al., 2000). The range of scores found on the Competency rating scale in this study was small and restricted due to ceiling effects, which is very likely to have dampened the effects of potential correlations with other variables. This is consistent with the finding that few relationships reached statistical significance. Despite this, trends toward statistically significant relationships were observed, with the relationship between competency and alliance in the predicted direction, that is, with greater competency associated with a stronger alliance. The ceiling effects obtained on this measure make it difficult to compare the overall levels of competency obtained. The mean total competency score in a previous study that used this measure with a similar population was significantly lower than the one found in the present study (Aubry et al., 2000). This suggests that

supervisors in the current study exhibited a tendency to assign workers higher scores than would be expected. Examination of the scores suggests this to be the case. For instance, the mean Competency score obtained for this sample is equivalent to a rating of 5 "superior performance / in the top 20%", whereas in the previous study it was found that the mean fell in the category equivalent to 4 "above average performance / in the top 50%" (Aubry et. al., 2000).

In support of the content validity of the measure, the competencies identified turned out to be similar to those found to lead to positive outcomes in working with psychotherapy clients (Luborsky et al., 1985), persons with a developmental disability (Burchard et al., 1987) and to those characteristics identified by clients with severe mental illness as important features of community support (McGrew et al., 1996; Prince et al., 2000).

In the path analysis as well as in the correlation matrix, the overall worker competency was not found to be related to the mediational or outcome variables in the study. In the following section, the relationships between worker competency and every other variable in the study will be discussed in turn.

Looking at relationships among the worker characteristics, all subscales as well as the total score of the Competency Rating Scale correlated significantly with worker attitudes, indicating that workers who were rated as more competent also reported more positive attitudes toward persons with psychiatric disabilities. This is consistent with Cohen's (1990) suggestion that greater competency leads to a greater sense of self-efficacy, which in turn leads to more positive attitudes. The worker competency score was not found to be related to experience in mental health, although the personal attributes subscale of the Competency Rating Scale did correlate with experience. Those workers who had been working in the field of mental health longest were

most likely to be rated as being sensitive to individual differences, showing commitment to work, and adopting a friendly, kind, and warm manner with others. This relationship was expected with worker competency; however, one might expect that it would be skills and knowledge, rather than personal attributes, that would change with time. One explanation is that perhaps the personal attributes measured are precisely those attributes that encourage a worker to stay in the mental health field longer. Alternatively, it is possible that personal attributes and number of years experience in mental health are both related to a third variable. Further study would help to test these possibilities.

Unlike the results from a previous study, worker competency was not found to be related to level of working alliance. The failure to find a relationship between worker competency and working alliance may be a result of the restricted range of the former. Alternatively, it might result from the fact that ACT uses a team approach and there are therefore relationships between other workers and clients that may confound the findings.

Contrary to previous findings (Aubry et al., 2000), the Competency rating scale did not correlate with subjective quality of life, symptoms, or functioning of clients with severe mental illness. The restricted range obtained on this measure may account for the lack of statistically significant findings.

Despite the fact that the ceiling effects and restriction of range observed on this measure likely reduced some relationships and obscured others, the Competency rating scale yielded some interesting information. Although there were few significant relationships found between the main variables, upon examining bivariate correlations and trends, competencies appear to be related to working alliance, subjective quality of life and symptoms. In addition, there were

relationships between subscales that warrant further study. The fact that the items obtained during construction of the measure are similar to those found to be relevant in the fields of psychotherapy and developmental disabilities suggests this is a robust construct and that research in each might inform the others. In addition, the Competency rating scale appears to be a measure which could be useful in the selection, training and evaluation of workers.

Attitude Findings. The attitude measure showed good internal consistency; however, the range was found to be somewhat restricted and the level of worker attitudes reported in this study were higher than those found for other case managers in the literature (e.g., Murray & Steffen, 1999). This ceiling effect may have reduced the correlations with other variables. Attitudes were not found to be correlated with any of the main variables in the study other than the competency scales. This finding is not consistent with predictions by Antonak and Livneh (1988) and Cohen (1990) that treatment would be affected by worker attitudes. Cohen (1990) found that negative attitudes toward people with severe mental illness were associated with resistance against providing adequate treatment.

One factor that may have contributed to the restricted range and the lack of significant findings is that the attitude measure has such 'face validity' that it is easy for workers to identify and endorse socially desirable responses. Another alternative is that the attitudes measured in the scale are outdated. In fact, several workers commented that some items seemed to be outdated, reminiscent of a time when the focus of community attitudes revolved around fears about the dangerousness of the mentally ill. This restrictive philosophy was more prevalent in the early days of the deinstitutionalisation movement, when persons in the community had had little exposure to persons with a mental illness and their concerns were primarily about safety. More recently, the

focus of mental health reform has increasingly addressed issues of social integration, subjective quality of life and increased self-efficacy for mental health consumers (Murray & Steffen, 1999).

Attitudes toward mental illness were found to differ among the workers surveyed. This is consistent with previous research (e.g., Murray & Stephen, 1999) that has shown that attitudes do differ even among those workers who have been trained to work with persons with psychiatric disabilities. In the present study, despite the ceiling effects observed, these differences were found to be related to competency, in that those workers who were rated as more competent reported more liberal and less restrictive attitudes toward persons with psychiatric disabilities. In addition, despite being measured by an outdated scale which exhibited a ceiling effect, these differences were shown to be related to a subscale addressing social integration which, is an important focus of treatment. This is interesting and may relate to comments by Antonak and colleagues (Antonak & Livneh, 1988) that the worker's attitude toward disability can affect the acceptance of the illness by family, acquaintances and the general population. These attitudes can each effect the degree of social integration an individual achieves. This is an avenue of research that may shed some light on the links between the effect that workers' attitudes have not only on their clients, but also on those who surround them, and how these effects can relate to client outcomes such as social integration, itself an important goal of disability reform. Further research with a different attitude measure and a larger sample size may show that there are both direct and indirect effects of attitudes on client outcomes.

Experience Findings. As can be seen in the path analysis in Figure 3, experience in mental health was significantly related to subjective quality of life, but, contrary to expectations, workers with more experience in mental health had clients who reported a lower quality of life. There are

several possible explanations for this. Due to their greater experience, it may have been that longer-tenured workers were assigned less well-functioning and less satisfied clients. This does not appear to be the case, however, as assignment of clients to workers occurred on a rotational basis, with each new client being assigned in sequence. It might be due to the fact that workers who have been working for a longer period of time become tired of the job and become uncaring and thereby less effective. If this were the case, however, worker competency would be expected to be negatively correlated with years in mental health, which is not the case. In fact, greater number of years of experience in mental health was related to higher scores on the personal attributes subscale of the competency rating scale. This scale includes such attributes as being respectful, having a positive attitude, being an advocate for clients, believing in rights to a certain standard of living, as well as being warm, flexible and client centred. Workers exhibiting these desirable traits are unlikely to be less caring and less effective than other workers. Another possible explanation is that more experienced workers push their clients harder and make them aim higher and therefore the clients see a bigger discrepancy between their idealized life and their current one.

An alternative, and perhaps more plausible, explanation for this finding is that more experienced workers were trained earlier and had more exposure to institutionalization and its more paternalistic philosophy. It has been suggested by Draine and Solomon (1986) that there is a group cohort effect for age among people with psychiatric disabilities. In their study, older clients, who have had more exposure to the old philosophy of institutionalization were found to form significantly closer working alliances with their case managers than did a younger age cohort, despite the fact that the two groups had an equal number of hospitalizations (Draine & Solomon,

1986). Those clients who were exposed to the older and more paternalistic experience of institutionalization would have different needs and expectations than a younger age cohort. It is suggested that there may be a similar group cohort effect with workers in terms of the year of entry into the mental health profession. Possibly workers who were exposed to the earlier philosophy of institutionalization perceive different needs among persons with mental illness in general, and their clients in particular, than those who have entered the field, and been trained, more recently. Murray and Steffen (1999) describe the current focus of mental health reform as encouraging empowerment and increasing self-efficacy in mental health consumers. It is possible that the training of workers who entered the field earlier, and their early experience with persons with severe mental illness may not have encouraged them to focus on greater independence, but rather to adopt a "caring for" rather than an "empowering" approach to treatment..

The inclusion of worker's experience as a variable in this study suggested that there was a "training cohort" effect in mental health philosophy. Beutler and colleagues (Beutler et al., 1994) have suggested that it is important not to confound experience or training level with skill level. The findings of this study provide support for the argument that measuring both the skill level and years of experience of the worker adds more information than selecting one or the other.

The lack of association between years of experience and working alliance is consistent with Dunkle and Friedlander's findings (Dunkle & Friedlander, 1996), but differed from Mallinckrodt & Nelson's (1991) finding that higher task and goal subscale scores were related to greater number of years experience of the therapist. In explaining the discrepancy between their results and those of Mallinckrodt and Nelson, Dunkle and colleagues suggest that it may be due to the greater sample size and range of years experience of therapists in the Mallinckrodt and Nelson

(1991) study. This holds true for the current study as well.

Working Alliance Findings. The internal consistency of the Working Alliance Inventory was found to be very good, and the consistency of the subscales was good. The scores on the measure are similar to those found in a population of psychotherapy clients (Mallinckrodt & Nelson, 1991) and in a study of the alliance between support workers and clients with severe mental illness (Solomon et al., 1995). It is clear from the findings of this study that clients with severe mental illness do form alliances with their workers, as do clients in psychotherapy. Draine and Solomon (1986) suggest that the relationship may actually be more important to persons with severe mental illness than to others. They argue that this is because people with a mental illness are more likely to have exhibited unusual behaviour that caused the public to withdraw and to maintain a distance between themselves and the person with severe mental illness. These authors found that having experienced withdrawal of others or other disaffiliating experiences such as having an arrest history lead to closer alliances. It is possible that these disaffiliating experiences left clients with decreased levels of social support, which would result in their being more open to engaging in a relationship with a worker or therapist. Additionally, individuals with severe mental illness may be more motivated to engage in an alliance to enable them work on goals and tasks that will improve the quality of their lives.

The scores on the Working Alliance Inventory were significantly correlated with gender, indicating that females reported higher levels of alliance with their workers than did males. This is consistent with previous research which has found that women tend to have more social support and different social transactions (Goering et al., 1992; Hall & Nelson, 1996) than men. Unlike the findings of Draine and Solomon (1996), age was not found to be related to working alliance in this

study.

As previously discussed, none of the paths between worker characteristics and working alliance were significant. Working alliance, therefore, could not act as a mediating variable between worker characteristics and psychological well being. The correlation matrix and the path analysis indicated that a better working alliance was associated both with a better subjective quality of life and with higher functioning.

The finding that higher scores on the Working Alliance Inventory were associated with a better subjective quality of life is consistent with that of McCabe, Roder-Wanner, Hoffman & Priebe (1999) in a study of long term clients. Examination of the subscale correlations indicates that higher task and goal subscale scores were related to a better subjective quality of life, but the bond subscale score was not found to be related to either variable. This is consistent with Horvath and Greenberg's (1989) finding that task and goal subscales of the Working Alliance Inventory are more highly correlated with outcome than is the bond subscale when the client's view is measured. It therefore appears that it is the collaborative working component of the alliance, rather than the affective component, that relates most closely to a client's positive overall ratings of life. A closer working alliance between client and worker was associated with higher client functioning. It is possible that having a closer alliance with his or her worker allows clients to better profit from treatment and thus to achieve a higher level of functioning. Alternatively, it is possible that higher functioning clients form closer alliances with their worker. Working alliance was not found to be related to level of symptoms. Mallinckrodt (1996) found that working alliance was indirectly related to symptom reduction through an increase in social support.

Summary of Findings. Overall, the findings in this study show very modest success in

identifying the contribution of support workers to clients with severe mental illness. Most of the paths in the proposed model were found not to be significant when path analyses were performed. There were, however, some interesting results. First, working alliance was found to be associated with both greater subjective quality of life and better client functioning even when controlling for worker competencies, attitudes and years in mental health. This is consistent with research from the fields of psychotherapy (Horvath & Symonds, 1991; Mallinckrodt, & Nelson, 1991) and severe mental illness (Gerhs & Goering, 1991; Solomon et al., 1995) which show that working alliance is an important component of client/therapist relationships and is positively related to client outcome. A review of the literature on common factors in psychotherapy (e.g., Lambert & Bergin, 1994; Luborsky et al., 1985) indicated that the relationship between client and therapist is an important factor which influences outcome. This is true across different therapies, as well as with different populations. Surveys of the components of case management which are considered important by individuals with severe mental illness indicate that they also report the helping alliance or relationship with the worker as being key (e.g., McGrew et al., 1996; Prince et al., 2000). These findings lend support to the idea that the client/worker relationship is similar to that between psychotherapy clients and their therapists, which reinforces the idea that research in one area can inform the other.

Second, contrary to expectations, increased worker experience in mental health was associated with a lower subjective quality of life for clients. It is thought that this may have been due to the changing philosophy of mental health reform, in that workers with more experience were exposed to the early wave of deinstitutionalisation which focussed primarily on illness as contrasted with the more recent focus on independence and self-efficacy for mental health consumers. It is clear,

however, given the small amount of variance explained by these variables, that there are external variables that are associated with working alliance and client psychological well being other than the ones considered here. Nevertheless, there is evidence that worker characteristics, and especially working alliance, do have an effect on client psychological well being. Working alliance is an important component of the relationship between client and worker that is related to client outcome. This suggests that by identifying those variables which are associated with the working alliance, it will be possible to improve the alliance and thereby focus on those variables to improve client outcomes.

Limitations and Future Considerations

There were several shortcomings to this study. An important one is sample size. Although the participation rate was adequate (just slightly under 50%), the resulting sample of 65 clients (63 for some analyses) was low and undoubtedly reduced the power of the analysis, making significant relationships more difficult to detect. The generalizabilty of the findings is further limited given that the sample was one of convenience and not randomly selected. Clients were not randomly chosen for participation in the study. An effort was made, however, to ensure that workers were not biased about which clients they approached to participate in the research. This was done by having the group as a whole eliminate those clients they felt were not well enough to participate and then having each worker approach everyone else. Despite this, there may still be differences between those who participated and those who did not, based on the fact that clients who participated in the study were perhaps less symptomatic and possibly more cooperative with the worker. This last factor may be related to the quality of the working alliance. Ideally, it would be possible to obtain functioning scores for all clients in the program for comparison purposes.

Statistical comparisons between characteristics of the current sample and the overall population of clients served by ACT showed no significant differences along the dimensions of age and gender. However, information about more clinical dimensions, such as diagnosis or length of time in the program, were not available for the whole group and therefore no comparison could be made even with the whole population of ACT clients. This limits our ability to draw conclusions about the generalizability of the results of the study. In looking at worker selection, it is interesting to note that all workers (with the exception of two who had not been with the service for six months and therefore were not aproached) agreed to participate in the study. This alleviates concern about a self-selection effect for workers, with, for instance, only the best workers volunteering to participate.

Working with clinical populations in the community presents inherent difficulties, such as those related to difficulty with access. This can be especially true for persons with a serious mental illness, who may be dealing with mental health crises and who may have trouble trusting people. Despite this, future work addressing the contribution of worker characteristics and working alliance to the psychological well being of clients should ideally be done with a larger sample. The larger sample would increase the power of the analyses and allow more variables to be included. A potential limitation with the methodology of the study is that the clients had, on average, been receiving services from ACT for four years at the time of participation in the study. It is possible that the window of opportunity to measure program-related change had been missed. This may have restricted the range of the outcome variables thus limiting the ability to find statistically significant relationships.

A further limitation of the study is that ceiling effects were obtained for two predictor

variables (competencies and attitudes), and thus it was difficult to determine if the lack of significant correlations was due to an actual absence of relationships or due to the fact that relationships were being masked. In addition to these ceiling effects, the attitude measure was found to be somewhat outdated. In future studies, alternative measures should be considered, especially for this variable. The fact that the observations were not independent (i. e., the same supervisor rated several workers, and most workers filled out questionnaires for more than one client) is another limitation of the study. Path analysis, the type of statistical analysis used in this study is based on the assumption that the data are independent. This non-independence may have added to the ceiling effects that were found on the Competency Rating Scale. Finally, although the internal consistency of each of the measures was found to be good, the calculation of inter-rater reliabilities would add useful information. Inter-rater reliabilities were not tested for two reasons. For the competency measure, there was only one supervisor for each of the workers who was in a position to rate their competencies. For the measure of client functioning, it was not possible to obtain reports from more than one person per client as this would have added to the workers' workload.

The use of information from various sources (e.g., supervisor ratings, worker ratings and client self-report) is a strength of this study. It would be interesting, in addition, to get multiple informant ratings for variables such as competencies and working alliance. For instance, it would be helpful to know whether clients' ratings of worker competencies are related to working alliance and psychological well being, given that supervisors' ratings were not found to be related to these measures. In addition, it would be helpful to have different types of data, such as observational data, to further examine the reliability and validity of the constructs measured. For instance,

although it was predicted that level of symptoms would be related to working alliance and psychological well being, this result was not found. An objective measure of symptoms to further examine this finding might shed further light on this relationship.

Another issue to be addressed is whether the group approach to community treatment used by ACTT had any effect on the current findings. Looking at the working alliance, clients reported similar levels of alliance to those found in previous studies on clients with severe mental illness and their (individual) support workers (Solomon et al., 1995). Because clients in the current study were also seen by other members of the team, it is difficult to know if some portion of client's well being (whether negative or positive) is derived from contact with the other workers. Some relationships with other team members may be positive, thereby possibly inflating alliance scores, whereas other relationships may be negative, thereby decreasing alliance scores. In order to determine whether there were group effects which either dampened or inflated the correlations found between worker competencies, working alliance and psychological well being, it would be of interest to repeat this study with a sample from a community treatment program that operates such that each client has only one case worker.

There are several factors that should be considered in future studies. Although in this study working alliance was not found to be related to level of symptoms, adding social support to the model might demonstrate an association between these two variables. Mallinckrodt (1996), for instance, found that working alliance was indirectly related to symptom reduction through the mediational effects of social support. Another interesting variable to measure would be level of worker stress. This would help to rule out worker burnout as an explanation of workers' greater number of years experience in mental health being associated with a lower subjective quality of

life for clients.

There is evidence from the association between attitudes and the social competence subscale scores of the Functioning scale that workers' attitudes are associated with clients' social competence and integration. This is an interesting finding that suggests links to other areas of research such as the deinstitutionalisation literature which has found that social integration, although an important goal of the current mental health reform, has largely not been achieved (Flynn & Aubry, 1999). Further exploration of this finding may identify a relationship with social support, as has been suggested by Mallinckrodt (1996).

Implications for Practice

The results of this study indicate that there are several factors that should be considered when hiring and training community support workers. Alliance is an important component of the relationship between client and worker, and workers who are able to establish and maintain a close working alliance with individuals with severe mental illness will likely have clients who have better outcomes in the areas of subjective quality of life and functioning. Results showed that working in the mental health field for a greater number of years was associated with a poorer subjective quality of life for clients. If the interpretation of a training cohort effect for those trained in and exposed to a more restrictive treatment philosophy is correct, it would suggest that the selection and training of community support workers requires the consideration of several factors. Attention should be paid to previous experience in the mental health field in order to determine if there are past attitudes and training that may interfere with the worker's relationship with clients. Training should emphasize attitudes and treatment approaches that are modelled on the most current aspects of mental health reform, and should be ongoing in order to maintain the

focus and quality of care. There is some evidence that suggests that an important characteristic of an effective community support worker includes positive attitudes. Positive and liberal attitudes are related to higher levels of client social competence and integration, which are major goals of deinstitutionalisation and mental health reform. The selection and training of workers who can foster these attributes may be of benefit to clients.

Conclusion

The present study proposed and tested a path analytic model of the relationship between worker characteristics, working alliance, and psychological well being for clients in a community treatment program. Although results of the path analyses did not support the existence of a mediational model between worker characteristics, working alliance, and psychological well being, findings did show that clients with a better working alliance had better subjective quality of life and better functioning.

Research tells us that working alliance plays an important role in psychotherapy, as well as in treatments for persons with severe mental illness. The factors that are associated with working alliance, either directly or indirectly, have yet to be determined, although there is at least preliminary evidence that worker competencies may be related to the formation of the therapeutic bond. Further research is needed to identify variables that are related to the task and goal components of the working alliance. This research should examine client characteristics as well as further worker characteristics that may be related to working alliance. The results of this study support the contention that relationships between clients with severe mental illness and their community workers are similar to those between psychotherapy clients and their therapists. Information about the interplay between the antecedents of working alliance and client outcome

would add to current knowledge of both psychotherapy and community treatment program processes.

This exploratory research has contributed to the knowledge about worker contributions to the working alliance and psychological well being of clients of a community treatment program for persons with severe mental illness. It establishes a link to previous research in the field of developmental disabilities and psychotherapy research. Similar competencies have been found across the fields of psychotherapy, developmental disabilities and psychiatric disabilities. The common factors model discussed in the psychotherapy literature (Lambert & Bergin, 1994) appears to be relevant across different types of helping relationships and different challenges faced. With future research, and evidence that this finding can be replicated with other populations, it may be possible to develop a competency measure that can be used to compare and evaluate all therapies and client treatments and their practitioners.

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APPENDIX A

RECRUITMENT SCRIPT & CONSENT FORMS

RECRUITMENT SCRIPT
(For support workers)

A research study is currently being conducted on the clients of Assertive Community Treatment Team - Lanark, Leeds and Grenville. It is looking at the kinds of services we provide to clients and how they affect clients in the service. The Assertive Community Treatment Team is working with researchers from the School of Psychology at the University of Ottawa for this study.

The researchers are interested in talking with people like yourself who have received services from the Assertive Community Treatment Team. They would like to ask you some questions about your daily life.

If it is O. K. with you, I will give Yvanna Kroitor, who is a researcher with the project, your name so that she can contact you to explain more about the study. It is completely up to you if you would like to meet with Yvanna. If you say no, it won't affect any of the services you receive in any way. As your support worker I am not involved with this project and it will make no difference to me whether or not you participate. The decision is yours alone to make.

SUPPLEMENTARY INFORMATION
(In response to client questions/concerns)

Participating in the study will not cost you anything. Any expenses, such as travel expenses, will be covered by the research project.

The meetings for this study will take place in your home or in a private room at Brockville Psychiatric Hospital, whichever you prefer.

You can decide not to participate in this study at any time.

You will be paid ten dollars for participating in the study.

TO BE FILLED OUT BY STAFF

Client name _____ CB # _____

Date study discussed _____

Agreed to meet with researcher Yes ___ No ____

Preferred means of contact (please include phone number if the client would like to be contacted by telephone):

CLIENT CONSENT FORM

Title of Project

Service provider competencies as predictors of psychological well being for persons with a severe mental illness

Details of the study

My name is Yvanna Kroitor and I am a Graduate Student in the school of Psychology at the University of Ottawa. I am working on a research study with the Assertive Community Treatment Team - Lanark, Leeds & Grenville which is being supervised by Dr. Gary Gerber, Adjunct Professor at the University of Ottawa.

The purpose of the study is to identify skills of service providers that relate to positive well being in clients experiencing psychiatric difficulties.

We are asking you to participate in this study because you are currently receiving services from the Assertive Community Treatment Team - Lanark, Leeds & Grenville.

What's involved?

I will ask you questions from several different questionnaires asking about the people you spend time with, how you spend your time, and your overall well being. The interview will last approximately one and a half hours. A break will be built into the interview, but you can have additional breaks if you feel that you need them. I will also interview your support provider from the Assertive Community Treatment Team - Lanark, Leeds & Grenville.

Participation in this study should not cost you anything. You will be given the money to cover any travel costs that you may have as a result of participating. You will be paid ten dollars for your participation in this interview. Payment will be made, in cash, at the end of the interview.

Risks

There are no risks expected from taking part in this study. Some people may feel more nervous during an interview. If you feel uncomfortable during the interview, please let me know. You can take a break, or we can meet at another time. You can also decide to end your participation in the study. If there is any question you do not wish to answer, you can just tell me to skip it.

Benefits

You may not benefit directly from this study. What we learn from talking with you may help others who receive services in the future. A possible benefit of participating in the study for you is the chance to talk to someone about things that are important to you.

Confidentiality

Any information that you give for this study is confidential. Your case managers and the other staff of the Assertive Community Treatment Team - Lanark, Leeds & Grenville will not be told what you have said. Instead of your name, a code number will be used to identify the information you give us. Any research reports that come from this study will not identify you in any way. The reports will be

written about everyone that participates in the study, as a group. All the information collected in the study will remain strictly confidential and will be used for research purposes only. The questionnaires will be kept in a locked filing cabinet in a locked office at the University of Ottawa.

Voluntary Participation

It is your decision if you want to take part in this study. You can change your mind and leave the interview at any time. This will in no way affect the services you receive from the Assertive Community Treatment Team - Lanark, Leeds & Grenville. You will still receive the best care they can provide. Your support provider is in no way connected to the study and it will not make any difference to him or her whether or not you participate. The decision is yours alone.

Participation Statement

Someone has read the above information to me. I understand what is involved in the study. My questions have all been answered. I have had enough time to think about whether I want to take part. I am signing this form voluntarily (on my own). I know that I can change my mind and not participate at any time. I will still receive the best care available. If I have more questions I will call:

Yvanna Kroitor at 345-1461 ext. 2296 or Dr. Gary Gerber at 345-1461 ext 2396.

By signing this consent form, I am showing that I agree to take part in this study. There are two copies of the consent form, one of which is for me to keep.

NAME OF PARTICIPANT (Please Print) _____

PARTICIPANT'S SIGNATURE_____ DATE_____

Thank you for your time.

I have carefully explained to this person the nature of the research study. I certify that, to the best of my knowledge, the person understands clearly the nature of the study and demands, benefits and risks involved to participants in this study.

RESEARCHER'S SIGNATURE _____ DATE _____

A summary of the results will be available once the interviews are done. If you would like a copy of the report mailed to you when it is ready, please write your address here:

(Valid until June 2000)

INFORMED CONSENT FOR SUPPORT WORKERS

I, _____, am interested in participating in the study on characteristics of effective service providers to persons with psychiatric difficulties conducted by Yvanna Kroitor, PhD Candidate and Dr. Gary Gerber, Adjunct Professor at the University of Ottawa. The purpose of the study is to identify skills of service providers that contribute to positive well being in clients with serious mental illness.

If I agree to participate, my participation will involve completing a questionnaire asking about the functioning of some of my clients. I understand that the clients in question have agreed to participate in the study and have already signed an informed consent form. The time required will be approximately 15 to 20 minutes per questionnaire (i. e., per client). I will also be asked to complete a questionnaire looking at beliefs about persons with a mental illness. In addition, I understand that my immediate supervisor will be rating my competencies. I understand that the ratings will be completely confidential and once they are completed all names will be removed. The researcher will remain blind to my supervisor's ratings and the information collected will be identifiable only by a code number.

I understand that I am free to withdraw from the study at any time without any penalty occurring to me or to my clients. As well, I understand that I can refuse to answer any questions that I find uncomfortable. I have also been assured that all the information collected in the study will remain strictly confidential and will only be used for research purposes. The questionnaires will be kept in a locked filing cabinet in a locked office at the University of Ottawa and will be destroyed once the research project has terminated.

There are two copies of the consent form, one of which is for me to keep. If I have any questions about the study, I can call Yvanna Kroitor at 345-1461 ext 2296 or Dr. Gary Gerber at 345-1461 ext 2396.

PARTICIPANT'S SIGNATURE _____ DATE _____

RESEARCHER'S SIGNATURE _____ DATE _____

Thank you for your time.

A summary of the results will be available once the interviews are complete, around January 2000. Please write your address here if you would like to receive a copy of the summary report. Address (if interested in summary of results):

(Valid until June 2000)

INFORMED CONSENT FOR SUPERVISORS

I, _____, am interested in participating in the study on characteristics of effective service providers to persons with psychiatric difficulties conducted by Yvanna Kroitor, PhD Candidate and Dr. Gary Gerber, Adjunct Professor at the University of Ottawa. The purpose of the study is to identify skills of service providers that contribute to positive well being in clients with serious mental illness.

If I agree to participate, my participation will involve completing a questionnaire asking about the performance of support workers under my supervision. I understand that the support workers in question, as well as their clients, have agreed to participate in the study and have already signed an informed consent form. I understand that the ratings will be completely confidential and will be identified only by code number. The researcher will remain blind to my individual ratings and the information collected will be identifiable only by code number. The time required will be approximately 15 to 20 minutes per questionnaire (i. e., per support worker).

I understand that I am free to withdraw from the study at any time during the course of it without any penalty occurring to me or to my staff. As well, I understand that I can refuse to answer any questions that I find uncomfortable. I have also been assured that all the information collected in the study will remain strictly confidential and will be used for research purposes only. The questionnaires will be kept in a locked filing cabinet in a locked office at the University of Ottawa and will be destroyed once the research project has terminated.

There are two copies of the consent form, one of which is for me to keep. If I have any questions about the study, I can call Yvanna Kroitor at 345-1461 ext 2296 or Dr. Gary Gerber at 345-1461 ext 2396.

PARTICIPANT'S SIGNATURE _____ DATE _____

RESEARCHER'S SIGNATURE _____ DATE _____

Thank you for your time.

A summary of the results will be available once the interviews are complete, after April 2000. Please write your address here if you would like to receive a copy of the summary report.

Address (if interested in summary of results):

(Valid until June 2000)

APPENDIX B

CLIENT MEASURES

Demographics

1. Client's Name: _____

2. Age : _____

3. Gender : _____

4. How long have you been receiving help from ACTT? _____

5. How long have you been receiving services from your current support provider? _____

Satisfaction With Life Scale

Below are five statements with which you may agree or disagree. Using the 1 - 7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding. The 7- point scale is as follows:

1 = strongly disagree
2 = disagree
3 = slightly disagree
4 = neither agree nor disagree
5 = slightly agree
6 =agree
7 = strongly agree

_____ 1. In most ways my life is close to my ideal.

_____ 2. The conditions of my life are excellent.

_____ 3. I am satisfied with my life.

_____ 4. So far I have gotten the things I want in life.

_____ 5. If I could live my life over, I would change almost nothing.

Working Alliance Inventory

Below are some statements about your relationship with your worker with which you may agree or disagree. Using the 1 - 7 scale below, indicate your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding. The 7- point scale is as follows:

1 = strongly agree
2 = agree
3 = slightly agree
4 = neither agree nor disagree
5 = slightly disagree
6 = disagree
7 = strongly disagree

____ 1. I feel uncomfortable with my worker.

____ 2. My worker and I agree about the things that I will need to do to help improve my situation.

____ 3. I am worried about the outcome of our meetings.

____ 4. What I am doing with my worker gives me new ways of looking at my problem.

____ 5. My worker and I understand each other.

____ 6. My worker perceives accurately what my goals are.

____ 7. I find my meetings with my worker confusing.

____ 8. I believe my worker likes me.

____ 9. I wish my worker and I could clarify the purpose of my sessions.

____ 10. I disagree with my worker about what I ought to get out our meetings.

____ 11. I believe the time my worker and I are spending together is not spent efficiently.

____ 12. My worker does not understand what I am trying to do in our meetings.

____ 13. I am clear on what my responsibilities are in our meetings.

____ 14. The goals of these meetings are important to me.

____ 15. I find what my worker and I are doing in our meetings are unrelated to my concerns.

____ 16. I feel that the things I do in our meetings will help me to accomplish the changes I want.

____ 17. I believe that my worker is genuinely concerned for my welfare.

____ 18. I am clear as to what my worker wants me to do in our meetings.

____ 19. My worker and I respect each other.

____ 20. I feel that my worker is not totally honest about his/her feelings toward me.

____ 21. I am confident in my worker's ability to help me.

____ 22. My worker and I are working towards mutually agreed upon goals.

____ 23. I feel that my worker appreciates me.

____ 24. We agree on what is important for me to work on.

____ 25. As a result of our meetings I am clearer as to how I might be able to change.

____ 26. My worker and I trust one another.

____ 27. My worker and I have different ideas on what my problems are.

____ 28. My relationship with my worker is very important to me.

____ 29. I have the feeling that if I say or do the wrong things, my worker will stop working with me.

____ 30. My worker and I collaborate on setting goals for our meetings.

____ 31. I am frustrated by the things I am doing in our meetings.

____ 32. We have established a good understanding of the kind of change that would be good for me.

____ 33. The things that my worker is asking me to do don't make sense.

____ 34. I don't know what to expect as a result of our meetings.

____ 35. I believe the way we are working with my problem is correct.

____ 36. I feel that my worker cares about me even when I do things that he/she does not approve of.

Symptom Check List - 10

Below is a list of problems and complaints that people sometimes have. Read each item carefully, and circle the answer that best describes HOW MUCH DISCOMFORT THAT PROBLEM HAS CAUSED YOU DURING THE PAST WEEK INCLUDING TODAY. Do not skip any items. If you change your mind, erase your first answer completely. If you have any questions, please ask the questionnaire administrator.

1. **How much were you distressed by being lonely?**

0	1	2	3	4
Not at all	A little bit	Moderately	Quite a bit	Extremely

2. **How much were you distressed by feeling no interest in things?**

4	3	2	1	0
Extremely	Quite a bit	Moderately	A little bit	Not at all

3. **How much were you distressed by feeling afraid in open spaces or on the streets?**

0	1	2	3	4
Not at all	A little bit	Moderately	Quite a bit	Extremely

4. **How much were you distressed by feeling weak in part of your body?**

0	1	2	3	4
Not at all	A little bit	Moderately	Quite a bit	Extremely

5. **How much were you distressed by feeling blue?**

4	3	2	1	0
Extremely	Quite a bit	Moderately	A little bit	Not at all

6. **How much were you distressed by heavy feelings in your arms and legs?**

4	3	2	1	0
Extremely	Quite a bit	Moderately	A little bit	Not at all

7. **How much were you distressed by feeling afraid to go out of your house alone?**

0	1	2	3	4
Not at all	A little bit	Moderately	Quite a bit	Extremely

8. **How much were you distressed by feeling tense or keyed up?**

4	3	2	1	0
Extremely	Quite a bit	Moderately	A little bit	Not at all

9. **How much were you distressed by feelings of worthlessness?**

4	3	2	1	0
Extremely	Quite a bit	Moderately	A little bit	Not at all

10. **How much were you distressed by feeling lonely even when you are with people?**

0	1	2	3	4
Not at all	A little bit	Moderately	Quite a bit	Extremely

APPENDIX C

SUPPORT WORKER MEASURES

Worker ID # : _____

Client Initials: _____

Multnomah Community Abilities Scale (MCAS)

PLEASE CIRCLE the number of the statement which corresponds to the client's functioning during the past 3 months except for Section 1, Item #3 (Thought Processes), which should reflect the client's current functioning, and Section 4 (Behavioural Problems), which should reflect the client's functioning for the past 9 months.

Section One: INTERFERENCE WITH FUNCTIONING
This section pertains to those physical and psychiatric symptoms that make life more difficult for the client. Many of these can be lessened with medications but others are permanent. Regardless, rate the client as he/she functions with current medications and services.

1. *Physical Health:* How impaired is the client by his/her physical health status?
NOTE: Impairment may be from chronic physical health problems and /or frequency and severity of acute illness, not from psychiatric problems.

i. Extreme health impairment
ii. Marked health impairment
iii. Moderate health impairment
iv. Slight health impairment
v. No health impairment

2. *Intellectual Functioning:* What is the client's level of general intellectual functioning?
NOTE: Low intellectual functioning may be due to a variety of reasons besides congenital mental deficiency: e.g. organic damage due to chronic alcohol/drug abuse, senility, trauma, etc. It should, however, be distinguished from impaired cognitive processes due to psychotic symptoms, which are covered in later sections. Rate functioning independent of psychotic symptoms.

i. Extreme health impairment
ii. Marked health impairment
iii. Moderate health impairment
iv. Slight health impairment
v. No health impairment

3. *Thought Processes:* How impaired are the client's thought processes as evidenced by such symptoms as hallucinations, delusions, tangentiality, loose associations, response latencies, ambivalence, incoherence, etc?

i. Extreme health impairment
ii. Marked health impairment
iii. Moderate health impairment
iv. Slight health impairment
v. No health impairment

4. *Mood Abnormality:* How abnormal is the client's mood as evidenced by such symptoms as constricted mood, extreme mood swings, depression, rage, mania, etc.
NOTE; Rate abnormality based on range, intensity and appropriateness of mood.

i. Extreme health impairment
ii. Marked health impairment
iii. Moderate health impairment
iv. Slight health impairment
v. No health impairment

INTERFERENCE WITH FUNCTIONING (cont'd)

5. *Response to Stress and Anxiety:* How impaired is the client by inappropriate and/or dysfunctional responses to stress and anxiety?

NOTE: Impairment could be due to inappropriate responses to stressful events (e. g., extreme responses or no response to event that should be of concern) and/or difficulty in handling anxiety as evidenced agitation, perseveration, inability to problem solve, etc.

i. Extreme health impairment
ii. Marked health impairment
iii. Moderate health impairment
iv. Slight health impairment
v. No health impairment

Section Two: ADJUSTMENT TO LIVING

This section pertains to how your client functions in his/her daily life and how he/she has adapted to the disability of mental illness. Rate behaviour, not potential.

6. *Ability to Manage Money:* How successfully does the consumer his/her money and control expenditures?

i. most never manages money successfully
ii. Seldom manages money successfully
iii. Sometimes manages money successfully
iv. Manages money successfully a fair
v. Almost always manages money successfully

7. *Independence in Daily Life:* How well does the consumer independently in day to day living **NOTE:** Performance includes personal hygiene, dressing appropriately, obtaining regular nutrition, and housekeeping.

i. Almost never performs independently
ii. Often does not perform independently
iii. Sometimes performs independently
iv. Often performs independently
v. Almost always performs independently

8. *Acceptance of Illness:* How well does the consumer accept (as opposed to deny) his/her illness?

i. Almost never accepts illness
ii. Infrequently accepts illness
iii. Sometimes accepts illness
iv. Accepts illness a fair amount of the time
v. Almost always accepts illness

Section Three: SOCIAL COMPETENCE

This section pertains to the capacity of your client to engage in appropriate interpersonal relations and culturally meaningful activities.

9. *Social Acceptability:* In general, what are people's reactions to the consumer?

i. Very negative
ii. Fairly negative
iii. Mixed, mildly negative to mildly positive
iv. Fairly positive
v. Very positive

SOCIAL COMPETENCE (cont'd)

10. *Social interest:* How frequently does the consumer initiate social contact or respond to others' initiation of social contact?

i. Very infrequently
ii. Fairly infrequently
iii. Occasionally
iv. Fairly frequently
v. Very frequently

11. *Social Effectiveness:* how effectively does he/she interact with others?
NOTE: 'Effectively" refers to how successfully and appropriately the client behaves in social settings, i. e., how well he or she minimizes interpersonal friction, meets personal needs, achieves personal goals in a socially appropriate manner, and behaves prosocially.

i. Very ineffectively
ii. Ineffectively
iii. Mixed or dubious effectiveness
iv. Effectively
v. Very effectively

12. *Social Network:* How extensive is the consumer's social support network?
NOTE: A support network may consist of family, friends, coworkers, socialization programs, etc. Note: How extensive the network is does not depend on the social acceptability of the sources.

i. Very limited network
ii. Limited network
iii. Moderately extensive network
iv. Extensive network
v. Very extensive network

13. *Meaningful Activity:* How frequently is the consumer involved in meaningful activities that are satisfying to him or her?
NOTE: Meaningful activities might include arts and crafts, reading, going to a movie, etc.

i. Almost never involved
ii. Seldom involved
iii. Sometimes involved.
iv. Often involved
v. Almost always involved

Community Attitudes Toward the Mentally Ill

Following are some statements about persons with a mental illness with which you may agree or disagree. Please circle the statement that best represents how much you agree or disagree with each statement.

1. One of the main causes of mental illness is a lack of self-discipline and will power.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

2. The best way to handle persons with a mental illness is to keep them behind locked doors.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

3. There is something about persons with a mental illness that makes it easy to tell them from the general population.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

4. As soon as a person shows signs of mental disturbance, he/she should be hospitalized.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

5. Persons with a mental illness need the same kind of control and discipline as a young child.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

6. Mental illness is an illness like any other.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

7. Persons with a mental illness should not be treated as outcasts of society.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

8. Less emphasis should be placed on protecting the public from persons with a mental illness.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

9. Psychiatric hospitals are an outdated means of treating persons with a mental illness.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

10. Virtually anyone can become mentally ill.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

11. Persons with a mental illness have for too long been the subject of ridicule.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

12. More tax money should be spent on the care and treatment of persons with a mental illness.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

13. We need to adopt a far more tolerant attitude toward persons with a mental illness in our society.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

14. Our psychiatric hospitals seem more like prisons than like places where persons with a mental illness can be cared for.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

15. We have a responsibility to provide the best possible care for persons with a mental illness.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

16. Persons with a mental illness don't deserve our sympathy.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

17. Persons with a mental illness are a burden on society.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

18. Increased spending on mental health services is a waste of tax dollars.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

19. There are sufficient existing services for persons with a mental illness.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

20. It is best to avoid anyone who has mental health problems.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

21. Persons with a mental illness should not be given any responsibility.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

22. Persons with a mental illness should be isolated from the rest of the community

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

23. A person would be foolish to marry someone who has suffered from mental illness, even though he or she seems fully recovered.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

24. I would not want to live next door to someone who has had a mental illness.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

25. Anyone with a history of mental health problems should be excluded from taking public office.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

26. Persons with a mental illness should not be denied their individual rights.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

27. Persons with a mental illness should be encouraged to assume the responsibilities of normal life.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

28. No one has the right to exclude persons with a mental illness from their neighbourhood.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

29. Persons with a mental illness are far less of a danger than most people suppose.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

30. Most women and men who were once patients in a mental hospital can be trusted as babysitters.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

31. Residents should accept the location of mental health facilities in their neighbourhood to serve the needs of the local community.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

32. The best therapy for many persons with a mental illness is to be part of a normal community.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

33. As far as possible, mental health services should be provided through community based facilities.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

34. Locating mental health services in residential neighbourhoods does not endanger local residents.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

35. Residents have nothing to fear from people coming into their neighbourhood to obtain mental health services.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

36. Mental health facilities should be kept out of residential neighbourhoods.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

37. Local residents have good reason to resist the location of mental health services in their neighbourhood.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

38. Having persons with a mental illness living within residential neighbourhoods might be good therapy but the risk to residents are too great.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

39. It is frightening to think of people with mental health problems living in residential neighbourhoods.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

40. Locating mental health facilities in a residential area downgrades the neighbourhood.

strongly disagree	disagree	neither agree nor disagree	agree	strongly agree
1	2	3	4	5

APPENDIX D

SUPERVISOR MEASURE

Measure of Competencies of Community Support Providers - Supervisor Rating

Background Information

Clinical Supervisor Information *(i. e., Person completing this form)*

1) Name: _____

2) Highest degree completed and identified discipline: _____

3) Amount of time in current position: _____

4) Amount of time supervising the person currently being rated: _____

5) Number of persons currently supervised by you: _____

6) Number of persons you have supervised to date:_____

Support Worker Information *(i.e., Person being rated by the clinical supervisor)*

1) Support worker's initials: _____

2) Support worker's age: _____

3) Highest degree completed and identified discipline:

4) Amount of time in position: _____

5) Amount of time working in community mental health: _____

6) Number of clients currently in caseload: _____

NOTE TO USERS

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The following list includes types of competencies that individuals may have in three areas: 1) **personal attributes**, 2) **knowledge**, and 3) **work-related skills**. Please take a moment to think about the competencies of the support provider that you supervise, and then rate his or her performance on the following personal, knowledge and skill items. In rating the support worker, evaluate him or her on **each** competency according to how they compare to all other workers you have supervised to date.

PERSONAL ATTRIBUTES

PERSONAL ATTRIBUTE	*Low/ inferior performance* (In the bottom 20%) 1	*Below average performance* (In the bottom 40 %) 2	*Average performance* (About 50%) 3	*Above-average performance* (In the top 40%) 4	*High/ superior performance* (In the top 20%) 5
1. Shows sensitivity to and respect for individual differences *(recognizes uniqueness of each individual; is comfortable working with a variety of people; is non-judgmental, respectful, and tolerant toward persons with psychiatric disabilities)*	1	2	3	4	5
2. Demonstrates a positive attitude toward persons with psychiatric disabilities *(sensitive to individual needs and feelings; understands clients' limits and provides reasonable expectations; understands "where clients come from")*	1	2	3	4	5
3. Shows commitment to work *(conscientious in approach to work; interested in professional development)*	1	2	3	4	5
4. Demonstrates belief in individual rights to a certain standard of living	1	2	3	4	5
5. Adopts a caring and supportive attitude towards clients *(shows interest in others)*	1	2	3	4	5
6. Is sincere and genuine in interactions with others	1	2	3	4	5
7. Is independent and takes initiative in his or her own work (*self-confident about abilities; persists in the face of adversity)*	1	2	3	4	5
8. Demonstrates common sense and good judgement (*mature, emotionally stable and practical)*	1	2	3	4	5

PERSONAL ATTRIBUTE (cont'd)	*Low/ inferior performance* (In the bottom 20%) 1	*Below average performance* (In the bottom 40 %) 2	*Average performance* (About 50%) 3	*Above-average performance* (In the top 40%) 4	*High/ superior performance* (In the top 20%) 5
9. Does what he or she promises to do *(responsible, reliable, consistent, and honest)*	1	2	3	4	5
10. Adopts a positive and optimistic view of others *(sees the strengths in others)*	1	2	3	4	5
11. Adopts a friendly, kind, and warm manner with others	1	2	3	4	5
12. Demonstrates sensitivity and understanding of personal difficulties *(shows sensitivity to individual needs and feelings; demonstrates understanding of clients limits, provides reasonable expectations; understands "where clients come from")*	1	2	3	4	5
13. Adopts a client centred approach *(demonstrates trust in client's judgement and decision making; uses least intrusive help possible)*	1	2	3	4	5
14. Adjusts well to change *(flexible when faced with unanticipated events)*	1	2	3	4	5
15. Demonstrates a sense of humour *(able to make others laugh)*	1	2	3	4	5
16. Demonstrates creativity and intelligence	1	2	3	4	5
17. Manages stress well (*able to handle a heavy work load*)	1	2	3	4	5

KNOWLEDGE

KNOWLEDGE	*Low/ inferior performance* (In the bottom 20%) 1	*Below average performance* (In the bottom 40 %) 2	*Average performance* (About 50%) 3	*Above-average performance* (In the top 40%) 4	*High/ superior performance* (In the top 20%) 5
18. Knowledge of relevant ethical standards related to provision of community support	1	2	3	4	5

KNOWLEDGE

KNOWLEDGE (cont'd)	*Low/ inferior performance* (In the bottom 20%) 1	*Below average performance* (In the bottom 40 %) 2	*Average performance* (About 50%) 3	*Above-average performance* (In the top 40%) 4	*High/ superior performance* (In the top 20%) 5
19. Knowledge of social problems associated with psychiatric disabilities ***(homelessness, stigma, poverty, addiction, oppression)***	1	2	3	4	5
20. Knowledge of physical health issues *(effects of poor nutrition; long-term effects of medication; allergies)*	1	2	3	4	5
21. Knowledge of how different mental disorders affect functioning	1	2	3	4	5
22. Knowledge of crisis prevention and intervention	1	2	3	4	5
23. Knowledge of suicide prevention and intervention	1	2	3	4	5
24. Knowledge of strategies to achieve mental health and wellness	1	2	3	4	5
25. Knowledge of health care services in the region	1	2	3	4	5
26. Knowledge of community resources related to housing, recreation, finances, transportation, etc.	1	2	3	4	5
27. Knowledge of developmental issues as they relate to psychiatric disabilities *(i.e., knowledge of how psychiatric disabilities affect a person's life during adulthood in such areas as relationships, independence, identity)*	1	2	3	4	5
28. Knowledge of family issues related to psychiatric disabilities	1	2	3	4	5

KNOWLEDGE (cont'd)	*Low/ inferior performance* (In the bottom 20%) 1	*Below average performance* (In the bottom 40 %) 2	*Average performance* (About 50%) 3	*Above-average performance* (In the top 40%) 4	*High/ superior performance* (In the top 20%) 5
29. Knowledge of disciplines relevant to community support provision *(e.g., social work, psychology, sociology, health care, occupational therapy)*	1	2	3	4	5
30. Knowledge of presentation and effects of dual diagnosis disorders on functioning *(e.g., developmental disabilities or addictions and mental disorders)*	1	2	3	4	5
31. Knowledge of psychoactive medications *(treatment use and side effects)*	1	2	3	4	5
32. Knowledge of application of the Mental Health Act	1	2	3	4	5
33. Knowledge of first aid and emergency response to physical health problems	1	2	3	4	5
34. Knowledge of counselling theory and practice	1	2	3	4	5
35. Record keeping and correspondence skills related to health care provision	1	2	3	4	5

WORK-RELATED SKILLS

SKILL	*Low/ inferior performance* (In the bottom 20%) 1	*Below average performance* (In the bottom 40 %) 2	*Average performance* (About 50%) 3	*Above-average performance* (In the top 40%) 4	*High/ superior performance* (In the top 20%) 5
36. Able to work in a team	1	2	3	4	5
37. Adopts professional approach to work *(professional in relations with colleagues, clients and the public)*	1	2	3	4	5

SKILL (cont'd)	*Low/ inferior performance* (In the bottom 20%) 1	*Below average performance* (In the bottom 40 %) 2	*Average performance* (About 50%) 3	*Above-average performance* (In the top 40%) 4	*High/ superior performance* (In the top 20%) 5
38. Maintains confidentiality of information regarding clients	1	2	3	4	5
39. Assists clients to identify, access, and benefit from relevant community resources *(eg., housing, employment-related training, education, social assistance)*	1	2	3	4	5
40. Assists clients to develop natural supports such as friends and family in the community	1	2	3	4	5
41. Assists clients to identify, access, and use relevant health care services *(communicate effectively on clients' behalf with health care professionals; advocate and negotiate services needed for clients)*	1	2	3	4	5
42. Assists clients to identify needs and aspirations *(eg. housing, financial, educational, social support, leisure, etc.)*	1	2	3	4	5
43. Assists clients to set objectives and plan actions to achieve goals	1	2	3	4	5
44. Assists clients to put plans in place	1	2	3	4	5
45. Monitors how well clients are following plans and helps clients make changes to them when necessary	1	2	3	4	5
46. Relates to consumer/survivors *(listens actively to clients; talks to clients in a way that is understood; develops partnership with clients; recognizes client accomplishment)*	1	2	3	4	5
47. Assists persons with psychiatric disabilities to solve problems and manage changes *(help clients become aware of potential for change; gives advice when needed and requested; assists with decision making)*	1	2	3	4	5
48. Provides emotional support to clients when needed and wanted	1	2	3	4	5

SKILL (cont'd)	*Low/ inferior performance* (In the bottom 20%) 1	*Below average performance* (In the bottom 40 %) 2	*Average performance* (About 50%) 3	*Above-average performance* (In the top 40%) 4	*High/ superior performance* (In the top 20%) 5
49. Counselling skills specific to problems frequently associated with psychiatric disabilities *(addictions, sexual abuse, dissociation, depression)*	1	2	3	4	5
50. Assists clients to follow medication regimen	1	2	3	4	5
51. Crisis planning and intervention skills (prevent and respond to crises)/suicide intervention skills	1	2	3	4	5
52. Time management skills	1	2	3	4	5
53. Works well without supervision	1	2	3	4	5
54. Keeps in contact with clients	1	2	3	4	5
55. Facilitates involvement of clients in community activities	1	2	3	4	5
56. Mediate conflict between clients and others in the community	1	2	3	4	5
57. Resolve conflict with clients in an effective manner	1	2	3	4	5
58. Assist clients to develop necessary skills to live in the community *(cooking, housekeeping, budgeting, shopping, leisure planning, and time management)*	1	2	3	4	5
59. Provide role model for clients	1	2	3	4	5