Examining the Working Alliance as a Mediator of the Relationship Between Fidelity to the Strengths Model of Case Management and Client Outcomes

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Abstract

The strengths model of case management (SMCM) is a recovery-oriented intervention for people with severe mental illness that focuses on leveraging individual and environmental strengths to meet clients' goals. SMCM has a small, growing evidence base. This thesis is comprised of two studies examining the working alliance between people with severe mental illness and their strengths model case managers. The working alliance as a mediator of the relationship between fidelity to SMCM and clients' quality of life outcomes was explored.

Data for study one were drawn from a sample of 311 people with severe mental illness from seven mental health organizations in three Canadian provinces. The participants were new to SMCM and participated in five structured interviews every 4.5 months for 18 months. The team-level SMCM Fidelity Scale was used to examine how closely teams followed the model, every six months for two years, and then one year later, at three years. Ordinary least squares path analysis was used to test the simple mediation models. A moderator of mediation, to account for agency location, was also tested, as an exploratory analysis.

In the second study, using convenience sampling, twenty people with severe mental illness, with a current SMCM case manager, participated in semi-structured, qualitative interviews. Data were analyzed thematically, beginning with a start list of codes based on the research questions, the SMCM model, the previously tested mediation model, and the working alliance and SMCM literature.

Both studies expanded the construct of the working alliance in SMCM intervention settings. Study one showed that higher SMCM fidelity predicted better client outcomes (quality of life and hope), indirectly, through the working alliance. Independent of the working alliance,

SMCM fidelity was not associated with client outcomes. In an exploratory analysis, earlier outcomes predicted later working alliance.

In study two, people with severe mental illness attributed personal life change to their relationship with their case manager. They valued their case managers' flexibility and highlighted the work they did together on a wide range of practical goals of their choosing. From clients' perspectives, case managers approached the SMCM intervention responsive to clients' preferences and choices. Clients' perceptions of the working alliance aligned with three key elements commonly used to conceptualize the working alliance: the bond, and agreement on goals and tasks (Bordin, 1979).

Both studies showed that the working alliance serves as a mechanism of change in SMCM, supporting the effectiveness of SMCM and highlighting the need to implement interventions and training activities that focus on developing strong working alliances between case managers and clients with severe mental illness.

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Statement of Co-Authorship

This thesis is comprised of two studies. Data in study one were collected as part of a broader study, entitled, "Evaluating the strengths model of case management for people with severe mental illness: A multi-provincial study." Dr. Tim Aubry was a co-investigator of the broader study and oversaw the study implementation at the Ottawa site. He supervised this doctoral thesis research by providing guidance and oversight throughout the research process and assisting with manuscript preparation and review of both studies. He is listed as a co-author on both manuscripts. Dr. Eric Latimer served as the Principal Investigator of the broader study and is a committee member for this thesis. He is listed as a co-author on manuscript one. The other co-authors listed on manuscript one are co-investigators of the broader study, overseeing data collection at other study sites. Study one was approved by the respective research ethics boards at each of the study sites. The Office of Research Ethics at the University of Ottawa approved the research activities of the Ottawa site.

For study one, Maryann Roebuck was responsible for conducting the literature review, formulating the research hypotheses, analyzing the quantitative data, and writing the manuscript. She also worked as a Research Coordinator for the Ottawa site, coordinating client interviews, and conducting many of the interviews herself. Maryann served as the Principal Investigator of study two. She conducted the literature review, formed the research questions, and led all aspects of the research, including data collection and analysis, and writing the manuscript. Stéphanie Manoni-Millar validated the qualitative analysis for study two and reviewed the manuscript. She is listed as a co-author on study two. Study two was approved by the Office of Research Ethics at the University of Ottawa.

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General Introduction

Decision-makers and practitioners in the community mental health field frequently make decisions around how to allocate limited resources. To do this effectively, they need information about which intervention models improve people's lives, and how these models work, so they can be replicated.

Case management is a community mental health intervention for people with severe mental illness and complex needs, such as homelessness, substance use, frequent hospitalizations, and lack of social support. Case managers focus on connecting people to formal and informal supports in the community, in a timely way (Greene et al., 2006).

Developed in response to deinstitutionalization, the goals of case management have largely been to prevent people from being hospitalized, to help them live in the community, and to reduce barriers to accessing health and social services (Greene et al., 2006; Ponka et al., 2020). Since the beginning of deinstitutionalization in the 1960s, many community-based services, such as case management, have been poorly funded and have lacked coordination across programs and regions. Definitions of case management models vary and implementation has differed across local settings (Ballon, 2014; Kidd et al., 2017; Nelson & Prilleltensky, 2010; Ponka et al., 2020).

Due to inadequate community-based program funding and implementation challenges, many people who would previously have been in large mental health institutions moved into other institutions, such as nursing homes, group homes, and psychiatric wards in general hospitals, instead of becoming integrated into their communities. Others became incarcerated, moved into substandard housing, such as rooming houses, or became homeless (Nelson &

Prilleltensky, 2010; Rapp & Goscha, 2012). These challenges related to deinstitutionalization are still a reality today. For example, people with mental health conditions have acute care hospital stays that are two and a half times longer than people without mental health conditions (Johansen & Finès, 2012). Although people with mental health-related needs represent less than one percent of the population, they use 25% of acute care hospital days in Canada (Johansen & Finès, 2012). This over-use of hospitals is an indicator of challenges accessing community-based mental health care provision.

As a result of lack of coordination and piecemeal service provision, people's mental health needs are often not met, especially among people who may be the most vulnerable, such as people with severe mental illness. Approximately 33% of people in Canada who have a need for mental health services (e.g. information, counselling, medication) report that those needs are unmet or only partially met (Statistics Canada, 2012; Sunderland & Findlay, 2013). This rate is higher among people who are homeless and living with severe mental illness, with estimates as high as 75% (CIHI, 2007). In this context, mental health case management has become a central vehicle for supporting people with severe mental illness in the community.

The many types of mental health case management, and variations in their implementation in local settings, have contributed to challenges interpreting and summarizing the case management evidence base and determining how best to meet the needs of people with severe mental illness in their communities (Greene, et al., 2006; Chamberlain & Rapp, 1991; Ponka et al., 2020; Stanard, 1999). Broad case management types include: assertive community treatment (ACT), intensive case management (ICM), and standard case management (de Vet et al., 2013; Latimer & Rabouin, 2011; Ponka et al., 2020). While there is much variation within

each type, ACT is the most intensive, with support services provided 24 hours a day, seven days a week, by a multi-disciplinary team, and a client-to-provider ratio of 15:1 (de Vet et al., 2013; Ponka et al., 2020). ACT is generally provided to people with the most severe mental health needs, who have experienced high rates of hospitalizations (Ponka et al., 2020).

ICM is less intense than ACT, with a broad range of supports provided up to 12 hours a day, seven days a week, and a client-case manager ratio of 25:1 or less. ICM is also provided to people with complex mental health needs, although typically with less frequent hospitalizations than people receiving ACT (Ponka et al., 2020). Standard case management is the least intensive type, with a client-case manager ratio of 25:1 or more, focused on brokering a service need without additional support (Ponka et al., 2020).

Case management programs tend to be evaluated based on client outcomes, such as changes in hospitalization rates, mental health symptomatology, substance use, quality of life, housing stability, and functioning (Latimer & Rabouin, 2011; Ponka et al., 2020). A recent systematic review of randomized controlled trials of case management found that ACT was associated with reduced hospitalizations and improved housing stability, with mixed findings around improvements in mental health symptoms and quality of life (Ponka et al., 2020). ICM was associated with improved housing stability and reduced substance use, with mixed findings around improvements in mental health functioning, severity of symptoms, and hospitalizations. The reviewed studies did not support the effectiveness of the standard case management model. Comparison groups varied and included standard interventions, no intervention, and alternative interventions (Ponka et al., 2020).

Many factors make it difficult to compare studies of case management, such as different program settings, different spans of time that studies are conducted, varying methods, and varying definitions of case management types (de Vet et al., 2013; Latimer & Rabouin, 2011; Ponka et al., 2020). Ponka et al. (2020) noted that variations in study findings are particularly affected by the intensity of program delivery, caseloads, hospital-based versus community-based delivery, and varying needs of people with severe mental illness. Ponka et al. (2020) also identified that few studies described the roles of case managers or mechanisms of success. All of these factors lead to challenges drawing conclusions about the case management evidence base, such as which type of case management to implement, and how to implement case management effectively, with the best chances of leading to improved client outcomes (de Vet et al., 2013; Howgego et al., 2003; Ponka et al., 2020).

The Strengths Model of Case Management (SMCM) is a subtype of ICM that is described in detail by its developers, unlike many other case management interventions (Latimer & Rabouin, 2011; Ponka et al., 2020; Rapp & Goscha, 2012). When compared to broader ICM, SMCM is somewhat unique in that it focuses less on deficits and negative symptomatology than other types of ICM, while leveraging strengths to accomplish clients' goals. SMCM has a low client-to-case manager ratio (15:1) and prioritizes connecting people to natural resources in the community rather than resources in the formal mental health system (Rapp & Sullivan, 2014; Rapp & Goscha, 2012). SMCM aligns with principles of recovery-oriented practice, which are a growing focus in the community mental health field (Kidd et al., 2017; Rapp & Goscha, 2012).

The SMCM evidence base is promising in that outcome studies have been conducted over the years with some positive findings. Although methods vary greatly, researchers have

reported associations between SMCM and clients' positive outcomes, such as improved quality of life, goals achievement, and reduced hospitalizations (Fukui et al., 2012; Gelkopf et al., 2016; Rapp & Goscha, 2012; Tsoi et al., 2019). Further research is needed to support the approach, such as studies that use the model's newer fidelity scale, and more in-depth examination of how the model may lead to positive outcomes. The model theory highlights the client-case manager's working alliance as a mechanism of change (Rapp & Goscha, 2012) but few SMCM studies have examined the working alliance (Tsoi et al., 2019).

The therapeutic alliance is a large area of research in the psychotherapy field. The concept consists of three aspects of the work of a psychotherapist and client: the development of bonds between the client and psychotherapist, agreement on the goals of the therapy, and agreement on the tasks to achieve those goals (Bordin, 1979). The therapeutic alliance is central to psychotherapy research. In a large number of randomized controlled trials, it has been shown to predict positive client outcomes, across all psychotherapy intervention types (e.g. individual, family, group) and approaches (e.g. psychodynamic therapy, counseling, cognitive behavioural therapy [(Fluckiger et al., 2018]). Case management research has fewer studies on the working alliance, and the relationship between the alliance and people's life outcomes is less conclusive (De Leeuw et al., 2012; Kidd et al., 2017).

Structure and Scope of Thesis

This thesis furthers the development of case management research and practice for people with severe mental illness, particularly focusing on the SMCM. It is a mixed methods project with the purpose of examining the underlying role of the working alliance as a mediator of the relationship between fidelity to SMCM and clients' quality of life outcomes. The thesis begins

with an overview of background research, followed by manuscripts of the two thesis studies, and ending with a general discussion, summarizing the findings of the studies, their limitations, and implications for policy and practice.

The research overview provides a description of the SMCM intervention, including its principles and tools, and a discussion of its fidelity measurement, followed by a summary of the findings of SMCM outcome studies. Following the SMCM overview, a discussion of the concept of the therapeutic alliance and a review of its evidence base in the field of psychotherapy are provided. An overview of research examining the working alliance in case management is then presented, including research on the working alliance in SMCM. The research overview ends with a description of the parent study, from which the thesis studies were developed.

Study one is a mediation analysis of data from the parent study of 311 people with severe mental illness, new to SMCM, who participated in five structured interviews every 4.5 months for 18 months. SMCM fidelity assessments were conducted every six months for the first two years, with an additional assessment conducted at the three-year time point, for a total of six assessments. One exceptional site completed four fidelity assessments in total due to ending model implementation early. Ordinary least squares path analysis was used to test simple mediation models. A moderator of mediation, to account for agency location, was also tested, as an exploratory analysis.

Study two is a qualitative study of 20 people with severe mental illness, receiving SMCM services from one of the community mental health organizations that participated in the parent study. These 20 qualitative interview participants were not participants of the parent study. The 20 SMCM clients participated in semi-structured, qualitative interviews about their perceptions

of their relationship with their SMCM case manager. Using first and second cycle coding, data were analyzed thematically (Miles et al., 2014).

The inclusion criteria for both studies were that people were new to SMCM. They were eligible for and receiving case management services for people with severe mental illness from one of the participating mental health agencies. Program inclusion criteria differed from agency to agency. In general, a person's mental illness is severe if it interferes with one or more daily activities, such as self-care, getting around, employment, or interpersonal relationships. In addition, determinations of severity tend to consider duration - a person's mental illness is either marked by a severe first episode or is of sufficient duration (e.g. one year) to be considered chronic in nature. Finally, when determining severity, certain diagnoses tend to be considered as a severe mental illness. These diagnoses include: schizophrenia, a major affective disorder, or a severe personality disorder (OMHLC, 1999; SAMHSA, 2016).

The Strengths Model of Case Management (SMCM)

As a subtype of ICM, SMCM has received much attention in recent years and has begun to show some promise in terms of evidence for its effectiveness (Fukui et al., 2012; Gelkopf et al., 2016; Rapp & Goscha, 2012; Tsoi et al., 2019). Charles Rapp developed the model in the 1980s in response to traditional case management and interventions for people with severe mental illness that focused on impairments, pathology, deficits, and limits related to mental illness (Rapp & Goscha, 2012).

The model aligns with recovery-oriented practice principles, which are increasingly being adopted in the community mental health field (Kidd et al., 2017). Anthony (1993) defined recovery as "a way of living a satisfying, hopeful, and contributing life even with limitations

caused by illness. Recovery involves the development of new meaning and purpose in one's life as one grows beyond the catastrophic effects of mental illness" (p. 15). Recovery-oriented practice tends to prioritize hope, empowerment, choice, goals, and individualized care (Anthony, 1993; Kidd et al., 2017). The SMCM focuses on positive internal qualities and abilities, as well as community resources. It is client-driven, goal-focused, and supports people in the context of their communities (Barry et al., 2003; Rapp & Goscha, 2012).

As noted above, SMCM is a clearly defined case management intervention. While other forms of case management may identify similar principles in their programs, particularly in the current recovery-focused community mental health field, SMCM has developed tools and a fidelity scale to organize the intervention and to put the principles into practice. The following is a description of the intervention's principles, tools, the role of the client-case manager relationship, and the model theory.

Strengths Model Principles

Strengths model case managers build their case management practice on six principles:

1. There is an overall focus on individual strengths rather than pathology or deficits;
2. The community is viewed as an oasis of resources;
3. Interventions are based on client self-determination;
4. The case manager-client relationship is primary and essential;
5. The primary setting for the work is in the community, not in an office;
6. People can recover, reclaim and transform their lives (Goscha et al., 2014; Rapp & Goscha, 2012).

SMCM Tools

Based on these principles, the model uses specific tools that help case managers implement the intervention. One tool, the Strengths Assessment (see Appendix A), is used to identify personal attributes, goals, concrete skills and talents, and environmental resources (Rapp & Goscha, 2012). Another tool, the Personal Recovery Plan (see Appendix B), breaks down goals into small, specific, measurable steps. As an alternative to a case plan or treatment plan, typically used in a case management setting, the Personal Recovery Plan is a mutually-agreed upon goal agreement for the person receiving services. It reinforces the client as the director of the helping process and flows from the Strengths Assessment (Rapp & Goscha, 2012). In addition to the Strengths Assessment and Personal Recovery Plan, strengths model case managers also follow structured group supervision focused on brainstorming ways to leverage clients' strengths to help them achieve their goals (Goscha et al, 2014; Rapp & Goscha, 2012).

SMCM Working Alliance

As noted above, one of the six principles of SMCM is that the client-case manager relationship is primary and essential. Rapp and Goscha (2012) describe this relationship as the primary mechanism to produce positive outcomes. It is purposeful, reciprocal, empowering (the client is the director of the process), and hope-inducing. While the relationship is central, it is not intended to be long-term or to act as a permanent anchor in a person's life. The relationship is a "medium to achievement" (Rapp & Goscha, 2012, p. 71).

Rapp and Goscha (2012) note that there is often a tendency for the relationship between a social worker and person with severe mental illness to become one-sided or hierarchical. Within the strengths model, the case manager learns about the person's individual set of experiences

through an openness to understanding and by laying aside their assumptions about specific diagnoses (Rapp & Goscha, 2012).

Every client-case manager meeting is framed around strengths, goals and purpose, focused on helping the person "recover, reclaim, or transform his or her life" (Rapp & Goscha, 2012, p. 71). According to the model framework, these interactions increase a person's self-efficacy, their perceptions of being able to move forward in life, and their confidence to act on options (Rapp & Goscha, 2012). The ability to see and believe one can act on options is, in essence, what is meant by "hope-inducing" (Rapp & Goscha, 2012).

SMCM Theoretical Framework

The above principles and practices, including the focus on strengths and the centrality of the client-worker relationship, comprise strengths model practice. When put into practice, using the model tools, clients identify and achieve goals of their choosing, that are meaningful to them. As they meet a goal, their integration in the community, levels of hope, functioning, and motivation may increase. An increase in hope and motivation may lead to being able to achieve more goals. There is a reinforcing effect of goal achievement.

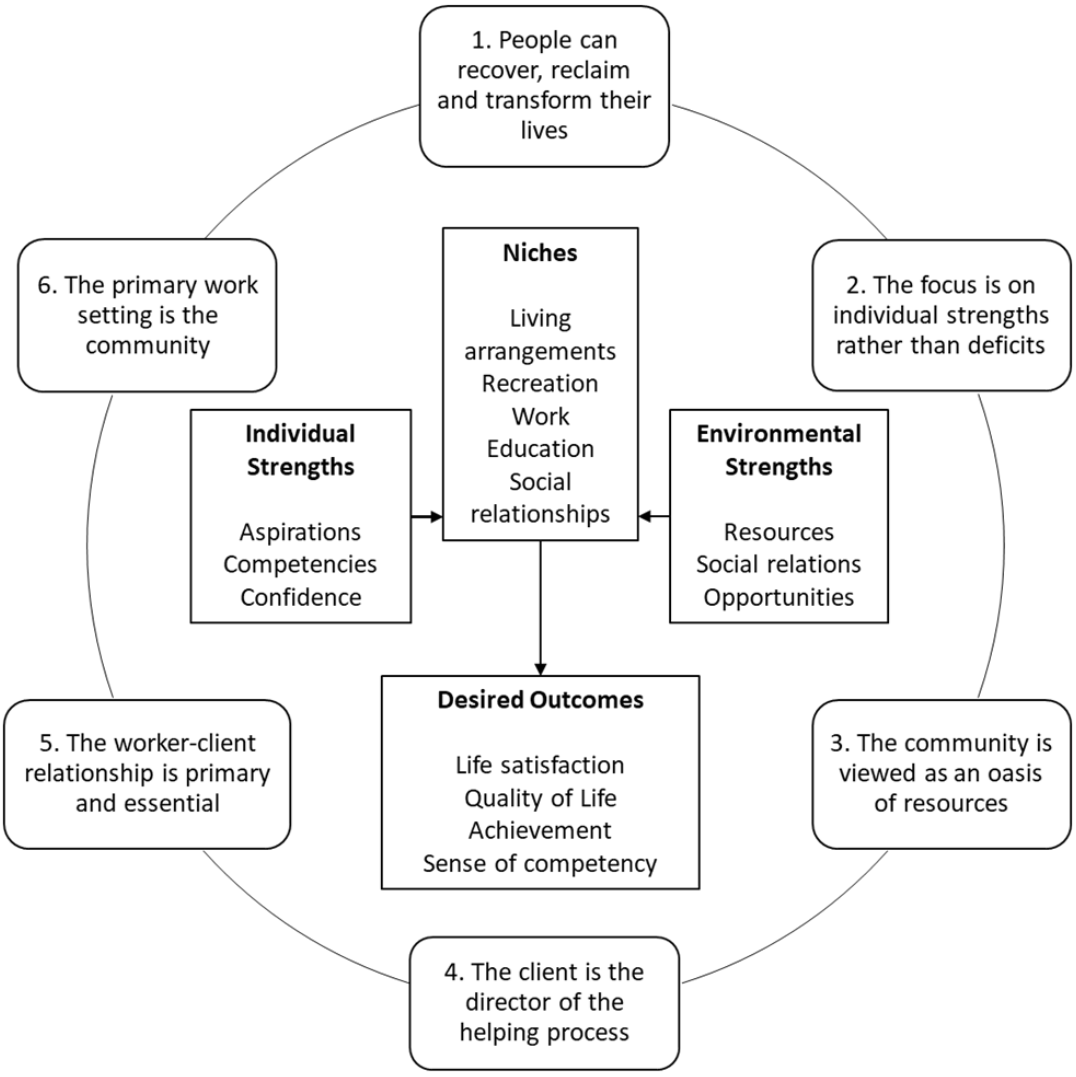
This SMCM practice impacts the quality of "niches" people inhabit. Niches are the environmental habitat, or immediate environments, of a person, such as their home or living arrangement, workplace, educational setting, recreational places, spiritual settings, and social relationships (Rapp & Goscha, 2012). A focus in SMCM is on finding and creating enabling niches, outside of the formal mental health system, which are then seen to lead to positive life outcomes, particularly improved overall quality of life. The principles and tools, when leveraged

to impact one area of a person's life, have a radiating effect, impacting a person's ability to pursue additional goals in other life areas (Rapp & Goscha, 2012).

Figure 1summarizes the interaction between strengths, niches, and quality of life outcomes, which are all influenced by strengths model practice principles.

Figure 1

Summary of the Strengths Model Theoretical Framework (adapted from Rapp & Goscha, 2012)



SMCM Critiques and Challenges

Following the above SMCM description, it is important to acknowledge critiques of the intervention and challenges with implementation. A common critique of SMCM is that a focus on strengths is inappropriate for people facing severe crises and that the intervention does not apply to all circumstances or to every client (Rapp & Goscha, 2012). As a client-led intervention, if a person does not want to focus on their strengths or goals, how does a case manager respond?

In addition, others may suggest that a strengths focus places responsibility on people with severe mental illness to solve their personal problems and achieve goals, without acknowledging the structural or systemic barriers they face. With its focus on natural community resources rather than the formal mental health system, SMCM may also provide a reason for governments to continue to under-fund formal mental health programming (Rapp & Sullivan, 2014).

SMCM proponents have countered these critiques by noting the necessary flexibility and responsiveness of case managers to address immediate needs and crises even while deficits and negative symptomatology may not be the primary focus of the intervention (Rapp & Sullivan, 2014). SMCM developers also suggest that there is a need to transform mental health services away from "low expectation services focused on remediating perceived deficits and often separating people from the community, then blaming them for not doing better" (Rapp & Sullivan, 2014, p. 132). According to Rapp & Sullivan (2014), the intervention is still under development and it continues to evolve.

SMCM has influenced the development of various strength-based approaches in multiple sectors worldwide, and having a focus on strengths is now common in case management settings (Rapp & Sullivan, 2014). At the same time, the implementation of the actual SMCM intervention

is on a smaller-scale, with some tendencies to drift from the original model and with many claims to be following SMCM while not implementing its principles or tools (Rapp & Sullivan, 2014). Challenges implementing a model in local contexts are common in community mental health settings, and have led to assessments of fidelity to interventions, as one strategy to track model implementation.

SMCM Fidelity

Rapp and Goscha (2012) developed the SMCM Fidelity Scale (see Appendix C), which is a scale that measures the degree to which a program adheres to SMCM principles and tools. Implementation fidelity refers to tools or methods used by program evaluators and researchers to determine whether a program is being delivered as intended, according to the program model and protocol (Carroll et al., 2007; Mowbray et al., 2003).

Fidelity measurement is a growing priority in the community mental health field, with its focus on evidence-based practice (Bond & Drake, 2019). Due to several influences, such as funders' reporting requirements, and program evaluation and implementation trends, the field is committed to developing ways to determine if a specific intervention leads to long-term outcomes, such as improved quality of life for people receiving services (Bond & Drake, 2019). Hence, intervention developers often identify the core criteria of an intervention and how to measure these criteria to determine fidelity in a local context (Bond & Drake, 2019; Mowbray et al., 2003)

The SMCM Fidelity Scale is an important way to systematically determine how closely a program is following the principles and tools that comprise SMCM (Rapp & Goscha, 2012; Rapp & Sullivan, 2014). Researchers have begun to use it to examine the relationship between

fidelity to SMCM and client outcomes (Fukui et al., 2012; Goscha et al, 2014; Petrakis et al, 2013; Prendergast et al., 2011; Tsoi et al., 2019). To complete the Fidelity Scale, trained reviewers assess case records, interview clients, case managers and supervisors, and directly observe practice in order to score the case management team within the following domains: caseload size; community contact; group supervision; individual supervision; use of the Strengths Assessment; use of the Personal Recovery Plan; naturally occurring community resources; and, hope-inducing practice (Rapp & Goscha, 2012; Teague et al., 2012).

SMCM Studies

Characteristics of Studies

Table 1 presents a summary of studies examining SMCM outcomes. While researchers have shown that SMCM leads to positive client outcomes, methods have been inconsistent, findings vary, and it is difficult to determine how closely practices adhere to the model (Fukui et al, 2012; Latimer & Rabouin, 2011; Rapp & Goscha, 2012). As the ICM approach with the largest research base, over 25 studies have been published between 1985 and 2019, examining client outcomes related to the SMCM.

Table 1

Summary of Studies of Strengths Model of Case Management (SMCM)

Authors	Target group	Model Fidelity	Study Design	Outcomes				
				Quality of Life	Community Integration	Service Use	Symptoms	Hospitalization
Experimental								
Björkman et al. (2002) **Sweden**	People with a mental illness (N = 77).	Unclear. No fidelity scale. Not all components of model addressed.	Randomized controlled trial. Compared SMCM (n = 33) to standard care (n = 44), a mix of outpatient, inpatient and day services (not case management) Measures at baseline, 18 months and 36 months.	SMCM - higher client satisfaction.	No differences in social network and psychosocial functioning.	SMCM – reduction in need for care, less inpatient care.	No differences in clinical outcomes.	
Chamberlain & Rapp (1991) **USA**	People with severe mental illness.	Rapp's model (Chamberlain co-authored other works with Rapp).		SMCM - more goals. No differences in quality of life.	SMCM - more community activities.		No differences in functioning.	SMCM - fewer hospitalizations.
Gelkopf et al. (2016) **Israel**	People with serious mental illness (N = 1276).	Rapp's model. Used fidelity assessment scale (similar to Strengths Model Fidelity Scale) -	Randomized controlled trial. Compared SMCM to "treatment as usual" psychiatric rehabilitation. Measures at baseline, 20 months.	SMCM - improved quality of life.		SMCM - lower service use.	SMCM - improved self-efficacy, less unmet needs, more goals. No differences in symptom severity.	

Husbands et al. (2007) Canada	People who were HIV positive and AIDS service users (N = 79).	Rapp's model. Case notes assessed to determine fidelity.	Randomized trial. Compared SMCM to "self-directed standard care" (psychosocial counselling, employment counselling).			SMCM – lower service use.	SMCM - improved physical, social and mental health function, reduced risk behaviours.	
Lindahl et al. (2013) **Sweden**	People with substance use problems following court-ordered residential care (N = 36).	No fidelity measure.	Randomized trial. Compared SMCM to standard case management. Measures at baseline, 6 months (end of treatment), and 12 months.	100% retention in SMCM group.		No differences in service use.	SMCM - sustained abstinence better.	
Macias et al. (1994) **USA**	People with severe mental illness (N = 41).	Followed Rapp's model. No fidelity measure.	Randomized. Compared SMCM (n = 20) to "informal case management" (n = 21). Measures at baseline and 12 months.		SMCM - family members less "burdened" and lower depression. No differences in social support.	SMCM – less crisis center contacts.	SMCM – better psychological functioning.	SMCM – reduced hospitalizations.
Modrcin et al. (1988) **USA**	People with severe mental illness (N = 44).	Rapp's model. Rapp as co-investigator. No fidelity measure.	Randomized. Compared SMCM (n = 23) to "standard case management (n = 21). Measures at baseline and 4 months.	No differences in quality of life.	SMCM – better community living scores. Control – better socialization skills.	SMCM – more likely to be in vocational training.	SMCM – increase in stress tolerance.	No differences in hospitalizations.
Prendergast et al. (2011) **USA**	812 People on parole, with substance abuse issues (N = 812).	Rapp's model, incl. strengths assessment. A fidelity measure - "Strengths Model Assessment Form".	Randomized study. Compared SMCM and solution-focused therapy group (n = 412) to standard parole (n = 400). Measures at baseline, 3 months, 9 months.			No differences in social service use and participation in drug abuse treatment.	No differences for drug use, crime, and HIV risk behaviours.	

Wohl et al. (2011) **USA**	HIV-infected prison inmates transitioning back into the community (N = 59).	Description of model aligns closely to Rapp's model. No fidelity measure.	Mixed Methods. Quantitative - randomized controlled trial. Compared SMCM (n = 31) to prison-based standard pre-release discharge (n = 28). 6 time points.		Qualitative - prioritized reconciliation with family and substance use concerns over medical care. No differences in incarceration.	No differences in access to health and social services.	Both groups - low rates of filling anti-retroviral prescription medications after release.	
Quasi-experimental or Non-experimental								
Barry et al. (2003) **USA**	Veterans diagnosed with a severe mental illness (N = 174).	Cited and described Rapp's strengths model for the treatment group. No fidelity measures.	Multivariate analyses. SMCM (n = 81) compared to assertive community treatment (n = 93). Measures every 6 months for 2 years.	SMCM - higher global life satisfaction.			SMCM – greater reduction in symptoms. Both groups - improved clinically.	Both groups – reduced hospitalizations and outpatient care.
Compton et al. (2016) **USA**	People with mental illness (N = 72).	Called "Opening Doors to Recovery". Similar to strengths model. No fidelity measure.	Longitudinal. Compared high participation with low participation groups. Measures at baseline, 4 months, 8 months, 12 months.	Significant linear trends for QOL.	No differences in recidivism.		Significant linear trends for primary recovery outcomes.	Hospitalization rates improved with participation.
Edinburgh & Saewyc (2008) **USA**	Girls who ran away and experienced sexual exploitation (N = 20).	Identified as SMCM. Not closely linked to Rapp's model. No fidelity measure.	Non-experimental. Pilot of first 20 clients in program. Descriptive statistics. Measures at baseline, 6 months and one year.		Decrease in running away, increased school attendance.	Increased access to health care.	Decrease in chlamydia infections, no pregnancies, increase in health knowledge.	

Fukui et al. (2012) **USA**	People diagnosed with severe mental illness (N = 953).	Rapp's strengths model (Rapp as co-author). Strengths Model Fidelity Scale used.	No comparison group; time-varying covariate linear growth modeling. Measures from baseline to 18 months.		High fidelity to SMCM - high levels of competitive employment and post-secondary education. No relationship for independent living.		High fidelity - lower hospitalization rates.
Hui et al. (2015) **Hong Kong**	People with mental illness (N = 45).	Rapp's model. Case managers trained by Rapp's team. No fidelity measures.	Quasi-experimental. Single group pretest and posttest design. Measures at baseline and 6 months.	Improvement in autonomy, hope, overall well-being. No improvement in disability management.	No improvement in social functioning, and helping others.	No reduction in psychological distress.	
Kisthardt (1993)	People with severe mental illness (N = 66).		Non-experimental.		Improved social functioning and leisure activities, decreased social isolation.		
Macias et al. (1997) **USA**	People with severe mental illness (N = 97).	Based on Rapp's model. Researchers reviewed case manager daily logs to confirm adherence to SMCM.	Quasi-experimental. SMCM (n = 48) compared to no case management (n = 49). Pre and post scores (9 months).	SMCM – greater increase in income.	SMCM – improved social support.	SMCM – greater decrease in symptoms. Control – decreased physical health.	
Rapp & Chamberlain (1985) **USA**	People with mental illness (N = 19).	Rapp's model (Rapp as co-author).	Non-experimental. Descriptive statistics. Measures 3 weeks after 6 months of SMCM.	Better quality than before program.	Case managers helped with resource acquisition.		No hospitalizations.

Rapp & Wintersteen (1989) **USA**	People with mental illness (N = 235).	Rapp's model (Rapp as co-author). Researchers reviewed case notes, assessments.	Non-experimental. Descriptive statistics. Measures at 8 months.	Increase in goals.			15% were hospitalized while in the study.
Ryan et al. (1994) **USA**	People with severe mental illness (N = 382).	"Developmental-acquisition model" was used in rehabilitation component of case management.	Correlational. Case managers were assessed for 3 types of case management.		Recovery-focused components of strengths model related to better community adaptation.		
Selander & Marnetoft (2005) **Sweden**	People on long-term sick leave and unemployed, in vocational rehabilitation (N = 10).	Rapp's model. No fidelity measure.	Mixed methods. Quantitative component was non-experimental. Measures at baseline and 12 months.	6 of 10 people - improved quality of life.	7 - decreased work absences, 7 – increased work days.		
Song & Shih (2010) **Taiwan**	Women who had experienced partner abuse (N = 26).	Rapp's model. Fidelity measured with a checklist developed by researchers.	Mixed methods. Quantitative - no control group. Measures at baseline and 3 months after completion of 2-year SMCM.	Increase in positive empowerment, life satisfaction. Qualitative self-affirmation, stronger sense of self, acting upon life goals.		Decreases in depression.	
Stanard (1999) **USA**	People with severe mental illness in rural settings (N = 44)	Rapp's model. "Manipulation check" used for fidelity.	Quasi-experimental; no random assignment. Compared SMCM (n = 29) and "generalist case management" (n = 15). 2 time points.	SMCM – higher quality of life.	SMCM – higher vocational and educational outcomes. No differences – residential living.	No differences – symptoms. Both groups showed improved symptoms.	No differences – hospitalizations.

Tsoi et al. (2019) **Hong Kong**	People with severe mental illness in supported accommodation (N = 124)	Rapp's model. Used Strengths Model Fidelity Scale	Quasi-experimental; no random assignment. SMCM with treatment as usual (case management without SMCM training) group over 12 months.	SMCM – better goal attainment than other group. No gp differences in wellbeing. High fidelity related to positive wellbeing and alliance.	SMCM – better employment outcomes than other group.	SMCM – poorer symptoms than comparison group. No gp differences in hope and recovery. High fidelity related to positive hope and recovery
Qualitative						
Arnold et al. (2007) **USA**	Young people who ran away from home (N = 11).	Modification of Rapp's model. Rapp as co-author. Adaptations based on youth population.	One-year intervention.		Naturally occurring resources as important. Key activity - helping to find part-time employment. Unique focus on bullying and school system.	
Brun & Rapp (2001) **USA**	Veterans transitioning to community following residential treatment for substance abuse (N = 10).	Rapp's model (Rapp as co-author). No fidelity measure.	Compared aftercare community services, including SMCM (n = 10) to standard aftercare. 4 time points.	Positive comments related to strength assessment. Difficulties believing case managers' comments about strengths.		
Redko et al. (2007) **USA**	People with substance abuse issues (N = 26).	Rapp's model (Rapp as co-author).	Semi-structured interviews and focus groups.	Increased confidence and optimism, feeling of lightness, felt special and unique.	Decreased feelings of stigmatization.	Reduced distress.

Tse et al. (2010) **New Zealand**	Chinese migrants with mental illness (N = 35).	Rapp's model. No fidelity measure.	Interviews and focus groups with service users, significant others, and practitioners.	Unique focus on personal and collective strengths and practical.	Helped in assisting with settlement and integration in society.

Note. Criterion to determine outcomes (e.g., increased confidence, decreased symptoms, fewer hospitalizations) were based on authors' statistical analyses and reporting of findings.

Approximately 10 of these 27 studies were conducted by Rapp and his colleagues. The majority of the 27 studies were with people with severe mental illness but also included people with substance abuse issues (Lindahl et al., 2013; Prendergast et al., 2011; Redko et al., 2007), people who were HIV positive (Husbands et al., 2007; Wohl et al., 2011), people transitioning from institutions back to the community (Wohl et al., 2011), women who experienced intimate partner violence (Song & Shih, 2010) and sexual exploitation (Edinburgh & Saewyc, 2008), and people with physical disabilities (Selander & Marnetoft, 2005). Sample sizes ranged from 10 (Rapp & Goscha, 2012) to 1,276 (Gelkopf et al., 2016) with the majority of studies reporting sample sizes under 100. Nine studies were randomized controlled trials, most with small sample sizes. In the remaining studies, researchers used highly variable methods, including qualitative, quasi-experimental and non-experimental approaches.

It is challenging to determine similarities and differences between the interventions used in each study. Most studies did not report assessments of fidelity to the SMCM model. The ones that did, did not measure fidelity consistently. For example:

- Fukui et al. (2012) and Tsoi et al. (2019) used the SMCM Fidelity Scale;
- Gelkopf et al. (2016) developed a fidelity scale similar to the one used by Fukui et al. (2012) but with different domains;
- Song and Shih (2010) developed a checklist to determine how closely case managers followed the strengths model;
- Prendergast et al. (2011) developed a “strengths model assessment form”;
- Macias et al. (1997) assessed case manager logs; and,

- Rapp and Wintersteen (1989) interviewed clients and case managers to determine alignment with SMCM.

With the exception of Fukui et al. (2012) and Tsoi et al. (2019), fidelity measures were used to confirm that a case management team had adopted strengths model practice to an extent that either a practice was different enough in its approach when compared to another study group or that over time a service had changed enough to have adopted the SMCM. Fukui et al. (2012) and Tsoi et al. (2019) used the SMCM Fidelity Scale to examine the relationship between fidelity and outcomes. Fukui et al. (2012) used team fidelity scores and time-varying covariate linear growth modelling to determine the association between fidelity and outcomes. They found that higher fidelity was significantly related to higher levels of employment and education and lower levels of hospitalization. Tsoi et al. (2019) found that very high levels of fidelity to the model were associated with higher levels of personal recovery, goal achievement, hope, and well-being.

Study Outcomes

SMCM researchers have examined a wide range of outcomes, such as quality of life, life satisfaction, employment, education, symptoms, functioning, substance use, hospitalizations, community integration and community service use. Overall, researchers have tended to report that SMCM leads to greater improvements in people's quality of life, life satisfaction, client satisfaction with services, positive educational and employment outcomes, and community integration.

The most common positive outcomes in SMCM research seem to be captured by self-report measures, such as quality of life and life satisfaction. People who have participated in SMCM reported higher life satisfaction than comparison groups, such as standard care, as well as

significant improvements in quality of life over time (Barry et al., 2003; Compton et al., 2016; Gelkopf et al., 2016; Hui et al., 2015; Rapp & Chamberlain, 1985; Selander & Marnetoft, 2005; Song & Shih, 2010; Stanard, 1999). Improved quality of life and life satisfaction domains associated with receipt of SMCM have included overall well-being, having care needs met, autonomy, meeting goals, self-efficacy, decreased feelings of stigma, increased hope and self-affirmation (Gelkopf et al., 2016; Hui et al., 2015; Redko et al., 2007; Song & Shih, 2010). The associations between positive quality of life and life satisfaction outcomes and SMCM have been reported across numerous subgroups, such as people with mental illness, people with substance abuse issues, people transitioning out of institutional care, those with long-term disabilities, and women who experienced intimate partner violence. However, again, study methods range greatly, sample sizes are often small, and study quality is sometimes poor.

Ibrahim et al. (2014) conducted a meta-analysis of five studies (randomized controlled trials and quasi-experimental designs) examining the SMCM with people with severe mental illness. Comparison groups in these studies varied, and were identified as: assertive community treatment, standard care services, traditional community services, and psychosocial rehabilitation. No significant differences in quality of life and level of functioning were found between SMCM and the other treatment groups. Authors noted the inconclusiveness of the meta-analysis due to the high heterogeneity between the studies and the interventions used, even though they all aligned with SMCM (Ibrahim et al., 2014).

In addition to quality of life, across five studies (experimental, quasi-experimental and qualitative), SMCM has been shown to be related to employment outcomes (Fukui et al., 2012; Stanard, 1999; Selander & Marnetoft, 2005; Macias et al., 1997; Tsoi et al., 2019). Studies have

shown mixed results when examining symptomatology, mental health functioning, and hospitalizations, although more studies found that the strengths model in this area was superior to other services than ones that showed no differences (Barry et al., 2003; Björkman et al., 2002; Chamberlain & Rapp, 1991; Compton et al., 2016; Fukui et al., 2012; Gelkopf et al., 2016; Hui et al., 2015; Husbands et al., 2007; Ibrahim et al., 2014; Macias et al., 1997; Macias et al., 1994; Rapp & Wintersteen, 1989; Stanard, 1999; Song & Shih, 2010; Tsoi et al., 2019). Since the SMCM intervention encourages a move away from a focus on deficits and diagnoses, improvements in severity of mental health symptoms may not be an appropriate measure of outcomes for SMCM clients (Tsoi et al., 2019).

Overall, outcomes that more consistently showed positive relationships with SMCM, such as quality of life, and life satisfaction, and satisfaction with services, may align with the strengths focus in that they provide flexibility for clients' priorities and goals. Inconsistent findings may be related to concepts and measures that do not align well with the model's theory of change, differences in methods, differences in the local implementation of the model, and lack of measures of fidelity to confirm adherence to the model. While not all studies had comparison groups, when they did, comparison groups ranged from standard case management to other forms of standard care and Assertive Community Treatment.

No studies have been found that examined mediators of outcomes, such as working alliance, as posited by the approach's theory. While there are many reasons for variations in study findings, as noted, an examination of mediators may help to explain some differences in study findings and also help to build the SMCM evidence base further by adding considerations of underlying mechanisms.

The Working Alliance

Therapeutic Alliance in Psychotherapy Research

While there is a lack of consensus on the definition of the therapeutic alliance (Elvins & Green, 2008; Horvath, 2018), a common conceptualization based on Bordin's work (1979) is that the alliance is achieved when a client and his or her psychotherapist reach consensus and collaboration in three areas: the goals of therapy, the tasks to achieve these goals, and personal attachments (or bonds) resulting from the client-therapist relationship (Bordin, 1979; Horvath, 2018).

Horvath (2018) and Elvins and Green (2008) noted an ongoing problem operationalizing therapeutic alliance. Time variations impact its operationalization. That is, it can be operationalized in moment-to-moment interactions, or at each therapy session, or based on the overall treatment process. There are also operational issues around what is being rated, and who the rater is. Some measures rate the therapist him/herself, and others measure the interactions between the therapist and client. Some measures include therapist ratings, and others are rated by clients themselves.

Horvath (2018) counted over 70 instruments that have been developed to measure therapeutic alliance. This instrument development is increasing, as opposed to narrowing in focus (Horvath, 2018). Variations are not due to making necessary adaptations to instruments for specific populations. Rather, the many instruments are attributed to duplication and the inconclusive nature of the concept. Horvath (2018) noted that the alliance is many things, all related, but not consensually supported.

The therapeutic alliance is often measured based on client and therapist ratings on Likert scales. The Working Alliance Inventory (WAI) and the Helping Alliance Questionnaire are two of the most common measures used. The WAI is based on Bordin's (1979) conceptualization. It covers agreement on goals, agreement on tasks of therapy, and the interpersonal connection between the therapist and client (Byrd et al., 2010; Spinhoven et al., 2007). Other measures focus on how understood a client feels, how much a client works with the therapist, and how helpful the therapist is (Joyce et al., 2003). Based on their reviews, Elvins and Green (2008) and Horvath (2018) agree that the concept of the alliance remains fairly descriptive.

Relationship Between Therapeutic Alliance and Psychotherapy Outcomes

Research related to the therapeutic alliance as a predictor of client outcomes began in the 1970s and has grown into a vast body of literature over the past 40 years (Horvath, 2018). The focus on the alliance-outcome relationship was largely spurred by research in the 1970s that showed that outcomes of psychotherapy were not explained by one treatment model. Treatment approaches tended to show the same outcomes regardless of approach (Bordin, 1979; Horvath, 2018). This initiated the development of a large body of research to explain the importance of the therapeutic alliance, and continues to this day in studies looking to account for the efficacy of treatments (Horvath, 2018).

The therapeutic alliance is a predictor of clients' positive psychotherapy treatment outcomes, accounting for approximately eight percent of the variance in the correlation between therapy and outcomes. A correlation ranging from $r = .21$ to .28 has been found consistently in multiple studies and meta-analyses (Fluckiger et al., 2018; Fluckiger et al., 2012; Horvath, 2018; Martin et al., 2000; Muran & Barber, 2010). Fluckiger et al.'s most recent (2018) meta-analysis

reported an overall weighted average effect size of $r = .28$ (95% confidence interval (CI) .256, .299, $p < .0001$).

Fluckiger et al.'s (2018) study was a multilevel, longitudinal meta-analysis of 295 independent studies, representing more than 30,000 clients. As with previous meta-analyses, they found that the relationship between alliance and outcomes remained consistent across psychotherapy types (e.g. individual, family, group, internet-based), treatment approaches (e.g. psychodynamic therapy, counseling, cognitive behavioural therapy), various measures of alliance, different outcomes, patient characteristics, different study designs, and countries (Fluckiger et al., 2018; 2012).

The direction of the alliance-outcome relationship is in need of further examination (Fluckiger et al., 2020; 2018). Fluckiger et al.'s (2020) meta-analysis found that early alliance predicted post-treatment outcomes. They found that there was a reciprocal relationship between alliance and symptoms, where stronger alliance led to lower symptoms, which then reinforced the stronger alliance, then lowered symptoms, and so on, in a cyclical way.

Theoretically, both a therapist and a client contribute to the strength of the therapeutic alliance. For example, a client decides how they will invest in the therapy and the relationship and may be more or less inclined to form a bond with a therapist based on various personal characteristics. Fluckiger et al. (2018) reported that people with diagnoses of substance use disorders or eating disorders had a lower alliance. However, overall, researchers show that clients' characteristics do not change the alliance-outcome relationship significantly (Baldwin et al., 2007; Fluckiger et al., 2018).

A psychotherapist's contribution to the alliance may be related to their skill level and their ability to build strong alliances with their clients (Baldwin et al., 2007). Using multi-level modeling, Baldwin et al. (2007) reported that the therapist had a bigger impact on the alliance-outcome correlation than individual clients. They suggested that therapists could receive training and build their skills in forming strong alliances, which then positively influence the client-therapist alliance.

Therapeutic Alliance and Treatment Type

Also related to therapists' skills, some psychotherapy studies have examined psychotherapists' adherence to a treatment or competence related to a specific therapy technique (Webb et al., 2010). Webb et al.'s (2010) meta-analysis showed that a therapist's adherence and competence were not related to outcomes in psychotherapy. Similarly, meta-analyses show that treatment type does not change the alliance-outcome relationship (Baldwin et al., 2007; Barber et al., 2010; Fluckiger et al,. 2012; Webb et al., 2010). At the same time, Webb et al. (2010) suggested that more work needs to be done in psychotherapy research related to examining the relationship between therapists' adherence to an intervention type and outcomes. Measures of adherence vary and may be based only on one or a few therapy sessions, presenting limitations. In some of these studies, the alliance was not controlled for and should be accounted for as a third variable in future research (Webb et al., 2010).

Working Alliance in Case Management Research

When turning to the field of case management with people with severe mental illness, there have been fewer studies on the working alliance compared to the field of psychotherapy (De Leeuw et al., 2012; Kidd et al., 2017). Moreover, most of this research has been conducted

fairly recently. Case management research tends to also use Bordin's (1979) definition of working alliance, as outlined above (Howgego et al., 2003; Kondrat & Early, 2010).

The term "working alliance" is used in the following thesis studies. "Working alliance" and "working relationship" are used in the case management literature examining the relationship between a case manager and client and their work together towards common goals (Kidd et al., 2017; Redko et al., 2007). "Working alliance" aligns closely and overlaps with the concept of the therapeutic alliance but is different from the therapeutic alliance (Abouguendia et al., 2004; Kidd et al., 2017; Muran & Barber, 2010).

Six reviews have focused either wholly or partially on studies of the working alliance in case management, looking at the relationship as it relates to outcomes as well as factors that impact the development of the alliance (De Leeuw et al., 2012; Farrelly & Lester, 2014; Horvath, 2018; Howgego et al., 2003; Kidd et al., 2017; McCabe & Priebe, 2004). While the WAI has been used in the majority of working alliance studies in the case management field (De Leeuw et al., 2012), case management researchers have used 17 different measures to measure the concept (De Leeuw et al., 2012; McCabe & Priebe, 2004). Qualitative researchers have noted that traditional measures of therapeutic alliance from the field of psychotherapy do not fully capture the alliance in the context of case management (Nath et al., 2012; Redko et al., 2007).

Relationship Between Case Management Working Alliance and Outcomes

Horvath's (2018) review included 79 studies that examined the working alliance outside of psychotherapy in six related helping professions (i.e. medicine, nursing, social work, physical therapy, education, and neurology/rehabilitation). Effects of the relationship between alliance

and outcomes were similar to that of the field of psychotherapy, with a range of effect sizes from r = .19 to .32 (95% CI).

Case management researchers have reported a positive relationship between working alliance and quality of life outcomes for people with severe mental illness but there are few studies and they are difficult to compare with each other due to different methods and study types (Ashford et al., 2010; De Leeuw et al., 2012; Howgego et al., 2003; Kondrat & Early, 2010; Kidd et al., 2017; Kondrat, 2012; McCabe & Priebe, 2004; Tsai et al., 2013).

Researchers have found positive relationships between a stronger working alliance and housing stability, greater life satisfaction (Chinman et al., 2000; Howgego et al., 2003; Sandu et al., 2021), a higher level of functioning and social support (Calsyn et al., 1999; Hopkins & Ramsundar, 2006; Howgego et al., 2003), lower depressive symptoms (Rogers et al., 2008), and decreased rehospitalization rates (Fakhoury et al., 2007). In these studies, working alliance was usually measured early in the intervention (e.g., 3 months) and the significant outcomes were found later in the intervention (e.g., 12 months).

Some researchers have reported no relationship between the alliance and outcomes (Chinman et al., 2000; Rogers et al., 2008; Tsai et al., 2013). Tsai et al. (2013) suggested that case management for people who are homeless may not rely on the alliance for positive outcomes to as great an extent as traditional “office” psychotherapy, and people may place more value on practical support in case management than psychotherapy. Buck and Alexander’s (2006) qualitative study support this view. While ICM clients valued their case manager for “being there”, they also valued how the case manager helped them with money, gave them rides, got them services, and helped them to be social.

Working Alliance and Case Manager Approach

In Kondrat and Early's (2010) study of people with severe mental illness in case management (n = 160), case manager differences (e.g. characteristics that influence their ability to form an alliance) accounted for about 11% of the variance in working alliance scores. Aligning with Baldwin et al.'s (2007) psychotherapy findings, some case managers were more successful than others in establishing a working alliance with clients. De Leeuw et al.'s (2012) review examined studies of how case management "style" had an impact on the working alliance. Empathy, respect, and viewing the healthy side of the person were positively related to the alliance. Continuity of care and frequency of contact were also positively correlated.

Based on Farrelly and Lester's (2014) review of 13 studies, they identified three key components to a beneficial working alliance: mutual trust, demonstration of mutual respect, and shared decision-making. They also identified a barrier to the relationship: a lack of clarity of the goal of case management, which created poorly defined roles and possibly unmet needs.

The focus on case managers' personal qualities is also seen in qualitative research. Redko et al. (2007) found that people described the working alliance by identifying their case managers' personal qualities. Participants said the case manager made them feel special, unique, and listened to, and they valued having control over goal-setting and a focus on their strengths and abilities in their descriptions of the relationship. Redko et al. (2007) observed that clients' perceptions of the working alliance reflected strength-based principles, such as the focus on strengths and a client-driven approach.

Beyond case manager characteristics, in Calsyn et al.'s (1999) study, certain treatment features were positively correlated with the alliance: frequency of program contact, and the

number of supportive services the person was connected to. However, once the correlations were analyzed through hierarchical regression, these relationships were not found.

Three studies have examined the working alliance in SMCM in particular (Brun & Rapp, 2001; Redko et al., 2007; Tsoi et al., 2019). Two were qualitative, looking at the centrality of the working alliance from the perspective of case management clients with substance use issues. Redko et al. (2007) noted that the working alliance is often not described nor addressed directly in case management models. The exception is SMCM, where it is one of the main principles of the model and described as essential to the intervention's success. Participants in both qualitative studies reported that they perceived the close relationship with their case manager as leading to personal change, such as improvements in self-worth and self-esteem (Redko et al., 2007) and their ability to make positive changes in their lives related to substance use (Brun & Rapp, 2001). In Tsoi et al.'s (2019) study, very high SMCM fidelity was positively associated with the working alliance. However, they reported no differences in improved working alliance in their SMCM group versus a comparison group (i.e. case management without SMCM training or tools).

The large body of research on the therapeutic alliance in psychotherapy can prompt similar examinations of the concept of the working alliance in other mental health interventions, such as case management for people with severe mental illnesses. Studies of the working alliance in case management are few in number and highlight the need for further research exploring the construct and its association with client outcomes. SMCM provides a clear description of the role of the client-case manager relationship, highlighting the close working alliance as a central mechanism of change in the intervention.

Context of the Thesis Studies

This thesis uses data from a multi-site study, entitled, "Evaluating the strengths model of case management for people with severe mental illness: A multi-provincial study." Six mental health organizations located in Ontario and Quebec adopted the SMCM, under the training and guidance of Dr. Rick Goscha from the University of Kansas. A seventh mental health organization located in Newfoundland also participated, and had already implemented SMCM under Dr. Rick Goscha's guidance. In total, three hundred and eleven people with severe mental illness receiving SMCM services from these seven organizations participated in quantitative client interviews focused on evaluating their intervention outcomes. The study also included fidelity assessments using the SMCM Fidelity Scale, and a qualitative examination of the implementation of the model.

My Roles in the Parent Study

I worked as a Research Coordinator for one of the study sites, coordinating five interviews, 4.5 months apart, for each of the clients in the study at this community mental health organization. I also conducted over 100 of the interviews myself with clients at this site. Following data collection, I have collaborated with the study co-investigators on data analysis and co-authorship of additional study manuscripts. I am the first author on a brief article validating the Patient Generated Index, which has been accepted for publication by the *Psychiatric Rehabilitation Journal* (Roebuck et al., 2020). I am the second author on an article reporting the results of the implementation component of the broader study, qualitatively examining the experiences of the six community mental health organizations that implemented the SMCM for the first time (Briand et al., 2020). Finally, I will be included as a co-author on

the main article for this study, which will report the results of the direct relationship between fidelity to SMCM and client outcomes.

Contributions to the Literature

This thesis is comprised of two studies examining the role of the working alliance as a mediator between fidelity to the SMCM and clients' outcomes. The hypotheses and research questions were derived from prior research and theory. They contribute to both case management research and theory, specifically, SMCM as a case management intervention, and the working alliance as a case management mechanism.

In its 2017 Canadian Health Accord, for the first time the Government of Canada identified mental health as a top priority of federal health investing (Government of Canada, 2017). Through this agreement, the Government of Canada committed mental health funding to provincial and territorial governments with several areas of focus, including "spreading evidence-based models of community mental health care" and "expanding availability of community-based mental health and addiction services for people with complex health needs" (Government of Canada, 2017). Even with this prioritization, the actual amount of mental health funding has remained low (Canadian Health Coalition, 2017; OECD, 2014). According to the Organisation for Economic Co-operation and Development (OECD, mental illness represents as much as 23% of the disease burden on a country; yet, most countries underspend on mental health care. Canada's spending is particularly low, with investments of 7.2% of its total health spending on mental health care, which is far below its peers, such as England at 13% (OECD, 2014), although comparisons should be made cautiously since the way funds are spent vary

greatly from country to country, with some countries expending a significant portion of their mental health budgets on treatment in hospitals.

In Canada and across the globe there is a continued need to highlight the importance of community mental health services for people with severe mental illness. Building the evidence base of community mental health interventions contributes to this prioritization, providing governments with sound evidence-based solutions to meet the complex needs of people with severe mental illness.

A common focus of research in the community mental health field is to connect fidelity to an intervention with real change in people's lives, which helps to make a case for investing in and expanding high-fidelity implementation of these interventions (Bond & Drake, 2019). When turning to research on SMCM, we see evidence of a relationship between the intervention and client outcomes, as well as a need for more research to clarify inconsistent findings. While an SMCM fidelity tool has been developed, it needs to be incorporated into SMCM studies beyond the two studies that have reported on its use so far (Fukui et al., 2012; Tsoi et al., 2019). Researchers have suggested that research around mediators between the SMCM and outcomes would be helpful (Bjorkman et al., 2002; Fukui et al., 2012). This thesis contributes to the SMCM evidence base, and addresses areas that need further research, such as using the SMCM Fidelity Scale (Rapp & Goscha, 2012), incorporating the working alliance into analyses to align with SMCM theory, and expanding the SMCM research into a new country context.

The study also makes a significant contribution to research on the working alliance between a person with a severe mental illness and their case manager. While support for the key role of the therapeutic alliance in psychotherapy is strong, more research is needed on the

alliance in other interventions, including case management (De Leeuw et al., 2012; Farrelly & Lester, 2014; Horvath, 2018; Howgego et al., 2003; Kidd et al., 2017; McCabe & Priebe, 2004). Research on the alliance in community mental health interventions must incorporate the additional focus on fidelity-outcome measurement. In addition, services are provided to people with severe mental illness in community-based settings, often with a focus on meeting practical needs in complex environments, such as situations of vulnerable housing, isolation, and comorbidity with substance use disorders (Buck & Alexander, 2006; Tsai et al., 2013). This unique aspect of the alliance in community mental health also needs to be considered. As such, this study contributes to the conceptualization of the working alliance in community mental health and case management, builds on needed research examining the alliance-outcome relationship in these settings, and tests the working alliance as a mediator in fidelity-outcome studies.

This study also makes a significant contribution methodologically. In the quantitative study, measuring the working alliance as a mediator in a fidelity-outcome model provides a new approach to including factors that may be common across community mental health interventions to fidelity-outcome studies. Also, my use of qualitative methods to examine a mediation model is a unique approach. The qualitative study provides an in-depth examination of the mediation model, from the perspective of people receiving SMCM case management services. This qualitative contribution provides further insight into the findings of the quantitative study, introducing considerations around the process and underlying mechanisms at work in the mediating relationship.

Examining the Working Alliance as a Mediator of the Relationship Between Fidelity to the Strengths Model of Case Management and Client Outcomes, in a Multi-provincial Context

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Abstract

Objective: The purpose of this multi-site study was to examine the client-case manager working alliance in the strengths model of case management (SMCM) as a mediator of the relationship between fidelity to the intervention and clients' quality of life, hope and daily functioning outcomes.

Methods: Three hundred and eleven people with severe mental illness from seven community mental health agencies participated in the study. They were new to SMCM, and participated in five structured interviews every 4.5 months for 18 months to measure their working alliance, quality of life, hope and functioning. The team-level SMCM fidelity scale was administered every six months for three years. Ordinary least squares path analysis was used to test simple mediation models. A moderator of mediation, to account for agency location was also tested, as an exploratory analysis.

Results: Higher fidelity to SMCM influenced better client outcomes, indirectly, through the working alliance. Higher SMCM fidelity predicted stronger working alliance, which then predicted better client quality of life and higher level of hope. There was no evidence that SMCM fidelity influenced examined client outcomes directly, independent of the working alliance. In addition, client outcomes predicted later alliance, sugegsting a reciprocal relationship.

Conclusions: The study supports SMCM as an intervention that leads to improvements in the quality of life, hope and functioning of people with severe mental illness. It also supports the working alliance as a mechanism of change in SMCM.

Introduction

The field of case management for people with severe mental illness is expanding and gaining increased attention and recognition (Kidd et al., 2017). It represents a group of interventions (e.g. intensive case management [ICM], Assertive Community Treatment (ACT), standard case management) that support people with severe mental illness and complex needs to become integrated in the community (Kidd et al., 2017; Rapp & Goscha, 2012). Within case management, the focus of this study is on the delivery of the strengths model of case management (SMCM), a subtype of ICM, and the role of the client-case manager working alliance in SMCM. The SMCM evidence base is growing but considered in early development, with researchers using highly variable methods, which have yielded inconsistent findings (Kidd et al., 2017; Latimer & Rabouin, 2011; Rapp & Goscha, 2012; Rapp & Sullivan, 2014).

Psychotherapy researchers have developed a substantial evidence base around the therapeutic alliance, which is the level of consensus and collaboration of a psychotherapist and their client in three areas: goals of therapy, tasks to achieve these goals, and personal attachments (or bonds) resulting from the client-therapist relationship (Bordin, 1979; Horvath, 2018). Researchers have shown that the therapeutic alliance is a predictor of clients' positive psychotherapy treatment outcomes, accounting for approximately eight percent of the variance in this association. A correlation ranging from $r = .21$ to .28 has been found in multiple studies and meta-analyses (Fluckiger et al., 2018; Fluckiger et al., 2012; Horvath, 2018; Horvath et al., 2011; Martin et al., 2000; Muran & Barber, 2010; Webb et al., 2010).

Case Management Research and Working Alliance

Turning to case management, the same examination of the working alliance is less clear. Researchers have reported a relationship between working alliance and outcomes for people with severe mental illness receiving case management, with higher levels of alliance leading to lower levels of mental health symptoms, higher functioning, and higher satisfaction with care (Ashford et al., 2010; De Leeuw et al., 2012; Howgego et al., 2003; Kidd et al., 2017; Kondrat, 2012; Kondrat & Early, 2010; McCabe & Priebe, 2004; Sandu et al., 2021; Tsai et al., 2013). However, there are far fewer studies on the working alliance in case management, and methods and intervention subtypes vary widely, making study comparisons challenging (De Leeuw et al., 2012; Kidd et al., 2017).

The concept of working alliance in case management has been developed from the therapeutic alliance concept in psychotherapy and working alliance is not clearly defined nor differentiated from therapeutic alliance in psychotherapy (Chinman et al., 2000; Howgego et al., 2003; Kondrat & Early, 2010; Tsai et al., 2013). Psychotherapy and case management are different interventions and the client-case manager bond and agreement on goals and tasks may differ from the therapeutic alliance in psychotherapy. For example, people in case management may place more value on practical supports, such as accessing services, meeting basic needs, and building informal supports (Buck & Alexander, 2006; Nath et al., 2012; Redko et al., 2007; Tsai et al., 2013). Recognizing challenges with its conceptualization, in this study, the term “working alliance” is used, and Bordin’s (1979) definition (i.e., bond, goals, and tasks).

Researchers have examined the impact of individual case managers’ skills in forming a working alliance and how case manager characteristics influence working alliance formation. In

Kondrat and Early's (2010) study of people with severe mental illness in case management (n = 160), case manager differences accounted for about 11% of the variance in working alliance scores. Baldwin et al. (2007) reported similar findings in psychotherapy research – the therapist had a bigger impact on the alliance-outcome correlation than individual clients, suggesting that therapist characteristics (e.g., style, ability to form a bond) are more important than variation in client characteristics (e.g., symptomology, mistrust, diagnoses) in the alliance-outcome relationship. Researchers have considered what attributes of therapists or case managers predict a stronger alliance. While therapist or case manager characteristics need to be explored more in-depth, researchers have suggested several potential contributing factors to the alliance, such as therapeutic style, being reflective, trustworthy, or affirming, as well as being able to provide practical assistance (Baldwin et al., 2007; De Leeuw, 2012; Fluckiger et al., 2018; Kondrat & Early, 2010; Sandu et al., 2021). Considerations of case managers' skills in forming a working alliance lead to questions around what characteristics of case management practice itself could promote individual case managers' skills to foster close working alliances.

SMCM Outcomes

Developed in the 1980s by Charles Rapp in response to traditional mental health case management's focus on impairments and deficits, SMCM focuses on positive internal qualities and assets of clients, as well as environmental resources (Rapp & Goscha, 2012). It is client-driven, goal-focused, and supports people to access natural resources in the context of their communities (Barry et al., 2003; Rapp & Goscha, 2012).

SMCM is also promising because it has an explicit theoretical framework and provides an operationalization and structure that other case management interventions fail to provide

(Kidd et al., 2017; Rapp & Goscha, 2012). SMCM is framed by six overarching principles, one of which is that the client-case manager relationship is primary and essential (Rapp & Goscha, 2012). The principles are implemented through the use of the SMCM tools: a Strengths Assessment, a Personal Recovery Plan (i.e. goal worksheet), structured group supervision and individual supervision (Rapp & Goscha, 2012). The strengths model theory suggests that using SMCM principles and tools (e.g., identifying and leveraging strengths, highlighting natural resources in the community, fostering hope) lead to client achievement of meaningful, individual goals. Goal achievement in one life area (or niche) increases hope and leads to pursuing and achieving goals in other areas. The process continues, leading to increased movement in life areas, higher levels of hope, motivation, and functioning, and eventually greater overall quality of life (Rapp & Goscha, 2012).

SMCM research has begun to show evidence of the intervention's effectiveness (Fukui et al., 2012; Gelkopf et al., 2016; Rapp & Goscha, 2012; Tsoi et al., 2019). While studies vary greatly in methods and quality, SMCM research has shown trends that the intervention leads to improvements in clients' quality of life, life satisfaction, satisfaction with services, and positive educational and employment outcomes compared to other forms of community supports, such as other forms of ICM, ACT, or standard care (Barry et al., 2003; Compton et al., 2016; Fukui et al., 2012; Gelkopf et al., 2016; Ibrahim et al., 2014; Rapp & Goscha, 2012; Selander & Marnetoft, 2005; Stanard, 1999; Tsoi et al., 2019). Less consistently, studies have shown reductions in the severity of mental health symptoms and hospitalizations, and improvements in functioning and community integration. Inconsistencies may be related to highly variable study methods and measures, outcomes that may not align with the model itself, and differences in

how closely a program is following the model (Barry et al., 2003; Björkman et al., 2002; Chamberlain & Rapp, 1991; Gelkopf et al., 2016; Lindahl et al., 2013; Macias et al., 1994; Prendergast et al., 2011; Stanard, 1999; Tsoi et al., 2019; Wohl et al., 2011).

In 2012, the SMCM developers produced a fidelity measure - the Strengths Model Case Management Fidelity Scale – to determine how closely a delivery of the intervention follows the SMCM model and protocol (Fukui et al., 2012; Rapp & Goscha, 2012). In addition to the present study, two studies thus far have used this measure to examine client outcomes (Fukui et al., 2012; Tsoi et al., 2019). Fukui et al. (2012) found that greater fidelity to the model was related to higher levels of employment and education and lower levels of hospitalization. Tsoi et al. (2019) found that very high levels of fidelity to the model were associated with higher levels of personal recovery, hope, goals achievement, and well-being. However, in Tsoi et al.'s (2019) study, only the SMCM setting with the highest fidelity ratings was found to have significantly different outcomes than a comparison group (i.e., case management without SMCM training or tools). The exception to this lack of difference was in goal achievement – the SMCM group showed higher goal achievement than the comparison group. The researchers of both studies suggested that further SMCM fidelity-outcome research is needed.

SMCM and the Working Alliance

Rapp and Goscha (2012) describe the client-case manager relationship in SMCM as the primary mechanism to produce positive outcomes or the "medium to achievement" (p. 71). It is goal-oriented, reciprocal (mutual learning), empowering (the client is the director of the process), and hope-inducing (Rapp & Goscha, 2012). Rapp and Goscha's (2012) description of this relationship is similar to Bordin's (1979) definition of the working alliance, particularly in that

they highlight the SMCM's high level of purposefulness, both in the overall practice (similar to Bordin's goals of therapy) as well as in each encounter between the client and case manager (similar to Bordin's therapy tasks).

Three studies have examined the working alliance in the SMCM (Redko et al., 2007; Brun & Rapp, 2001; Tsoi et al., 2019). Two were qualitative, looking at the working alliance and case management from the perspective of clients. Participants in both studies reported that the close relationship with the case manager led to personal change, such as improvements in self-worth and self-esteem and their ability to make positive life changes (Brun & Rapp, 2001; Redko et al., 2007). In Tsoi et al.'s (2019) study, very high SMCM fidelity was positively associated with the working alliance, as measured using the Working Alliance Inventory (completed by clients). However, they reported no differences in improved working alliance in their SMCM group versus their comparison group (i.e. case management without SMCM training or tools).

Current Study

The purpose of this study was to examine the client-case manager working alliance as a mediator between fidelity to the SMCM and clients' quality of life outcomes. It was a secondary analysis of a parent study of the implementation of SMCM in Canada. The following hypotheses were developed based on a combination of theory and research. In SMCM model theory, the intervention's foci on the purposefulness of the client-case manager relationship, leveraging strengths, and pursuing meaningful goals across life areas, support the consideration that the working alliance plays a role in clients' improved life change. As such, following SMCM closely may be associated with development of close working alliances, and stronger SMCM working alliances may be positively associated with client outcomes. SMCM research is limited in both

examinations of the fidelity-outcome relationship and working alliance-outcome relationship. The studies that have been conducted suggest the need for further exploration of these areas within SMCM. In this study, the following hypotheses were tested:

1. Greater fidelity to SMCM predicts higher levels of the working alliance between a case manager and clients with severe mental illness.
2. Higher levels of the working alliance predict greater improvements in clients' outcomes (quality of life, hope, functioning) over the course of SMCM.
3. Greater fidelity to SMCM will have an effect on clients' outcomes (quality of life, hope, functioning), indirectly through the working alliance as a mediator.

Methods

Participants

Three hundred and eleven people participated in the parent study. They were new clients to services delivering SMCM for people with severe mental illness (i.e., within six weeks of entering SMCM in a community mental health setting at the time of the baseline interview). To be eligible for the study, participants met the inclusion criteria for SMCM services at the relevant participating organization. Fourteen case management teams, in seven community mental health organizations participated, located in three Canadian provinces (i.e., Ontario, Newfoundland, Quebec).

As part of this parent study, case management teams adopted the SMCM. They received initial training on the approach, as well as follow-up mentoring from the model leads at the University of Kansas. One of the organizations had already been trained in SMCM by the

University of Kansas representatives when the study began so they began the study with a higher level of fidelity to the model than the other teams, although none of the teams began the study with what would be considered "high fidelity." Teams also adjusted their structure to accommodate the new intervention, such as shifting their teams to adhere to the appropriate ratio of case managers to clients, and changing the format of their team meetings to follow the SMCM group supervision process.

Measures

Covariate Measures

The Demographic Service and Housing History (DSHH) questionnaire was used to gather clients' demographic information at baseline (e.g. gender, age, education, employment, hospitalization). The Residential Timeline Follow-back (RTLFB) questionnaire was used to determine if people were stably housed or not stably housed during the previous six months at baseline (Tsemberis et al., 2006). The total number of Adverse Childhood Experiences (ACE) was also included as a study covariate (Felitti et al., 1998). These questionnaires were completed in the structured interviews for the study, which were conducted by researchers with each client-participant. See Table 2 for details of these variables.

Program Fidelity

The Strengths Model Case Management Fidelity Scale was used to determine how closely case management teams followed the SMCM intervention (see Appendix C [Fukui et al., 2012; Rapp & Goscha, 2012]). Ten clinical supervisors of the participating case management teams were trained by a University of Kansas SMCM consultant to conduct assessments using the Fidelity Scale. In pairs, they assessed SMCM fidelity of the participating case management

teams (other than teams at their own organization). These fidelity assessors provided ratings on 5-point scales based on their observations, reviews of case records, direct observations, and interviews with clients, case managers, and supervisors. The ratings for each assessment were based on consensus between the two assessors rather than a mean of the two assessors' independent ratings. The Fidelity Scale covers the following domains: caseload size; meeting in the community; group supervision; individual supervision; use of the Strengths Assessment; use of the Personal Recovery Plan; naturally-occurring resources; and, hope-inducing practice (Rapp & Goscha, 2012).

One domain of the scale (integration of Strengths Assessment and treatment plan) was excluded from this analysis because it did not align with model implementation in the Canadian context where the format of treatment plans are provincially-mandated, making it difficult to introduce changes specific to an intervention characteristic, such as alignment with the Strengths Assessment. Without this domain, total fidelity scores ranged from 8 to 40, and a total score of 32 or higher indicated high fidelity.

The individual level of fidelity to SMCM practice that each client received throughout their participation in the study was determined based on the total team fidelity scores at each of the assessment time points. Using linear interpolation, a daily team fidelity score was calculated for each day of the study (i.e., the span of time that client interviews were conducted). A fidelity score was then calculated for each client-participant's five structured interviews, using these daily interpolated scores. This client-level score was the average level of SMCM fidelity of a client's case manager's team over the previous six months (180 days) leading up to each client

interview date. A three-month (90-day) and nine-month (270-day) average SMCM fidelity score were also calculated for each participant interview, to be used for sensitivity analyses.

Client-Case Manager Working Alliance

The 24-item Recovery-Promoting Relationships Scale (RPRS [see Appendix D]) measures the relationship between clients and their mental health providers, including elements of the recovery model (e.g. hope-inducing practice and empowerment [Russinova et al., 2006]). This measure was administered to clients in the structured interviews with researchers. Clients respond to statements about their current mental health provider (i.e., case manager) on a 4-point agree/disagree Likert scale. Raw scores are converted into scaled scores and then summed, according to Russinova et al.'s (2006) manual. Total raw scores range from to 24 to 96 and total scaled scores range from 0 to 100. The RPRS is divided into two indices, the Core Relationship Index and the Recovery-Promoting Strategies Index. In this study, the two indices were highly correlated (r = .69), and in Russinova et al.'s (2006) factor analysis of the measure, the items loaded on a single factor. Hence, the decision was made not to separate the total score into the two indices and to use the total scores in this study's analysis.

The scale has shown good test-retest reliability with coefficients of stability ranging from .61 to .72, when completed approximately 16 days apart. Regarding convergent validity, total RPRS score has been shown to have a high correlation with the Working Alliance Inventory (WAI) (r = .79 [Russinova et al., 2006]). In this study, Cronbach's alpha was .96 for all time points, demonstrating high internal consistency.

Outcome Measures

Client outcomes were measured with four questionnaires, either administered to clients by a researcher in structured interviews or completed by a researcher following the structured interviews.

20-item Quality of life Interview (QOLI-20). Lehman's QOLI-20 measures self-reported life satisfaction in the areas of family, friends, finances, home, neighbourhood, and recreation on a 7-point scale (see Appendix E [Lehman, 1988]). Items are summed for a total score. The QOLI-20 total score has been shown to have good internal consistency and test-retest reliability. The measure shows good construct and predictive validity based on confirmatory factor analyses and multivariate explanatory models (Lehman, 1996). In this study, the QOLI-20 had a Cronbach's alpha ranging from .89 to .92 over the study time points.

Patient-Generated Index (PGI). A person-generated, individualized measure of quality of life, the PGI provides a rating of self-identified life areas that are important to a person and that they would like to see improved the most (see Appendix F [Ruta et al., 1994]). Test-retest reliability coefficients for the PGI range from .48 to .91 (Mayo et al., 2017). Supporting its construct validity, researchers have reported significant relationships (correlations around .30) between the PGI and quality of life measures for specific physical disabilities or general quality of life (Camilleri-Brennan et al., 2002; Garratt, 2015; Ruta et al., 1999). Analyses from this study sample showed significant correlations with the QOLI-20 total score, ranging from r = .25 to .42. Internal reliability analyses are not suitable for this measure due to the highly individualized, life areas, used as scale items that are defined by respondents.

Trait Hope Scale. The THS assesses hope based on self-beliefs and responses to different situations, on an 8-point Likert scale (see Appendix G). The total THS score is calculated by summing eight items on the measure (Snyder et al., 1991). It has good test-retest reliability ranging from .73 to .85. Significant positive correlations with measures of related constructs support its construct validity (Snyder et al., 1991). In this study, the scale was found to have high internal reliability with Cronbach's alpha ranging from .81 to .84 for the different time points.

Multnomah Community Ability Scale (MCAS). The MCAS is an observer-rated, 17-item scale used to evaluate and describe functional abilities of people with psychiatric disabilities (see Appendix H [Barker et al., 1994]). The study researchers who conducted the structured client interviews for this study participated in MCAS training. They completed the MCAS for participating clients following each of their structured interviews. On a 5-point scale, the researchers rated functioning across four life domains: health, adaptation, social skills and behaviour. Barker et al. (1994) reported the scale's inter-rater reliability of .85, test-retest reliability of .83 and predictive validity with total scores demonstrating high correlations with future hospitalizations. The MCAS in the current study was found to have a Cronbach's alpha ranging from .79 to .81 for the different study time points.

Procedure

Ethics approval was provided by the relevant ethics boards at each study location. New case management clients were invited to participate. They entered the study from October 2014 to July 2016 after providing informed consent. Following a baseline interview, they participated

in four additional structured interviews that were 4.5 months apart, each with honoraria provided in cash.

The baseline, 9-month and 18-month interviews were conducted in person, either at the case management organization, in the person's home, or in a community space (e.g. library). These in-person interviews were about an hour long and included the outcome measures at each interview, plus the DSHH and RTLFB in the baseline interview, and the ACE measure in the 9-month interview. The 4.5-month and 13.5-month follow-up interviews were conducted by phone unless a person requested an in-person alternative. They were about 20 minutes long and included the RPRS and updates on service use and housing status (RTLFB).

The baseline fidelity assessments of the 14 case management teams were conducted from September 2014 to December 2014. Six fidelity assessments were conducted for most teams: at baseline, then at approximately six months, 12 months, 18 months, 24 months, and 36 months. One team dropped out of the study early, thus ending further efforts at model implementation. They completed four fidelity assessments.

Data Analysis

Analysis Considerations

Multilevel mediation modeling, structural equation modeling, and mediation path analysis were considered when determining how to test the hypotheses for this study. The decision to test simple mediation models using ordinary least squares (OLS) path analysis was based on several practical and statistical considerations.

The clients in this study were nested within case managers, in 14 case management teams, in seven mental health organizations, across three provinces. Hence, there were concerns

of non-independence in the data due to this natural clustering, which could lead to inflation of Type I error rates (Tabachnick & Fidell, 2019). If a multi-level analysis had been conducted to account for this clustering, the level-2 sample would either consist of the 14 case management teams or seven organizations. While some researchers may consider that a level-2 sample size of 10 or 20 is possible, a sample size of around 60 clusters is usually what is required for adequate power in a multi-level analysis (Huta, 2014; Tabachnick & Fidell, 2019).

In some of the study sites with more than one participating case management team, several clients and case managers moved frequently between teams for various reasons (e.g., changes in the team structure to align with the SMCM, clients requesting case manager switches, case manager turnover). Hence, the clustering of the client data across teams was not consistent across study time points in some sites, indicating a practical challenge with using multi-level modeling at the team-level.

As an additional consideration of the data clustering, in order to examine the variance in data between the study sites (i.e., organizations), the intraclass correlations (ICC) were calculated for the study's dependent variables (including the mediating variable) (Heck et al., 2014). ICC's ranged from .02 to .12. Therefore, the ICC's were low, but some (ICC > .05) were not low enough to ignore (Pituch & Stevens, 2016).

Considering the small number of clusters at both the team- and organization-levels, the impracticality of analyzing the data at the team-level, and the ICC results, we decided to test simple mediation models but to correct the alpha levels for analyses that included a dependent variable with an ICC greater than .05. We adjusted the alpha level, post hoc, from $p < .05$ to $p < .01$ in order to account for inflated Type I error rates, as recommended by Pituch & Stevens

(2016). The variables with ICC > .05 were the QOLI-20 at 18 months (ICC = .07), the PGI at 18 months (ICC = .12), MCAS at 18 months (ICC = .07), MCAS at nine months (ICC = .11), and the RPRS at 13.5 months (ICC = .06). If coefficients of effects that included these variables in the path analysis were $p > .01$, they were considered non-significant and their indirect, mediating paths were also considered non-significant.

In addition to adjusting the alpha levels post hoc, the site ID variable was added as a covariate in the mediation analyses, to control for differences in findings due to the agency variable. And, as an exploratory analysis, the sites were divided into a dichotomous variable (i.e., location in Quebec versus in Ontario or Newfoundland), which was tested as a moderator of the mediation analyses. Conducting such analyses were, again, a preliminary way to begin to explore possible differences across organizations. There were several reasons that this dichotomous variable made sense as a moderator. First, the fidelity assessors for the study were grouped according to language; a group of fidelity assessors conducted the assessments for Quebec and another group of fidelity assessors conducted assessments for Ontario and Newfoundland. Also, site differences in service provision (e.g., program inclusion criteria, legislated treatment plans, funding criteria) may have been somewhat accounted for by distinguishing between Quebec and the two English-speaking provinces.

As noted above, structural equation modeling was also a possible analysis to test the hypotheses. The QOLI-20 variable and PGI are potentially two variables of the same construct (quality of life) and could be used to form a quality of life latent variable in a structural equation model. However, correlations between the QOLI-20 and PGI ranged from $r = .25$ to .42, depending on time point. These correlations were considered too low to assume that the

measures were measuring the same construct and the decision was made not to use latent variables in the analysis.

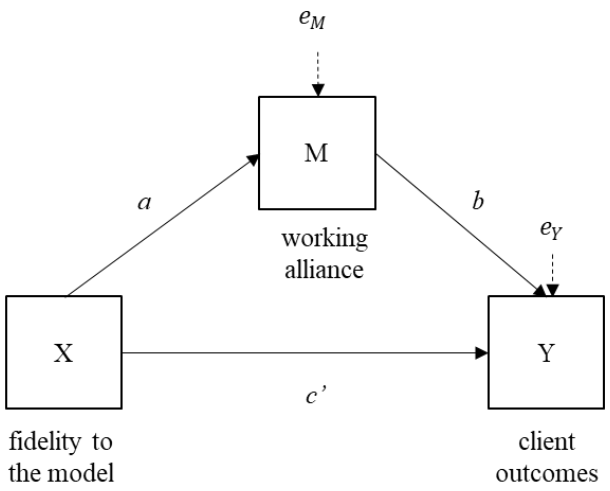
Analysis

A Missing Values analysis, using SPSS, at the item-level of the data showed that 16.3% of the values were missing. At the scale-level, 11.6% of the data were missing. The data were Missing Completely at Random, according to Little's Test, at the scale-level, when separating the dependent variables by time point (Tabachnick & Fidell, 2019). Based on these missing values analyses, missing data were replaced using multiple imputation at the item-level (17 iterations) then using Baranzini's (2018) procedure for compressing SPSS multiply imputed files into a single data file.

Simple mediation models were tested using ordinary least squares (OLS) path analysis with the PROCESS 3.4.1 macro program in IBM SPSS version 26. In addition to the individual X-M and M-Y effects, the indirect paths from model fidelity (X) to client outcomes (Y), through the client-case manager working alliance, as a mediator (M), were tested. Figure 2 shows a statistical diagram of the simple mediation model, based on Hayes (2018).

Figure 2

Statistical Diagram of the Simple Mediation Model



The statistical equations for the simple mediation model are:

$$M = i_M + a\mathrm{X} + \sum_{\mathrm{i}=1}^{\mathrm{q}} f_i\, C_i + e_M$$

$$Y = i_Y + c'\mathrm{X} + \mathrm{bM} + \sum_{\mathrm{i}=1}^{\mathrm{q}} g_i\, C_i + e_Y$$

M represents the linear model for the mediator variable (working alliance) and Y represents the linear model for the outcome variable (client outcomes). X is the independent variable, fidelity to SMCM. *a, b,* and c' are the regression coefficients in the model (*a* = effect of X to M, *b* = effect of M to Y, *c'* = effect of X to Y). i_M and i_Y are constants, e_M and e_Y are errors in the estimation of M and Y, and $\sum_{\mathrm{i}=1}^{\mathrm{q}} f_i\, C_i$ represents the set of covariates (q) that are held constant (C).

The mediation model included nine covariates: age, gender, housing status (stable/unstable), employment (unemployed/employed), education, adverse childhood

experiences, site, hospitalized for at least six months in the past five years (or not), and the baseline score of the outcome measure being tested. See Table 2 for a summary of these variables. The rationale for including the site variable as a covariate was noted above. Hayes (2018) supports the use of treating an earlier-in-time variable as a covariate in mediation models and moderated mediation in order to account for the level of Y at the beginning of the study. The additional covariates were included because they were collected in the parent study and considered to have possible associations with the dependent variables.

The simple mediation model was tested eight times using Model 4 of PROCESS (Hayes, 2018): each of the four outcome variables were tested, at both the 9-month and the 18-month time points. The 4.5-month working alliance score was included as the mediator in the models testing the 9-month dependent variables (controlling for baseline scores). The 13.5-month alliance was the mediator in the models testing the 18-month dependent variables (controlling for baseline scores). The average fidelity for the six months leading up to either the 4.5-month interview, or the 13.5-month interview, was used, to match the working alliance time point in the analyses.

Bootstrap percentile confidence intervals (CI) were used to determine the significance of the indirect effects. In this study, 5,000 bootstrap samples were used to construct 95% CIs. In addition, effect sizes of the indirect relationship coefficients were reported using the PROCESS calculation of the completely standardized indirect effect size, which is a descriptor of "the difference in standard deviations in Y between two cases that differ by one standard deviation in X" (Hayes, 2018, p. 135).

As an exploratory analysis, after the simple mediation model testing, moderated mediation was tested, examining whether or not the indirect relationship of fidelity (X) to client outcomes (Y) through the working relationship (M) was contingent on where the intervention took place (W). A dichotomous moderator variable was constructed by dividing the sample between case management services located in Ontario and Newfoundland, coded as 0, and case management services located in Quebec, coded as 1. Fidelity assessment in Ontario and Newfoundland was done by one group of assessors, and in Quebec by another group, with only occasional overlap between the groups. See Figure 3 for a conceptual representation of this moderated mediation and Figure 4 for a statistical model.

Figure 3

Conceptual Diagram of the Moderated Mediation Model

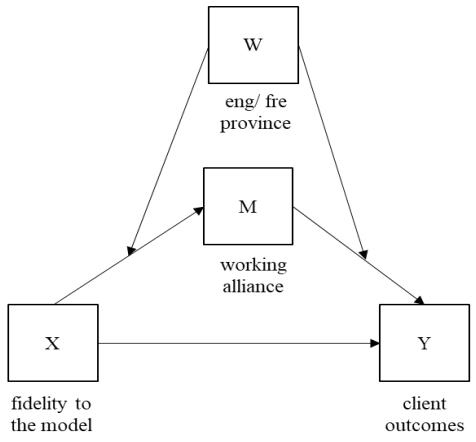
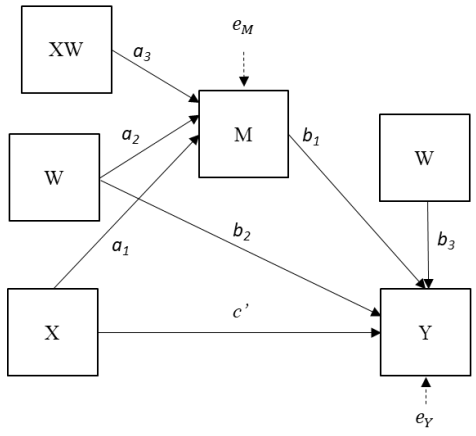


Figure 4

Statistical Diagram of the Moderated Mediation Model



The statistical equations for the moderated mediation are:

$$M = i_M + a_1\mathrm{X} + a_2\mathrm{W} + a_3\mathrm{XW} + \sum_{\mathrm{i=1}}^{\mathrm{q}} f_i\, C_i + e_M$$

$$Y = i_Y + c'\mathrm{X} + b_1\mathrm{M} + b_2\mathrm{W} + b_3\mathrm{MW} + \sum_{\mathrm{i=1}}^{\mathrm{q}} g_i\, C_i + e_Y$$

M represents the linear model for the mediator variable (working alliance) and Y represents the linear model for the outcome variable (client outcomes). X is the independent variable, fidelity to SMCM and W is the moderator (i.e., location of agency). *a, b,* and c' are the regression coefficients in the model (*a* = effect of X to M, *b* = effect of M to Y, *c'* = effect of X to Y). The effect of X to M and M to Y are moderated by W. i_M and i_Y are constants, e_M and e_Y are errors in the estimation of M and Y, and $\sum_{\mathrm{i=1}}^{\mathrm{q}} f_i\, C_i$ represents the set of covariates (q) that are held constant (C).

Eight covariates were included when testing the moderated mediation models: age, gender, housing status, employment, education, adverse childhood experiences, hospitalized for at least six months in the past five years, and the baseline scores of the outcome measure being tested. See Table 2 for a summary of these variables. Site was excluded in these models since it was redundant with the moderator variable.

The moderated mediation was tested eight times using Model 58 of PROCESS (Hayes, 2018). Each of the four outcome variables were tested, at both the 9-month and the 18-month time points. The interactions between X and W and M and W were examined to determine whether or not the effects in the mediation were contingent on the moderator. If significant, these were then probed at values of 0 (agency located in Ontario or Newfoundland) and 1 (agency

located in Quebec) to determine whether or not they affected the mediation path. As well, the percent of variance in client outcomes explained by the moderation component of the model was reported. The overall moderated indirect path was examined, reporting the "test of moderated mediation" to determine if the moderator's weight in the mediation was significantly different from zero. The indirect relationship was also probed at values of the moderator (0 and 1). As above, 95% bootstrap CIs were used to test the effects, with 5,000 bootstrap samples.

Power for this sample was considered, post hoc, referring to G *Power and Fritz and MacKinnon (2007). With a sample of 311 clients, the multiple regression analyses had a power of .99 for detecting the X-M and M-Y effects at the .05 level (G*Power). According to Fritz and MacKinnon (2007), a sample size of 558 is needed to obtain power of .80 for an indirect effect with small standardized coefficients (β = .14) of X-M and M-Y and 95% bootstrap CIs. For an indirect effect with standardized coefficients of β = .26 for both X-M and M-Y effects and 95% CIs, a sample size of 162 would be needed to obtain power of .80. According to Hayes (2018), there are challenges when estimating power in mediation analyses considering the lack of an agreed-upon way to determine the magnitude of the path effects and combined indirect path. Considering these power analyses, the tests of the indirect mediation effects may have been underpowered; hence, the decision to also report the regression coefficients of each path.

Results

The mean age of the 311 people in the study was 40.32 (*SD* = 13.1). Fifty percent (*n* = 155) were male, 48% (*n* = 149) were female and two percent (*n* = 5) identified as non-binary. Eighty percent (*n* = 258) were White, three percent (*n* = 8) were Indigenous, and eight percent (*n* = 24) identified as an ethnicity other than White or Indigenous (e.g. Black, East Asian,

Colombian). Eighty-six percent (n = 269) were unemployed and 19% (n = 65) were unstably housed. Table 2 provides the descriptive statistics of the study's covariate variables.

Table 3 provides the mean scores of the study variables and results of tests of comparisons of the means. Differences in mean scores were analyzed using dependent samples t-tests for the RPRS and fidelity variables, and one-way repeated measures analyses of variance for the QOLI-20, PGI, THS, and MCAS. The average fidelity at 13.5 months (M = 29.66, SD = 4.21) was significantly higher than average fidelity at 4.5 months, (M = 28.13, SD = 4.45), $t(310) = -8.75$, $p < .001$, Cohen's d = .35. The RPRS scores did not differ significantly from 4.5 months (M = 71.91, SD = 17.80) to 13.5 months (M = 70.50, SD = 15.85), $t(310) = 1.43$, p = .16. The outcome variable means at nine months and 18 months were significantly different from baseline scores (using Bonferonni post hoc tests), with the exception of the PGI at nine months (M = 31.62, SD = 20.09), which did not differ significantly from the PGI at baseline (M = 30.72, SD = 20.99, p = 1.00).

Table 2

Demographic Characteristics (Study Covariates) of Study Participants at Baseline

	Participants (N = 311)	
	n *(%)*	*M (SD)*
Age (years)		40.3 (13.1)
Client Sex		
Female	155 (51%)	
Male	149 (48%)	
Language		
French	101 (33%)	
English	210 (67%)	
Site		
1	20 (6%)	
2	34 (11%)	
3	27 (9%)	
4	93 (30%)	
5	46 (15%)	
6	40 (13%)	
7	51 (16%)	
Education Level		
High School Diploma or Less	160 (51%)	
Some College or College Diploma	87 (28%)	
Some University or Degree (Bachelor's)	50 (16%)	
Unemployed	269 (86%)	
Employed (Competitive)	42 (14%)	
Unstable housing (e.g., on the streets, emergency shelter)	58 (19%)	
Stable housing (e.g., apartment, house, social housing, rooming house for more than six months)	251 (81%)	
Hospitalized for at least six months in past five years	28 (9%)	
Adverse Childhood Experiences		15.4 (3.1)

Note. Some characteristics representing under 10% of participants are excluded.
M = Mean, *SD* = standard deviation

Table 3

Mean Scores of Study Variables by Time Point (N = 311)

Scale		Mean	SD				
				Dependent samples t-test results[a]			
				t	*p*	*d*	
Fidelity				-8.75	<.001	0.35	
	4.5 months	28.13	4.45				
	13.5 months	29.66	4.21				
RPRS				1.43	.16		
	4.5 months	71.91	17.80				
	13.5 months	70.50	15.85				
				Repeated measures ANOVA results			
				F	*p*	η_p^2	*post hoc p*[b]
QOLI-20				21.97	<.001	.07	
	Baseline	82.85	20.18				
	9 months	87.44	16.85				<.001
	18 months	88.56	18.25				<.001
PGI				4.17	.02	.01	
	Baseline	30.72	20.99				
	9 months	31.62	20.09				1.00
	18 months	34.64	20.78				.02
THS				12.50	<.001	.04	<.001
	Baseline	42.35	11.22				
	9 months	44.11	8.88				.01
	18 months	45.05	8.58				<.001
MCAS				8.48	<.001	.03	
	Baseline	72.08	7.25				
	9 months	73.20	6.14				.02
	18 months	73.63	6.24				<.001

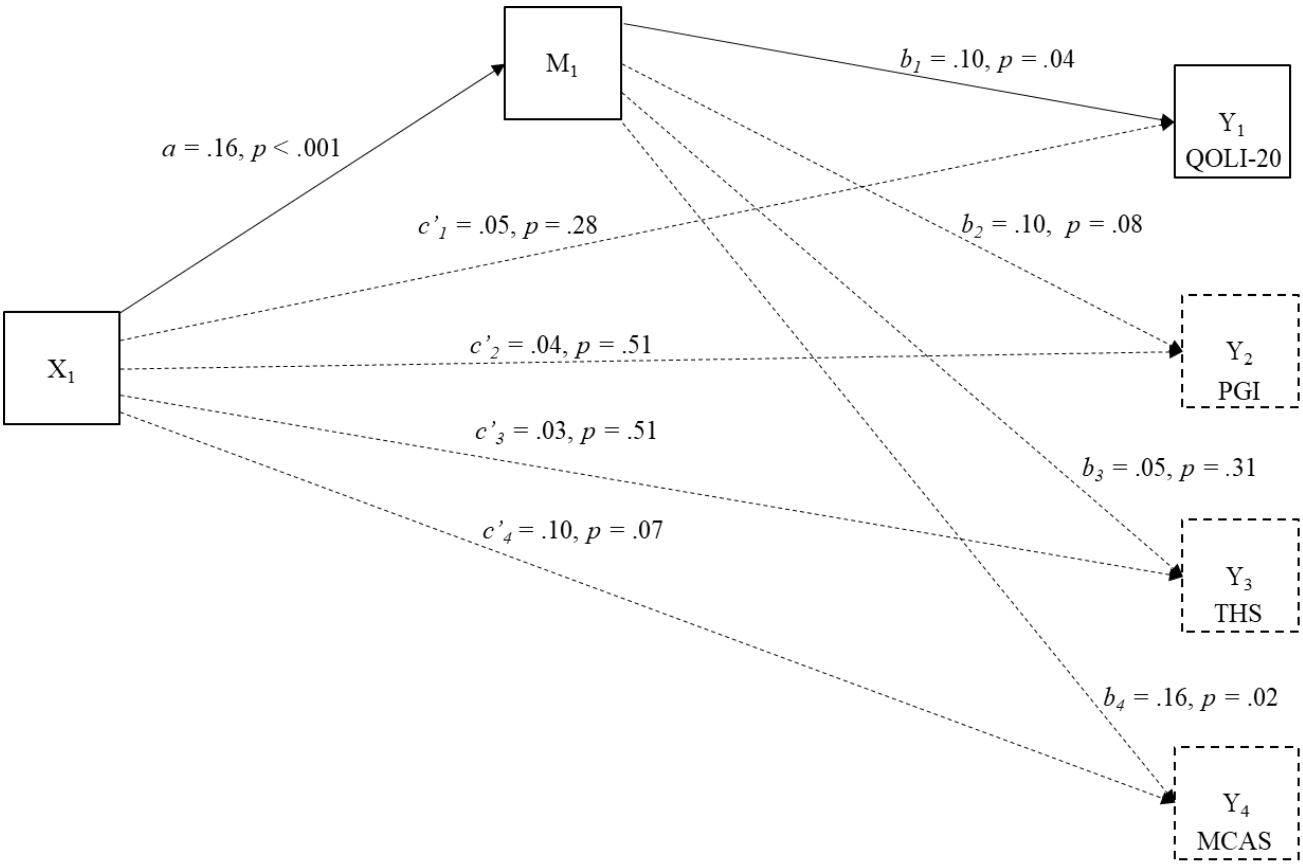
Notes. SD = standard deviation; *d* = Cohen's d; η_p^2 = partial eta squared; RPRS = Recovery Promoting Relationships Scale; QOLI-20 = 20-item Quality of Life Interview; PGI = Patient-Generated Index; THS = Trait Hope Scale; MCAS = Multnomah Community Ability Scale
[a]Comparisons of scores at 4.5 months and 13.5 months; [b]p-value of Bonferonni post hoc test, comparing with baseline means.

Testing the Working Alliance as a Mediator

Figures 5 and 6 present the results of the mediation analyses based on the standardized coefficients of effects. See Tables 6 to 13 in Appendix I for coefficient tables.

Figure 5

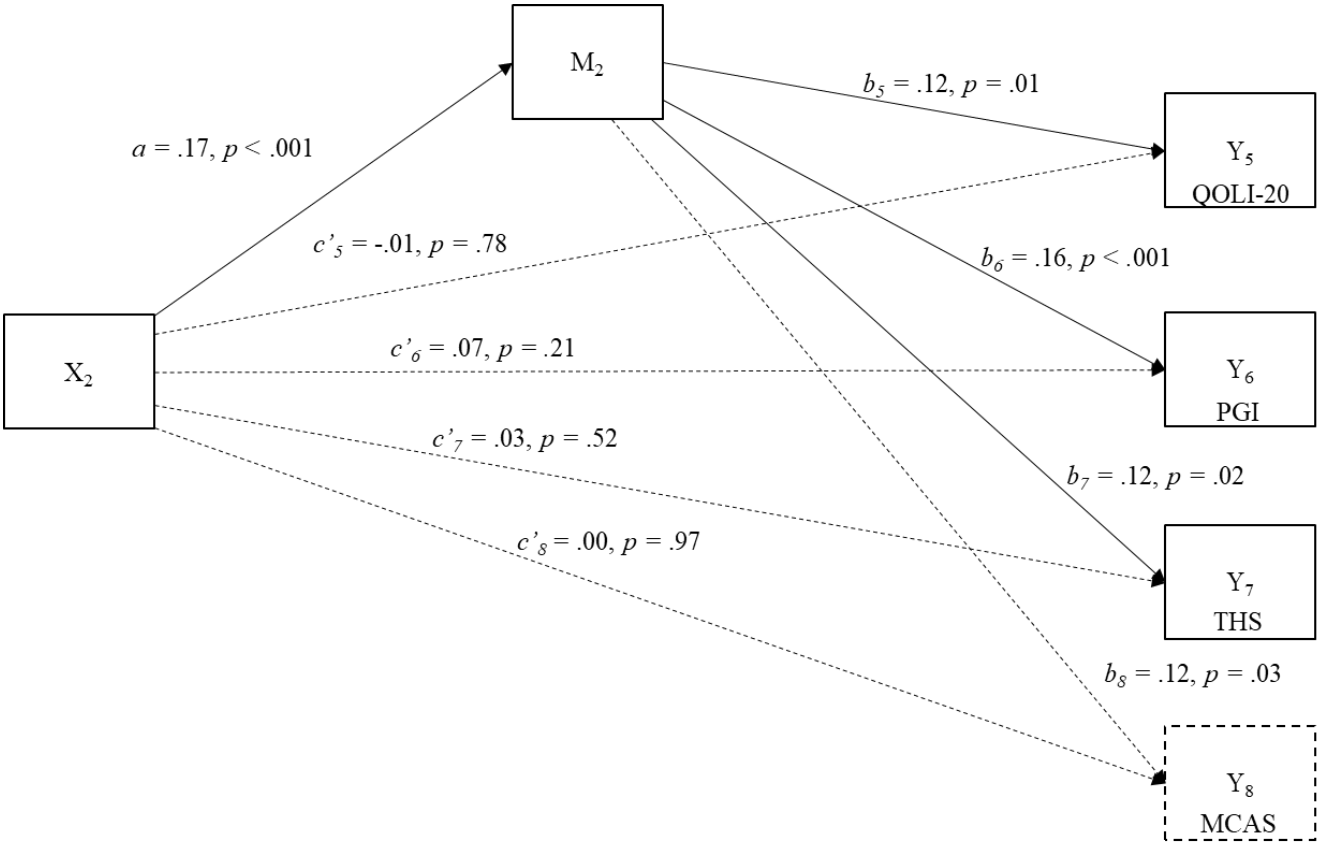
Standardized Coefficients of Four 9-Month Mediation Models (tested separately), N = 311



Notes. Covariates not shown. The mediations were tested separately but are presented in one graph. Dashed arrows represent non-significant effects based on $p < .05$, with the exception of the corrected MCAS (Y_4), where $p < .01$.
X_1 = 180-day average fidelity to the strengths model at 4.5 months,
M_1 = Recovery-Promoting Relationship Scale at 4.5 months,
Y_1 QOLI-20 = Quality of Life Interview at 9 months,
Y_2 PGI = Patient-Generated Index at 9 months,
Y_3 THS = Trait Hope Scale at 9 months,
Y_4 MCAS = Multnomah Community Ability Scale at 9 months.

Figure 6

Standardized Coefficients of Four 18-Month Mediation Models, N = 311



Notes. Covariates not shown. The mediations were tested separately but are presented in one graph. Dashed arrows represent non-significant effects based on $p < .05$ for the THS, and $p < .01$ for the corrected RPRS (M_2), QOLI-20 (Y_5), PGI (Y_6), and MCAS (Y_8).
X_2 = 180-day average fidelity to the strengths model at 13.5 months,
M_2 = Recovery-Promoting Relationships Scale at 13.5 months,
Y_5 QOLI-20 = Quality of Life Interview at 18 months,
Y_6 PGI = Patient-Generated Index at 18 months,
Y_7 THS = Trait Hope Scale at 18 months,
Y_8 MCAS = Multnomah Community Ability Scale at 18 months.

Adjusting for covariates, fidelity to SMCM predicted client outcomes, indirectly through the working alliance as a mediator. Higher fidelity to the model predicted a stronger working alliance at both the 4.5-month time point ($a = .16$, $p < .001$, $CI = 0.21$ to 1.08) and the 13.5-

month time point (a = .17, p < .001, CI = 0.22 to 1.05). In addition, clients who reported stronger working alliance had higher quality of life (QOLI-20) at nine months (b = .10, p = .04, CI = 0.01 to 0.20) and 18 months (b = .12, p = .01, CI = 0.03 to 0.26), higher patient-generated quality of life (PGI) at 18 months (b = .16, p < .001, CI = 0.07 to 0.35), and higher hope (THS) at 18 months (b = .12, p = .02, CI = 0.01 to 0.12).

Regarding the mediating paths, based on 95% bootstrap CIs, the indirect path coefficient (ab) was above zero for the QOLI-20 outcome at both nine months (ab = .07, CI = 0.00 to 0.15) and 18 months (ab = .09, CI = 0.01 to 0.20). In addition, the 95% CI for the indirect path coefficient was above zero for the PGI outcome at 18 months (ab = .13, CI = 0.02 to 0.28), and the THS at 18 months (ab = .04 CI = 0.00 to 0.10). The completely standardized indirect effect sizes for the significant mediation models ranged from .017 to .027, with CIs above zero. Two cases that differ by one standard deviation of X result in a small change of .017 to .027 standard deviation in Y, through the indirect path. For all of the simple mediation models, there was no evidence that SMCM fidelity influenced client outcome scores, independent of the working alliance. When the analyses were run using the three-month (90-day) or nine-month (270-day) average SMCM fidelity scores as sensitivity analyses, the results remained the same.

As a follow-up exploratory analysis to examine causal order, the outcome variables at nine months were positively related to the working alliance (M) at 13.5 months. Four hierarchical multiple regressions were performed, first entering the nine covariates, then entering a nine-month variable in step two (QOLI-20, PGI, THS, and MCAS). The dependent variable was working alliance at 13.5 months. When the nine-month outcome variable was entered into the model, the change in amount of variance explained ranged from 1% to 5%, depending on the

variable. The change was significant for QOLI-20 (R^2 = .11, F[1, 300] = 10.48, p < .001), the THS (R^2 = .08, F[1, 300] = 3.87, p = .05), and the MCAS (R^2 = .11, F[1, 300] = 16.99, p < .001) but not for the PGI (R^2 = .06, F[1, 300] = 2.54, p = .11).

Testing the Agency Location as a Moderator of the Mediation Models

In order to explore for the presence of an association with the location of participating agencies, the addition of a dichotomous moderator variable – Location in Ontario or Newfoundland (0) versus Quebec (1) – was tested. None of the mediation effects were moderated by the location variable at the nine-month time point. At 18 months, the association between the working alliance and client outcomes (M – Y) was moderated for the PGI and THS outcome variables. There was no moderation for the MCAS and QOLI-20 mediation effects at 18 months. The working alliance-outcome relationship (for the PGI and THS) remained significant for agencies located in Quebec but not for agencies located in Ontario and Newfoundland. There was no evidence of a moderation of the association between fidelity and working alliance.

Using the index of moderated mediation (and a pruned Model 14 in PROCESS), at 18 months, the moderator's weight in the indirect path was significantly different from zero for the PGI (index = .18, *CI* = 0.02 to 0.44) and the THS (index = .07, *CI* = 0.00 to 0.17). The moderation component of these models explained 1% to 2.5% of the variance in client outcomes, indicating a small effect.

Discussion

The findings support the study hypotheses. First, closely following the SMCM intervention led to stronger working alliance. Second, stronger working alliance predicted better

client quality of life (QOLI-20 and PGI) and hope. Third, SMCM fidelity indirectly influenced quality of life and hope outcomes, through its effect on the working alliance. These findings align with strengths model theory, which describes the SMCM working alliance as a mechanism to positive outcomes, and support the association between SMCM and positive change in people's lives (Rapp & Goscha, 2012). The findings also build on a body of literature showing that working alliance in case management interventions predict quality of life outcomes of people with severe mental illness, encouraging the addition of working alliance considerations in studies of the effects of intervention fidelity on client outcomes (Baldwin et al., 2007; Kidd et al., 2017; Tsoi et al., 2019; Webb et al., 2010).

SMCM and Common Factors Theory

The study findings raise further research questions about what elements of SMCM lead to a stronger working alliance. Baldwin et al. (2007) asked a similar question of the alliance and psychotherapy research: "What characteristics or actions of the therapist are responsible for the alliance and subsequent outcomes?" (p. 850). SMCM fosters many possible case manager skills or intervention characteristics that researchers have considered to play a role in forming strong working alliances, including: agreement on goals (Farrelly & Lester, 2014; Fluckiger et al., 2018); a goals focus that quickly leads to perceived decrease in unmet needs (Kidd et al., 2017); smaller caseloads (Kidd et al., 2017), frequency of contacts (De Leeuw, 2012; Fluckiger et al., 2018); affirming the person, and viewing the healthy side of a person (De Leeuw, 2012; Fluckiger et al., 2018). Even having a structured intervention has been shown to lead to stronger alliance (Wampold, 2015).

Common factors theory suggests that an intervention and therapist provide a certain level of hope that the intervention will be relevant and helpful to that specific person and the challenges they are facing, and an expectation that the person has the ability to engage in the intervention and see change (Baldwin et al., 2007; Wampold, 2015). Therapists do this partly due to clarity of the intervention – what it is and what will happen throughout it. With this clarity, the person is able to agree on goals and tasks of the intervention. As such, the therapist and client can engage in collaborative, purposeful work. Regardless of what the specific actions are, overall, the client engages in healthy actions to accomplish goals. This process leads to positive life change (Baldwin et al., 2007; Wampold, 2015). Again, this theory of change aligns with SMCM theory. The SMCM intervention is a structured approach that focuses on expressing hope in a person recovering, bringing clarity to goals, and providing flexibility to what goals are pursued (Rapp & Goscha, 2012). As one goal is accomplished in one life area or niche, a person's hope and motivation increase, and they pursue and achieve goals in other areas of life. Tsoi et al. (2019) found that their SMCM group had higher rates of goal achievement than a comparison group (case management without SMCM).

While three of the mediation paths in the study were significant at 18 months, only the mediation path from fidelity to QOLI-20 was significantly different from zero at nine months. These findings may indicate that hope and individualized quality of life take longer than standardized quality of life to develop over the course of a case management relationship and are less connected to the alliance early on in the relationship. The lack of an association with functioning could have been related to ongoing challenges people may experience despite growing in goal achievement, feelings of hope, and overall quality of life.

The effect sizes of the indirect paths were small, indicating the preliminary nature of the findings and that there are many additional factors and variables influencing the alliance and client outcomes that the mediation models did not account for. While a power analysis showed that the sample size was adequately powered for regression analyses, Fritz and MacKinnon's (2007) sample size estimates for mediation analyses showed that our sample may have been underpowered. As such, some small, non-significant findings may prove to be significant with a larger sample size. The results certainly need to be duplicated in further studies and should be treated as preliminary findings.

Rigidity and Responsiveness

Study findings showed that fidelity to the intervention was only related to client outcomes through the working alliance. This finding may indicate that if a case manager follows the intervention rigidly, without sensitivity to forming an alliance, or without responsiveness to a client and his/her needs, the intended outcomes of the intervention may not be realized. Psychotherapy researchers have reported a negative relationship between rigidity to an intervention and client outcomes (Fluckiger et al., 2018; Wampold, 2015; Webb et al., 2010). At the therapist level, Webb et al. (2010) identified the importance of responsiveness of therapists – that therapists change the level of treatment or the way they implement treatment based on a person's behaviour or context (Mowbray et al., 2003).

Showing that high fidelity leads to better outcomes is often the aim of program evaluation but it is also a challenging task, with many external variables impacting this relationship, including challenges implementing programs in new contexts, different characteristics of clients and case managers, variations in fidelity from case manager to case manager and over time, and

team and organizational changes and challenges (Bond & Drake, 2019; Sandu et al., 2021; Webb et al., 2010). The seven organizations implementing the intervention for this study faced such variations and challenges, which surely affected their fidelity to SMCM and the study findings.

Assigning team-level fidelity scores to individual clients' interview time points fails to account for individual differences in case managers, possibly attenuating the size of the relationship between level of SMCM fidelity and level of working alliance, and level of SMCM fidelity and outcomes. Mowbray et al. (2003) identified this challenge in fidelity measurement more broadly. In case management research, single fidelity scores are often assigned to teams and organizations but there is much variability in fidelity within the teams, among case managers. Having case manager levels of fidelity, time-matched to client interviews, would have been a more precise fidelity approach. However, collecting individual-level fidelity measures is highly resource-intensive and time consuming. This challenge highlights a study limitation, but also a common research and implementation dilemma in natural community mental health settings.

Outcomes Associated with Later Alliance

The finding that client outcomes at nine months were associated with the working alliance at 13.5 months suggest that the relationship between the alliance and outcomes is reciprocal in nature (Fluckiger et al., 2018). In a meta-analysis of psychotherapy literature, Fluckiger et al. (2020) found that early therapeutic alliance predicted post-treatment outcomes. They reported that throughout therapy, the alliance and symptoms had a reciprocal relationship, where stronger alliance led to lower symptoms, which reinforced the stronger alliance, and lowered symptoms, and so on, cyclically. The findings of this current study begin to support such

a reciprocal relationship in the case management working alliance as well. The findings suggest that both the client and case manager play a role in formation of the working alliance, although psychotherapy literature has shown that therapists may influence the alliance more strongly than individual clients (Baldwin et al., 2007).

Agency Location as a Moderator

The mediation model was moderated by agency location at 18 months. In agencies located in Ontario and Newfoundland, there was no longer a relationship between working alliance and the PGI and THS (the exception was the QOLI-20). In contrast, there remained a significant positive relationship in Quebec. This finding may support the alliance-outcome relationship dwindling or changing with time, in some contexts more than others (Baldwin et al., 2007; Webb et al., 2010). It may also highlight program and cultural differences, as well as differences in clients served, although the two groups did not differ significantly in functioning, housing stability, employment status, and diagnoses. It may have also been due to a lack of power and simply a result of chance.

Limitations and Areas for Further Study

As discussed, study limitations include measurement of fidelity at the team-level rather than the individual case manager-level, and a small sample size for mediation path analyses with small, standardized coefficients. In addition, the nested nature of the data, in teams, organizations and provinces, was not accounted for in this study due to the small number of clusters. However, alpha levels were adjusted to account for the potential of inflated Type I error rates, and a site variable was included as a covariate in the mediation analyses. Although the moderated mediation was an attempt to begin to explore differences across sites, in order to examine

whether or not the team or organizational levels of data contribute to variability in the overall models being tested, a larger sample size would be needed, with a greater number of data clusters (i.e. organizations or teams). Additionally, further studies could consider analyses with case managers as the units of analysis rather than clients, or control for variation in findings due to differences between case managers. According to Baldwin et al. (2007), some therapists are better at developing a working alliance than others. Hence, studies controlling for case managers' effect on the alliance-outcome relationship may be warranted. Further studies could use multi-level modeling to examine these possible levels of variability.

The study findings are based on broad concepts of fidelity and working alliance. Further research could examine underlying factors within these constructs that serve as mechanisms for change in people's lives. Rapp and Sullivan (2014) identified the need for further fidelity development in SMCM, saying that fidelity development is essential for advancing the SMCM research agenda.

While the term "working alliance" was used in this study, to align with Bordin's (1979) definition of the therapeutic alliance, the use of the RPRS measure may not have been a precise measure of working alliance. Horvath (2018) identified a blurring of the therapeutic alliance and the working relationship, and resulting challenges with operationalizing the therapeutic alliance as a distinct concept. While the RPRS is correlated with the WAI (a common working alliance measure [Russinova et al., 2006]), the RPRS may be more of a measure of a client's overall satisfaction with the client-case manager relationship rather than a measure of Bordin's (1979) construct. While items clearly measure the quality of the client-case manager bond, specific items related to agreement on goals and tasks of the intervention are lacking. As a measure of the

"recovery-promoting" relationship, many items align so closely with aspects of the SMCM that the RPRS could almost be considered as also measuring the SMCM intervention itself from the perspective of clients. Conducting a similar study that uses the WAI as a mediating variable would provide an interesting comparison and further develop research on the working alliance in SMCM.

Average RPRS total scores remained the same over the two time points in this study. There is discussion in the literature around when to measure the alliance and its pattern over time (Chinman et al., 2000; Baldwin et al., 2007). In addition to its potential stability across time points, clients in some sites likely would have changed case managers between time points in the study. These case manager switches were not accounted for in the RPRS measure. Case manager switches may particularly contribute to a lack of change in outcomes at later points in the study. A switch in a case manager, and the need to begin to form an alliance based on a new relationship, may have influenced outcomes. Future research could account for variability in case managers, match working alliance scores to individual case managers, and look at patterns of an alliance that are formed over the course of a relationship between one client and one case manager.

Finally, while the different levels of fidelity to SMCM allowed for testing the mediation model in an observational study, further research could potentially include randomized group comparisons (e.g. case management with and without SMCM), to, again, continue to explore common elements across interventions that may or may not lead to change through the working alliance.

Conclusions

Overall, the study suggests that the SMCM has a positive impact on client outcomes, through the influence of the working alliance. The study also raises the importance of including the working alliance in studies examining the impact of case management interventions on people's lives. The findings strengthen the SMCM evidence base, highlighting the centrality of one of its core principles – that the working alliance is a mechanism of change. The findings also add to a smaller research base on the working alliance in case management, compared to the extensive work that has been done on the therapeutic alliance in psychotherapy. This study supports the use of case management interventions that are well-defined, goal-focused, hope-inducing, and affirming, as possible elements that impact the working alliance, which then lead to change in the quality of life of people with severe mental illness, living in the community.

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A Qualitative Study of the Working Alliance in the Strengths Model of Case Management with People with Severe Mental Illness

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Abstract

Objective: The purpose of this study was to examine clients' perceptions of the client-case manager working alliance in the Strengths Model of Case Management (SMCM), from the perspective of clients with severe mental illness. The study follows previous quantitative findings that the client-case manager working alliance mediated the relationship between fidelity to the SMCM and client quality of life outcomes.

Methods: Twenty people with severe mental illness, with a current SMCM case manager, participated in semi-structured, qualitative interviews. Using first and second cycle coding, data were analyzed thematically. The initial coding list was based on summaries of the interviews, research questions, the SMCM research and model theory, a previously tested mediation model, and the working alliance literature.

Results: People in this study attributed personal life change to their relationship with their case manager. They valued their case managers' flexibility and highlighted their work on a wide range of goals of their choosing. Case managers approached the SMCM intervention responsive to their clients' preferences and choices, and made decisions that preserved the working alliance. Clients' perceptions of the working alliance aligned with Bordin's (1979) definition of the therapeutic alliance, particularly agreement on goals and tasks. While the bond was important to clients, sometimes it had a lower priority compared to receiving practical assistance.

Conclusions: The working alliance serves as a key element of the SMCM intervention. Clients describe it as helping to improving their lives. Incorporating the working alliance in case management research may continue to build understanding of the impact of case management on people's lives.

Introduction

Researchers studying the working alliance in psychotherapy and case management explore what characteristics and actions of a support worker lead to a trusting bond with a client, and ultimately improvements in the lives of people with severe mental illness (De Leeuw et al., 2012; Farrelly & Lester, 2014; Fluckiger et al., 2018; Kidd et al., 2017; Webb et al., 2010). There is a lack of consensus on the definition of the working alliance but it is generally conceptualized as the bond between a client and support worker (e.g., psychotherapist, case manager) and the degree to which the client and worker agree on the goals of the intervention and the tasks needed to work towards those goals (Bordin, 1979; Horvath, 2018).

Some proposed underlying mechanisms of change within the working alliance include having a goals focus, having small caseloads, affirming a person, having frequent contacts, adopting structured interventions, and being a responsive worker (Baldwin et al., 2007; De Leeuw, 2012; Fluckiger et al., 2018; Kidd et al., 2017; Wampold, 2015). Farrelly and Lester (2014) reviewed 13 case management studies and identified three key components of an effective working alliance: mutual trust, demonstration of mutual respect, and shared decision-making. They also identified a potentially critical barrier to the relationship: a lack of clarity of the goal of case management, which led to poorly defined roles and unmet needs.

The working alliance in psychotherapy (usually referred to as the “therapeutic alliance” in the psychotherapy field) has been thoroughly researched with consistent results. The alliance predicts clients’ positive treatment outcomes, accounting for approximately eight percent of the variance in the correlation between therapy and outcomes (Fluckiger et al., 2018; Fluckiger et al., 2012; Horvath, 2018; Horvath et al., 2011; Martin et al., 2000; Muran & Barber, 2010;

Wampold, 2015). The evidence base of the working alliance in case management interventions is small with more variable research methods than psychotherapy research, such as qualitative studies, quasi-experimental studies, and longitudinal and cross-sectional studies with small sample sizes and few randomized trials (DeLeeuw et al., 2012; Kidd et al., 2017; McCabe & Priebe, 2004). For these reasons, findings are difficult to compare, and less consistent than in psychotherapy.

Overall, case management studies show a relationship between the working alliance and client outcomes, such as better functioning, lower depression, overall life satisfaction and improved quality of life (Ashford et al., 2010; De Leeuw et al., 2012; Howgego et al., 2003; Kidd et al., 2017; Kondrat, 2012; Kondrat & Early, 2010; Latimer & Rabouin, 2011; McCabe & Priebe, 2004; Sandu et al., 2021; Tsai et al., 2013). Case management research also shows that the working alliance in case management may be different than the therapeutic alliance in psychotherapy. Clients may value their case manager for more than their clinical skills, and describe the tasks of therapy as including practical aspects, such as receiving help with money, getting rides, and going to appointments together (Chinman et al., 2000; Rogers et al., 2008; Tsai et al., 2013). The community-based setting of case management makes the practice diverse, and involves providing access to services, and helping people to remain in the community (McCabe & Priebe, 2004). Case management “style” and individual case manager differences have been found to be associated with the quality of the working alliance (De Leeuw et al., 2012; Farrelly & Lester, 2014; Kondrat & Early, 2010).

To further complicate findings of working alliance research, case management consists of several types and subtypes of interventions (e.g. Assertive Community Treatment, intensive case management, standard case management, brokerage model, clinical case management), some of which are not clearly defined (Kidd et al., 2017; Latimer & Rabouin, 2011; McCabe & Priebe, 2004). The working alliance is conceptualized differently (or not at all) under each type of intervention. In a review of case management research, Ponka et al. (2020) noted that few studies described the roles of case managers or mechanisms of success.

The Strengths Model of Case Management (SMCM)

The Strengths Model of Case Management (SMCM) is a subtype of intensive case management for people with severe mental illness (Rapp & Goscha, 2012). SMCM focuses on clients' positive internal qualities and skills, as well as external resources. The intervention is centered on identifying client goals and achieving these goals, which lead to increased hope and motivation and further pursuit of and achievement of goals (Rapp & Goscha, 2012). This description of the intervention is similar to the goals and tasks components in Bordin's (1979) working alliance definition – a strong working alliance includes agreement on the goals of the intervention and the tasks to achieve those goals.

The case manager's role is clearly defined and operationalized in SMCM. The working alliance is central to SMCM practice and is associated with positive outcomes in the model theory (Rapp & Goscha, 2012, p. 71). The alliance is described as purposeful, reciprocal, and hope-inducing (Rapp & Goscha, 2012).

Two qualitative studies, and one quantitative, have examined the working alliance in SMCM (Brun & Rapp, 2001; Redko et al., 2007; Tsoi et al., 2019). In their quantitative study,

Tsoi et al. (2019) reported that very high SMCM fidelity was positively associated with the working alliance. Participants in both qualitative studies reported that the close relationship with the case manager led to personal change, such as improvements in self-worth and self-esteem (Redko et al., 2007) and their ability to make positive changes in their lives related to substance use (Brun & Rapp, 2001). Both qualitative studies were with people with substance abuse problems (one study excluded people diagnosed with schizophrenia and psychoses). The purpose of Brun and Rapp's (2001) study was to examine people's perceptions of SMCM more broadly and the working relationship was identified as a prominent theme that arose in people's qualitative interviews. In Redko et al.'s (2007) study, the purpose was to examine perceptions of the working alliance in SMCM and the influence of the working alliance on life change. Based on their findings, further qualitative research was needed to examine, in more depth, the working alliance in SMCM with people with severe mental illness.

Overall, researchers have shown that SMCM leads to quality of life improvements, yet, similarly to case management working alliance research, methods vary, sample sizes are small, and findings are inconsistent (Barry et al., 2003; Björkman et al., 2002; Compton et al., 2016; Gelkopf et al., 2016; Ibrahim et al., 2014; Lindahl et al., 2013; Macias et al., 1994; Prendergast et al., 2011; Wohl et al., 2011). In 2012, the SMCM developers produced a fidelity measure - the Strengths Model Case Management Fidelity Scale (see Appendix C), which is used to determine how closely a particular program follows the model and protocol (Fukui et al., 2012; Rapp & Goscha, 2012). Two studies thus far have used this measure to examine client outcomes (Fukui et al., 2012; Tsoi et al., 2019). Fukui et al. (2012) found that greater fidelity to the model was significantly related to higher levels of employment and educational participation and lower

levels of hospitalization. Tsoi et al. (2019) found that very high levels of fidelity to the model were associated with higher levels of personal recovery, goal achievement, hope, and well-being; however, when comparing the SMCM group to a comparison group (case management without SMCM training or tools), they found the only differences in outcomes were in higher goal achievement levels of the SMCM group. SMCM researchers have encouraged the use of qualitative research to further develop the intervention and SMCM model theory (Rapp & Sullivan, 2014).

SMCM Implementation in a Canadian Context

This study is embedded within a broader study that examined the implementation of SMCM in seven community mental health organizations, located in three Canadian provinces (Ontario, Newfoundland, and Quebec). From 2014 to 2017, the participating organizations implemented SMCM in partnership with the model developers at the University of Kansas. Prior to SMCM implementation, the organizations delivered other types of ICM or case management, without the use of the SMCM principles, tools, training or structure. In order to implement SMCM, organizations underwent shifts in their case management philosophy, changes in their practice with clients to align with the SMCM principles and tools, and changes in their overall team and supervisory structures.

This parent study included SMCM fidelity assessments, structured interviews with 311 SMCM clients (five interviews per client over 18 months), and a qualitative examination of the implementation of the intervention in the Canadian context. As part of the study analyses, we found that fidelity to SMCM with people with severe mental illness influenced client outcomes, indirectly through the working alliance. Higher fidelity to SMCM predicted stronger client-case

manager working alliance, and stronger working alliance predicted improvements in clients' quality of life and hope. The direct relationship from SMCM fidelity to client outcomes (specifically, quality of life and hope) was not significant when the working alliance was not accounted for as a mediator.

The Current Study

The purpose of this current study was to examine clients' perceptions of the client-case manager working alliance in the SMCM, from the perspective of clients with severe mental illness. This study was intended to follow up on the quantitative mediation findings, which raised additional questions related to underlying mechanisms, such as what it is about the SMCM working alliance that might facilitate change in people's lives, and how might this be unique to the working alliance in the SMCM intervention (De Leeuw et al., 2012; Kidd et al., 2017; Tsoi et al., 2019)? This current study also builds on the growing body of research on the working alliance in case management and previous SMCM research, such as the qualitative examinations of the working alliance with people with substance abuse problems in SMCM interventions (Brun & Rapp, 2001; Redko et al., 2007). Finally, the study provides insight into the constructs and processes of the working alliance in case management and ways it may be similar or different when compared to Bordin's (1979) commonly used concept of the therapeutic alliance in psychotherapy.

The following research questions were examined to further understand the working alliance in SMCM practice:

1. How do SMCM clients describe the working alliance with their SMCM case manager?

2. What are the underlying characteristics or key elements that comprise clients' descriptions of the working alliance with their SMCM case managers?
3. How do SMCM clients describe the role of the working alliance in leading to change in their own lives?

Terms

The term "working alliance" is used to refer to the degree to which people with severe mental illness and their case managers agree on goals of SMCM and tasks to achieve these goals, as well as the quality of their bond (Bordin, 1979; Horvath, 2018). "Working alliance" is similar to the term "therapeutic alliance," aligning with the literature in the field of psychotherapy. The use of "working" rather than "therapeutic" differentiates the concept of the working alliance in case management from the primary therapeutic focus of the therapeutic alliance in psychotherapy (Abouguendia et al., 2004; Kidd et al., 2017; Muran & Barber, 2010).

In the interviews conducted for this study, people were asked to describe the relationship they had with their worker and what makes a good connection with them. For this reason, sometimes the terms "relationship" or "connection" are used in this paper when reporting the results. The term "worker" or "case worker" is used for a similar reason – it is how clients in this organization refer to their case managers. The term "case managers" is also used in this paper, particularly when referring to the broader case management field rather than case management practice in the specific participating organization for this study.

Methods

Participants

Study participants were from one of the organizations that participated in the broader Canadian SMCM study. As with the other organizations that participated in the broader study, this community mental health organization began to implement the SMCM intervention in 2014, under the guidance of the University of Kansas SMCM model developers. The organization serves people with severe mental illness, with histories of homelessness or vulnerable housing. It provides a portfolio of programs, including intensive case management (using SMCM), housing supports based on the Housing First philosophy and practices, court outreach, and groups and supports for people with dual diagnoses (developmental disabilities) and comorbidity with substance use.

Twenty SMCM clients from the community mental health organization were recruited for this study. These client participants were a separate sample from the 311 people who participated in the broader study. Inclusion criteria for the study were that clients had been receiving SMCM at the organization for at least six months and were still receiving the service. To be eligible for case management services at the organization, people had to have been diagnosed with a severe and persistent mental illness (e.g. schizophrenia, major affective disorder) or display behaviours that would suggest a severe or persistent mental illness. They also had to have a history of vulnerable housing or homelessness and were 18 years of age or older.

Measure

Each client participated in a qualitative, semi-structured interview that ranged in length from 30 minutes to one hour. The semi-structured interview protocol was developed based on a

review of the working alliance, therapeutic alliance and SMCM literature, the research questions, and components of the SMCM Fidelity Scale (see the semi-structured protocol in Appendix J).

At the beginning of the interview, participants responded to the 24-item Recovery-Promoting Relationships Scale (RPRS). The RPRS measures the relationship between clients and their mental health provider (Russinova et al., 2006). It includes elements of the recovery model and was used in the previous quantitative study (Russinova et al., 2006). People respond to statements about their case manager on a 4-point agree/disagree Likert scale. The total RPRS score was used in this current study to determine the levels of the working alliance between the clients who participated in the study and their case managers. The scale has shown good test-retest reliability with coefficients of stability ranging from .61 to .72 (Russinova et al., 2006).

In addition to the semi-structured interviews, the 20 participating clients consented to allow the organization to share their personal administrative information with the researchers, particularly information related to their age, sex, gender, diagnoses, housing status, ethno-cultural identities, and length of time in case management.

Procedure

The study was approved by the University of Ottawa Research Ethics Board. In order to recruit interview participants, the researchers provided SMCM case managers at the community mental health organization with a brief explanation of the study and a recruitment script for their clients. This was a convenience sample. Case managers were told that the researchers were hoping to recruit clients with whom case managers had a strong working relationship, and others with a weaker relationship.

Case managers approached their clients to tell them that a researcher was conducting a study about case management and asked if they wanted to find out more. If they agreed, the case manager connected the client to the study's primary researcher. The researcher then met with the client, explained the study, reviewed the consent form, and invited the person to participate in the semi-structured interview. If they agreed to participate, the interview was conducted at that meeting.

The first six interviews were conducted in February 2020, in-person, at the community mental health organization. Restrictions due to the COVID-19 pandemic paused the interview recruitment process in March 2020. The interviews were continued in June 2020 and the final 14 interviews were conducted from June 2020 to August 2020, by phone. People in the in-person interviews were provided with $20 cash for participating. Participants who completed interviews over the phone received a $20 gift card by mail, email, or text. Interviews were audio recorded and transcribed verbatim.

Data Analysis

The semi-structured interview transcripts were analyzed thematically according to methods outlined by Miles et al. (2014). Described in further detail below, this analysis process included: [1] summarizing each interview; [2] developing case summary matrices for each interview; [3] coding each interview transcript using an initial coding list (i.e., first-cycle coding) and adjusting the list throughout the coding process; [4] developing a cross-case matrix of the data; [5] conducting second-cycle coding; [6] developing a conceptual diagram of the analysis results. Thematic analysis was seen as the most appropriate analysis method since it provided a

way to explore participants' descriptions and to compare these perceptions to themes and findings from the working alliance literature and SMCM research and intervention theory.

Interview Summaries

After each interview, the primary researcher completed a journaling process (Charmaz, 2006), answering the following summary questions (Miles et al., 2014) with additional personal reflections on the interview:

1. What were the main issues or themes that struck you during this interview?
2. Summarize the information you got (or failed to get) from the interview
3. What else struck you as salient, interesting, illuminating or important about this contact?
4. What are new issues or questions that could be pursued in other interviews?
5. What are elements of the interview that could be improved?

These summaries were developed in order to identify themes during data collection, to adjust the interview protocol as issues arose or new themes needed to be explored, and to identify personal biases, theories and reflections during the interviews (Miles et al., 2014).

Case Summary Matrices

After the ninth interview, the primary researcher began to develop case summary matrices in order to organize and summarize each interview by interview question (Miles et al., 2014). These case matrices were comprised of a row for each major interview question. One column summarized the participant's response to each question, another column included quotes to support the summary, and a third column included potential codes for that interview question. Following the completion of the first two case summaries by the primary researcher, a second

researcher validated the two summaries, comparing them with the transcripts, and highlighting what information she felt was missing.

Coding Scheme

Following the development of the case summary matrices, a provisional first cycle coding scheme was developed (i.e., a start list), which included descriptive codes and emotion codes from the case summary matrices, and hypothesis codes based on the study's research questions and working alliance and SMCM literature (Miles et al., 2014). A second researcher reviewed the coding scheme and identified areas for clarification based on the protocol and transcripts. When developing the summary matrices, the primary researcher decided to include information about past workers in the data analysis because of the depth of information included in clients' descriptions of past workers. A code to identify comments related to past workers ("multiple workers") was added to the coding list.

NVivo 12 Coding

The interview transcripts were coded using NVivo 12 qualitative analysis software. Two researchers coded the first two transcripts separately, using the coding list. They then compared the different versions of coded manuscripts, resolved discrepancies, and adjusted the coding list. At this point, in vivo codes and identity codes were added to the coding list to examine some concepts using participants' own words and to identify demographic information that arose in the interviews, such as gender identity, ethnic identity, and age (Miles et al., 2014).

Cross-Case Matrix

Following the coding, a cross-case matrix was developed, using the evaluation matrix tool in NVivo 12. In the resulting matrix, each row represented one client interview and each

column represented a code. Each cell contained a quote from the interview (based on the coding). The primary researcher grouped participants by gender in the cross-case matrix to compare findings across gender.

Second Cycle Coding

This first iteration of the cross-case matrix was then used to conduct second cycle coding. Referring to the coded transcripts and case summary matrices, the primary researcher identified patterns across codes, and identified themes to add to the cross-case matrix. She added new columns to the cross-case matrix and shifted quotes into these new columns to consider if the patterns reflected the data accurately. She also added an additional row to the matrix in order to summarize findings in each column, across cases (Miles et al., 2014).

Conceptual Diagram

During the second cycle of coding, the primary researcher also compared the themes, subthemes, and codes to the previously-tested quantitative mediation model, SMCM framework, and research base, and drafted a conceptual diagram of the qualitative findings (see Figure 7). This conceptual diagram was developed based on a combination of the categories and themes from the qualitative analysis, and using the overall structure of the quantitative mediation model from the previous study. The primary researcher adjusted categories and themes in the diagram as the findings were drafted, until the researchers were satisfied that the diagram accurately summarized the study findings.

The primary researcher presented the final evaluation matrix and the diagram to a second researcher, explaining the themes, subthemes and broad categories that had been identified based on the analysis, and described how they were connected. The second researcher asked questions

for clarification, challenged concepts, and made suggestions. When writing the findings, the primary researcher worked with the cross-case matrix and made final changes to themes or added new considerations as the writing progressed. Findings were also verified again by referring to the interview summaries, the case summary matrices, and the coded transcripts, and by a review by the second researcher.

Maintaining Rigour Throughout Data Analysis

As described above, the thematic analysis was validated by a second researcher throughout the analysis, including when developing the case summary matrices, during the NVivo coding, when interpreting the cross-case matrix, and in the interpretation of the themes and findings based on the analysis. Both researchers referred back to the case summary matrices and transcripts throughout the coding process in order to verify findings. Each stage of the analysis was documented, and decisions were recorded as an audit trail. Throughout the analysis, particularly after each interview, the primary researcher recognized and recorded her personal biases, including her personal interpretations of the working alliance as a mediator of the fidelity-outcome relationship based on the findings of the quantitative mediation study, and her biases in support of the SMCM intervention.

Results

Characteristics of Study Participants

Twenty people with severe mental illness, and histories of homelessness or vulnerable housing, participated in this study. Ten women, nine men, and one person identifying as transgender participated. Some gender information was missing from the administrative data (i.e., non-binary identity); hence, it is possible that more than one person in the sample identified as transgender or non-binary. Table 5 provides for a breakdown of demographic characteristics

of participants. Participants ranged in age from 22 to 61 years. The subgroup of men was older (M = 51.6, SD = 11.7) than the subgroup of women plus the person who was transgender (M = 33.2, SD = 11.2). While two participants self-identified as being Indigenous, and another identified as an ethno-cultural minority in their interview, additional ethno-cultural information for the rest of the participants was not available.

Participating clients' current case managers constituted a group of 10 people – seven women and three men. The largest number of clients supported by a case manager was four. The majority of clients had case managers in the intensive case management SMCM teams (n = 14, 70%). In addition, two clients were from the case management light program (higher client-staff ratio), two were from the community treatment order team (required by a doctor to follow a treatment plan), one was from housing-based case management (specifically for people who are homeless), and another from transitional case management (transitioning from long hospital stays to housing in the community).

All of the case managers were trained in SMCM. The most recent fidelity assessment conducted with the organization was in December 2017, more than two years prior to data collection for this study. Five of the intensive case management teams were assessed for fidelity to SMCM at that time. Their total fidelity scores ranged from 29 to 34, with a mean of 31.4 (SD = 1.5). These scores were considered a medium to high level of fidelity. The highest fidelity score a team could achieve on the fidelity scale was 40 and high fidelity was considered 32 or higher. These teams may have experienced a drop in fidelity since these assessments were conducted. Also, the other teams that clients were recruited from likely had lower fidelity to the

model because of more recent implementation and not participating in ongoing fidelity assessments to monitor implementation.

Clients had been in case management at the time of the interview for an average of two and a half years. Length of time receiving case management for study participants ranged from six months to more than eight years. Sixteen clients (80%) had had at least one previous case manager. For clients with more than one case manager, their time with their current case managers may have been less than six months and they may have come from teams that were at an earlier stage of implementation of SMCM. One client was reported as being in case management for one month but had been a case management client at the organization, with the same case manager, prior to this time, so she was included in the study.

Based on administrative data, the predominant primary diagnostic category of participants, as reported from referral sources, was a mood disorder (n = 9, 45%). Second, four clients (20%) had schizophrenia or a psychotic disorder, again, as their primary diagnosis. In addition to a severe mental illness, ten clients (50%) had comorbid substance use, four (20%) also had a diagnosis of a developmental disability, and 12 (60%) had a physical disability or chronic illness. Eighteen participants (90%) were stably housed, either in a private apartment or non-profit housing. The other two were homeless and living in a homeless shelter. The primary sources of income for all participants were financial support programs (e.g. Ontario Disability Support Program) even though six (30%) were also employed.

Table 4

Demographic Characteristics of Study Participants

	Participants (N = 20)	
	number (%)	*Mean* (SD)
Age (years)		41.7 (14.4)
Client Gender		
Women (she/her)	10 (50%)	
Men (he/him)	9 (45%)	
Transgender (they/them)	1 (5%)	
Case Worker Gender		
Women (she/her)	7 (70%)	
Men (he/him)	3 (30%)	
Indigenous	2 (10%)	
Ethnocultural Minority (excluding Indigenous)	1 (5%)	
Months in Case Management		29.2 (26.1)
Previous Case Worker(s)	16 (80%)	
Primary Diagnostic Category		
Mood Disorder	9 (45%)	
Schizophrenia and Related	4 (20%)	
Anxiety Disorder	3 (15%)	
Substance-related Disorder	1 (5%)	
Unknown	3 (10%)	
Comorbid Substance Use	10 (50%)	
Comorbid Developmental Disability	4 (20%)	
Comorbid Physical Disability	12 (60%)	
Employed	6 (30%)	
Education		
Less than high school diploma	7 (35%)	
High school diploma	10 (50%)	
College/University degree	2 (10%)	
Homeless (living in an emergency shelter)	2 (10%)	

Note. SD = standard deviation

Conceptual Diagram of Findings

See Table 5 for a summary of the final categories, themes, subthemes and codes that were developed in the thematic analysis. Figure 7 is a conceptual diagram of the study's broad categories and themes, and their relationships with each other. The following results of the thematic analysis are presented according to this conceptual diagram.

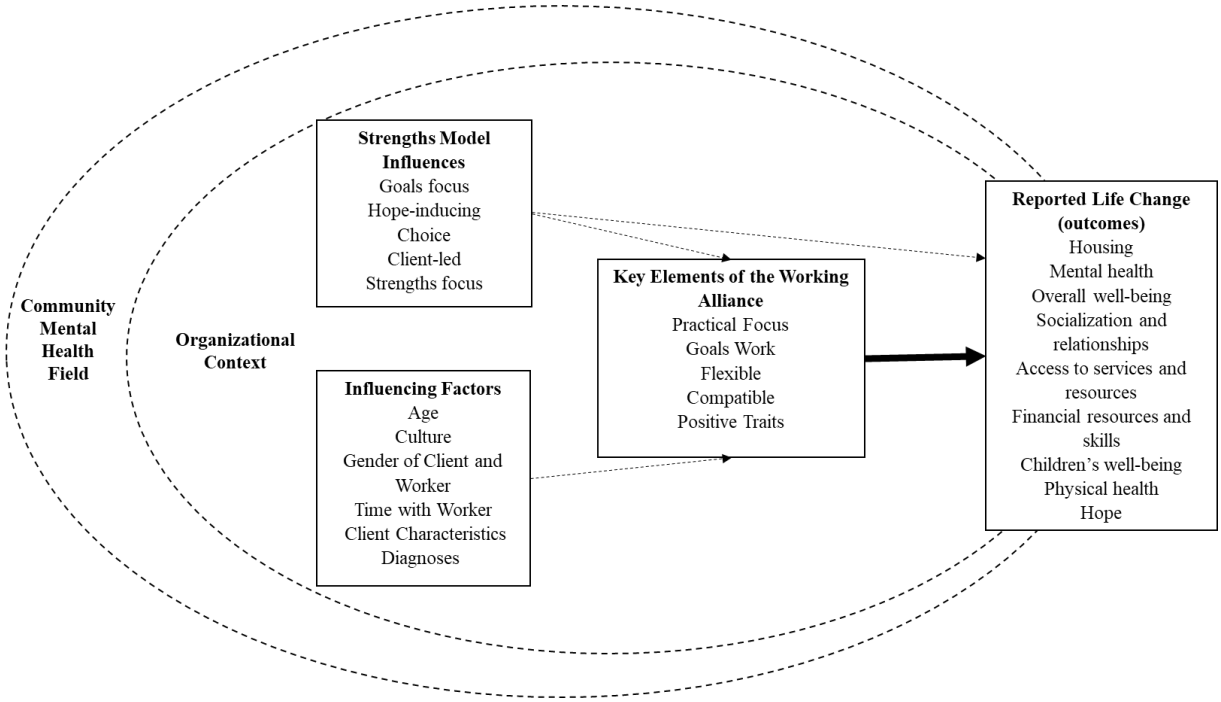
Table 5

Summary of Themes, Subthemes, and Codes

Categories	Themes/Subthemes	Codes (Descriptive, Emotion, Pattern, and Hypothesis Codes)
Perceptions of the Working Relationship	Overall Perception	relationship description; relationship emotion codes (+ - ok); multiple workers
	Worker Traits	positive worker traits; negative worker traits; being there; communication
	Practical	practical tasks; resources; plans; non-personal; personal; clinical tasks
	Flexible	time; companionship; rigid/flexible; multiple workers
	Fit	identification; age; culture; sex/gender; disability; client characteristics; time with worker; diagnosis
	Paths to Relationship	goals-relationship; strengths-relationship
Perceptions of the Strengths Model	Strengths Focus	strengths description; strengths emotion codes (+ - ok); strengths frequency; strengths importance; strengths-challenges
	Goals Focus	goals description; goals emotion codes (+ - ok); goals frequency; goals importance
	Hope	Hope
	Choice	choice; autonomy; relationship autonomy; strengths choice; goals choice; meeting choice
	Paperwork/Forms	strengths form; goal form
	Meetings	meeting place; meeting frequency; meeting importance;
Life Change	Reported Life Change	employment; education; finances; housing; isolation; family; friends; mental health; personal well-being; services; resources
	Paths to Life Change	goals-life change; strengths-life change; relationship-life change

Figure 7

Conceptual Diagram of the Study Findings – Key Elements of Study Concepts



Clients' Descriptions of the Working Alliance

Eighteen people perceived their relationship with their current case worker positively, indicated by statements like, "I like him," or, "It's a good dynamic." The remaining two clients (one man and one woman) expressed that the relationship was either both good and bad or mediocre.

These overall positive connections were reflected in the ratings of the RPRS. The mean total score was 91.0 (*SD* = 8.1 [out of 96]). The means of the individual 24 RPRS items were 3.5 or above for most items (out of 4). The two lowest scored items were: "my worker helps me recognize my limitations" (*M* =3.5, *SD* = 0.8), and "my worker understands the nature of my mental health condition" (*M* = 3.4, *SD* = 1.1).

As people described their connections with their workers in more detail throughout the interview, they shared some negative comments about the connection, such as feeling they were less connected on issues related to their diagnoses, or that their positive connection lacked depth. For example, one client (a woman) said, “We’re connected surface-wise… We get along.”

Multiple Workers

While the connections with current workers were highly positive, 16 people in the study (80%) had previous case workers from the same organization. Throughout the interviews, clients compared their current workers with past ones and often discussed areas of dissatisfaction with their past working relationship. Given this, the data included further insight into challenges with workers, and descriptions of more than 20 working relationships, with a more diverse range of positive and negative perceptions. Note, however, that sometimes past workers had not been trained in or implemented the SMCM at the time they were working with these clients. They may have been outreach workers or they may not have seen clients frequently. Hence, these are reasons for differences in experiences of SMCM.

Positive Worker Characteristics

When asked to describe their relationship with their current worker, 17 participants responded with descriptions of positive characteristics of their workers. They focused on how their case workers were supportive, non-judgmental, communicative, honest, peaceful, kind, compassionate, reliable, friendly, and caring. People noted that these positive traits led to strong connections. One client spoke of his worker’s compassion, which led to a trust and bond:

> You have to build that trust and that bond and once you're able to do that then you're able to get that person to really get into the deep soul and talk about the problems. But if you don't have that trust… you're just wasting your time with the person.

Practical Tasks

In addition to describing case workers' personal characteristics, when asked to describe their relationship, 17 participants identified things they do with their worker. All referred positively to task-oriented activities their worker does with them or for them. These activities included connecting them with services, resources or activities. Examples included finding housing, sorting out housing issues (e.g. bed bugs, housekeeping), buying groceries, meal planning, connecting with a personal trainer, using vet outreach, obtaining ID and health cards, applying for post-secondary education, getting a bike, filing taxes, paying child support, advocating for the needs of a child with a disability, navigating appointments, and making phone calls.

One client referred to his case worker by saying, "He's been really helpful in terms of getting things done that I need to get done." And another referred to her "task related questions", saying:

> If it was… a task-related question, for example, like, dealing with an internet provider or something like that - something where there's a very clear-cut, call this person to solve this problem kind of thing - she was pretty good.

The practical tasks were a central focus of relationship descriptions. In addition to this focus, five people spoke about working on improving their mental health or personal growth with their worker, and 11 said they relied on their case worker as a friend or companion.

However, the practical tasks were more of a central focus of their relationship descriptions. Two people (one woman and one man) said they chose not to share personal details with their worker but were still satisfied with the work on practical tasks. For example, while talking about how his worker had helped him access housing, one person said, “I don’t really get into my personal life… I'm a private person so you wouldn’t get me just telling her openly about it.” In the absence of work on their personal well-being and mental health, or while trust was still being formed, people expressed that they valued the working relationship for these practical tasks.

Flexibility

Flexibility was a theme in 13 descriptions of clients’ relationships with their workers. Specifically, people described flexibility in workers’ roles and also in their use of time. Related to roles, six people said their workers were more like a friend or family member to them than a case worker. Often they shared that they experienced isolation from family or did not have friendships, so they highly valued that their worker also filled this role. One said, “We had conversations where we'd both laugh and stuff so it was more like a friendship to me.” She contrasted this friendship with a past worker, saying:

> One of them was… very professional. I’m not saying [current worker] is unprofessional, but she's… more laid back. The other one was really, like, to the T, and there was nothing fun. They were just about mental health and how I was doing and stuff. Never, like, taking a break and just talking.

Eight people valued that their workers went above and beyond what they viewed as a case worker’s job description. One said, “When I needed help with my son, she gave me advice

with that - where to go and who to connect with. So, she expands her role a bit" (she/her). Another said, "I don't even think it was in her job to have to do that" (he/him).

Eight people framed flexibility in how workers used their time. For example, one client described his worker by saying, "And it wasn't, like, okay, I could give you an hour of my time and after that I'm going to go to another no matter how stressed out I am."

To balance the view of flexibility, however, there were some examples of an unhealthy lack of structure or the use of positive boundaries. One person identified a past worker who was not structured enough, describing her as laidback, unstructured, and missing appointments. Speaking of her current worker, the client said, "It's kind of good to have that stability in my life right now, like, the structure again, 'cause I was going downhill again."

Fit/Compatibility

The concept of fit was also a prevalent issue, highly related to clients' personal characteristics and whether or not they felt a connection or bond with their workers. Four clients (across genders) mentioned an age match between them and their workers that helped them to relate to each other. One woman highlighted that sharing the same culture with her worker was important because her worker understood mental health stigma in her particular cultural community. Another mentioned the intellectual match between himself and his worker.

Incompatibility with workers was raised across all genders, when people felt their workers did not understand or accept them, often related to their diagnoses. One client described their worker by saying, "Yeah, one of the challenges is that she didn't understand me… There's a lot of, like, my diagnosis she didn't know about and I still think she doesn't know about."

Seven people described their own personal behaviour or actions as influencing the relationship, such as the effort they put into case management, their own honesty, how they kept in touch with their worker, and where they were at, personally, at the time of receiving case management. These were often connected to compatibility. Referring to a poor connection with his past worker, one client said, “Well, I was in a different place too.”

Another client described a conflict with a past worker where the worker ended their conversation abruptly and the conflict was not resolved. Following this, the client left the organization for one and a half years. When she returned she got a new worker. Following this description of the conflict, she said, “I’m guessing it’s because I didn’t communicate 100%... because I didn’t feel comfortable in a way, and that’s not her fault. I just didn’t feel like we were connecting perfectly.” Despite a challenging interaction that caused her to leave the organization for a year and a half, she concluded by attributing the conflict to her own communication skills.

Elements of the Strengths Model

Goals Focus

The most common theme related to SMCM was the client-case worker focus on goals. All participants identified a goals focus and it came across as central to the work they did with their worker. The term came up naturally in the interviews. While some goals were related to mental health, like “being happy,” most were linked with the practical tasks clients identified when describing their relationships with their workers. For example, following a specific diet, getting a bike, moving, or obtaining ID. One client described her goals process with her worker:

> We always explore ideas about school or going back to work or changing cities… And when I talk to her, she kind of breaks it down with me. And then, you know, there’s a lot

> of options that we point out and we talk about… Then I ponder about it then I come to a conclusion. So, it really helps. Yeah, she's been very, very helpful.

Within the goals conversation, one client made a clear connection between goals and the working alliance with his worker, saying, "I think that because I'm achieving those goals it's a stronger connection."

Hope Through Goals. Six people described hope, particularly as seeing a way through a crisis or challenge. In the strengths model theory, the focus on meaningful goals induces hope (Rapp & Goscha, 2012) and there was a clear connection between the two concepts in the interviews. Referring to her goals, one client said, "When you have goals, you think forward." Clients articulated that hope was a result of, or connected to, movement on goals. Another person described his worker by saying:

> She gave me some hopes…about, she's gonna be here to help me find an apartment and try to get out of this really unstable environment that I'm in, because it weighs heavily on my outlook and my day.

Autonomy and Choice. Fifteen people identified the importance of choice and autonomy in their relationship with their worker. While often highly connected to goals, clients also highlighted choice in meeting places, in requesting to switch case workers, and in the overall nature of their work together. When describing what makes a good connection with his workers, a client said, "They don't say, like, what you need to do. They ask you what you want, what you would like to do. And in terms of a healthier life, how you wanna move forward."

There were also examples of people lacking choice, such as a client who described his past worker by saying:

> He kind of pressures things… he assumes too much… If I don't want to do certain things and he assumes I do… He used to drive me to a lunch and, well, I don't really want to go too often but he just assumes I want to go.

Clients also provided examples of goals that workers suggested they not pursue, which could indicate a lack of choice in the relationship. For example, a worker suggested his client not accept a job as a bouncer. Another client described how her worker would push her to do different things. While both of these instances restricted choice, the clients were satisfied with this approach. Similarly, two male clients described their workers' role as a guide or advisor. One said he was lucky "to have her guide me down the river here."

Two clients (female and male), when asked about goals and choice, highlighted their personal autonomy, independent of their case worker. While goals were important, they could achieve them on their own. While their workers were helpful, they as clients were capable. Another client emphasized her lack of autonomy in the client-worker relationship but in a positive way, saying:

> Obviously, I'm a client. It's not a mutual thing. I needed help and I would like that. So, I want her around… I respect her for being my CMHA worker. And if I don't feel like meeting her one day, I always meet her. I never not meet her.

Strengths Focus

The strengths focus was not as salient a theme as the goals focus – it did not come up naturally in the interview or people said it was not an important focus of case management. At the same time, fifteen people said their worker highlighted their strengths and reminded them of their accomplishments and skills, usually when they were facing a challenge. A client said her

worker would "remind me of who I am." Highlighting strengths conversations from both his past worker and a current worker, one client said:

> A couple of times there I felt like throwing myself under the bus and [past worker] would say 'Dude, what do you mean?' Like, 'You've made it this far,'… and encouraged me to keep going on my quest, right? Same as [current worker]… sometimes I'll be negative, and she'll turn it around on some of the accomplishments that I've made.

Several clients also identified challenges they had with strengths conversations. A couple of people said they did not like the term "strengths," and one said that if she was asked to identify her strengths, she would say, "I don't have any, go away." However, she was open to more general conversations about her abilities.

Another client, when he was asked if the strengths conversation was helpful, replied, "It depends on where I'm at, in terms of mental health, and, like, just what's going on with me." Another client who said she talked about strengths with her worker occasionally, identified a form of disconnection with her worker, attributed to the strengths conversations, because of a lack of acknowledgement of her struggles. She said:

> A big problem that I have with the strength stuff is… sometimes when I'm just having, like, a shit day, I don't want to be told to just focus on my strengths. It's like, 'No, I am feeling crappy right now and I want that to be acknowledged and I'd like to, like, just for two minutes wallow in it because sometimes wallowing is actually helpful.'

Paperwork/Worksheets

While people showed how central goals were in their relationships with their case workers, and to some degree, described a strengths focus, the goal worksheet and Strengths Assessment were generally perceived negatively or not recognized.

Twelve people either knew what the forms were and did not complete them at all, or they were not sure what they were and whether or not they completed them. Three of these 12 clients explained that they don't work with paperwork – one did not read and write, another loses all paperwork, and another said she and her worker only work verbally together. Another one of these twelve clients said that when her worker used the Strengths Assessment with her, she had a strong negative reaction against it. She said:

> She used to have a sheet that she had - and it made me really upset. I don't like paperwork …It made me cry and I threw them away. And I wouldn't talk to her and I wanted her to leave. So now she doesn't bring them out anymore. She keeps them filed at home, and we just chat.

Of the eight participants who were familiar with the tools, three were updating the Personal Recovery Plan or Strengths Assessment regularly – about every two months. Three others completed them less frequently (e.g. every six months, three times in two years, or once overall), and the other two did not know how often they completed them.

Clients distinguished the forms from conversations about goals or strengths, indicating the helpfulness of conversations about strengths and goals, and their dislike for the paperwork. One said, "Talking about strengths is definitely helpful for me as I have a low self-esteem and confidence," while at the same time he noted that "the form was supposed to help me…but it

didn't help." Identifying her preference for working on strengths without using the form, a client said:

> It's not usually the main focus of our conversations and that sheet doesn't come out all that much… but it has come out and, like, sometimes, when we're just talking about task things that need to be done, she'll be like, 'Okay, well, you're good at this so how about we focus on X, Y or Z.'

The preference for flexibility and a less structured approach was clear in the conversation around the forms. About meeting with her worker, a client said, "We talk about goals often enough… just casually talking about goals. Not really, like, structured."

While some clients talked with their workers about goals and strengths rather than completing the forms, three people identified adaptations of the forms, such as a worker completing a form without the client present. Another person who did not complete the forms with their current worker or past workers at all, described an adaptation with a past worker:

> She asked me to write down my strengths on these pieces of paper and put them on my wall. And at first, they were just scraps of paper but now I genuinely have a small list of my strengths written in calligraphy that I put on the wall.

They said this strengths exercise was helpful and a genuine way to celebrate their victories and accomplishments. Following up on this activity, they described a time when their worker revisited the list on their wall:

> I would talk about an issue I was currently having… and she asked me to look at the posts… And looking at the strengths that I have, that I put down when I felt good about

> those strengths…reminded me that… this is going to pass and I'm going to be able to go back to these strengths that I just have and that will help with the current issue.

Overall, clients reported that a focus on goals and strengths was helpful; however, the Strengths Assessment and Personal Recovery Plan were not necessarily used, seemingly due to a client preference not to use them and workers who responded to this preference.

Life Change

Clients described many diverse ways their lives had changed during the time that they had their case worker. Twelve people identified improved mental health (i.e. happier, decreased suicidal ideation and self-harm, decreased hospitalizations, better coping) and nine mentioned improved well-being, such as increased independence, overall well-being and feeling good about themselves. Six people described improved relationships and decreased isolation. One person described her life change as follows:

> What changed is the way I cope with my mental health… And I've mastered that. I'm really happy… Because I've been in a place, right, I was locked up for five years, so I just got off six years of probation. Me and my kids are so happy. I didn't think I was ever gonna get here. So that's a lot that's changed.

Ten people described moves to more stable housing or improvements within their housing, such as addressing bed bug situations or major cleaning needs. Five identified that they had better connections and knowledge of services and resources. Three people mentioned improved money management, two mentioned improved children's well-being, two identified progressing in post-secondary education, one accessed employment, and one said their physical health had improved. To summarize change in her overall well-being, one client said, "I've been

feeling my heart even transforming. So, it's been a very powerful transformation and I'm still on that journey."

Factors Influencing Life Change

While we examined the working alliance by exploring what is important to people within their descriptions of the working alliance and elements of the SMCM, we also coded language in the interviews that linked SMCM elements with life change, and that linked the working alliance with life change (i.e. hypothesis codes [Miles et al., 2014]).

Strengths Model Elements Related to Life Change. Across genders, four people said that goals were helpful in improving their lives and four people connected strengths to areas of life change. People's descriptions of goals linked to life change came up more naturally in the conversations than the connection between strengths and change.

When discussing strengths, one person said talking about strengths helped with his self-esteem and confidence. Another said the focus on strengths helped her to be positive and was healing. The other two clients who linked strengths to life change simply said that the focus on strengths helped them and it caused them to grow.

Clients who discussed the connection between goals and life change seemed to frame the association naturally. One client linked improvements in practical areas of her life with the practical goals she was setting with her case manager. Another client described how setting goals with her case worker led to life successes each week. Another said that setting goals "helps" and takes stress away. Finally, when talking about her goals, one client said:

> It gives me a purpose in life, like, it gives me the confidence that I am productive, I am adding to my community, I am adding to the society. I am doing something right so that would boost my self-confidence, level of comfort. I start loving myself.

Working Alliance Related to Life Change. The most prevalent linking theme in the data was that of the connection between the working alliance and life change. Eighteen of the people in the study linked the relationship to life change. Sometimes these two factors were difficult to separate because the attribution was almost assumed.

Change was described as being the result of a client-worker activity. One client described the work they did with their worker to be able to make phone calls:

> She's helped me a lot ‘cause I have trouble with phone calls and a lot of our sessions were helping me through phone calls… and that seems like it's small things but it genuinely is the only thing that has made me able to call the doctor and make appointments with the psychiatrist and make appointments in general.

When describing life change, people automatically framed it as a result of the relationship. For example, people used the phrase, “He’s been helpful” or, “She helped me through it.” One female client referred to, “Tasks we’ve accomplished together,” and another client described her life changes, then said, “I’ve done that with [worker]’s help.”

Some people recognized that life change started at the beginning of their relationship with their worker. For example, one client described how opening up with her worker helped her to manage suicidal ideation and self-harm. She said:

> Ever since her I started talking more and being even more communicative. Of what's bothering me and why. It's helped me out, to figure things out and to better understand situations, find resources to cope with it.

Another female client said, "Before her I wouldn't go to groups. Before her, I was too afraid to get help." Again, referring to the change beginning with her relationship with her worker and her growth from that point onwards, another client said:

> Before it was just me. And my own actions were not good. And now I have someone to bounce it off. I've done so much practice with her and I'm able to do it by myself now.

One client described the change in her mood from the beginning of interactions (phone calls) with her worker to the end. She said, "I would pick up the phone and tell her, like, I'm really feeling down. I'm tired and everything. We joke around about it and everything. And my mood - suddenly I feel good."

Finally, the following quotes highlight the key role that ongoing relationships with workers have had on clients' lives, leading to change. A male client said:

> Before I met [worker] …I was going down a dark path. Like, I knew I was getting into drugs and that and I wanted to straighten my life out but I just didn't know how to take that turn…Over that time they said, 'Okay, you take a left here or you take a right.'

And a female client said:

> You feel like you don't belong in the world and you don't see the light. And, when [Worker] came…she spoke to me and it was just like, she could just see through me, and she could just see the potential, but I couldn't. And, the way she pursued her work with

me, and went through the crisis with me… it was very remarkable, and I would say, it is a wonderful experience that I've had with her.

Discussion

The findings of this qualitative study provided insight into perceptions of the working alliance and its key characteristics, from the perspective of twenty people with severe mental illness, accessing SMCM at a community mental health organization. The study's conceptual diagram (Figure 7) highlights key themes and elements that were described by participants, within the working alliance concept and the SMCM intervention, and how these concepts may be connected to life improvements for people with severe mental illness.

Study participants valued a working alliance that focused on practical goals and tasks and that felt flexible and responsive. These characteristics of the working alliance reflected components of strengths model theory and elements of Bordin's (1979) definition of the theapeutic alliance. Study participants were most likely to attribute their personal life change to their case worker and the working alliance rather than to a specific intervention or its components, which aligns with the previously-tested quantitative mediation model, where the intervention-outcome relationship occurs through the working alliance. Finally, the working alliance and SMCM intervention took place within the context of the community mental health organization, within the broader community mental health field. These main findings are further described in this section.

Movement on Meaningful Goals

The focus on goals was a key element of clients' descriptions of their case worker. It is also a main focus of the SMCM intervention and the working alliance definition. As such, it connects the broad concepts of this study.

Goals Focus and the SMCM Intervention

In strengths model theory, through achieving a goal in one life area (i.e., niche), a person builds hope and motivation to identify and move towards goal achievement in another area, and there is a building up of hope and motivation which then leads to overall improved quality of life (Rapp & Goscha, 2012). In the SMCM Fidelity Scale, the domain, "hope-inducing practice," is broken down into: [1] client-case worker interactions that indicate movement on a goal that is meaningful and important to a person; and, [2] interactions that are directed toward expanding the person's autonomy and choice (Rapp & Goscha, 2012). While the Fidelity Scale also includes a domain measuring the use of the Personal Recovery Plan to identify and move forward on goals, the "hope-inducing practice" scale domain summarizes the goals focus of study participants the most closely. The "hope-inducing practice" concept was closely linked to the practical tasks people described and valued highly in their client-case worker relationships and their life change. Some participants also described a sense of moving forward in life by achieving one task at a time.

Redko et al. (2007) also found that people receiving SMCM highlighted goals as an important focus of the relationship. In Tsoi et al.'s (2019) SMCM study, one of the only differences between their SMCM group and comparison group (case management without SMCM) was higher goal achievement of the SMCM group. Movement on practical goals is

identified as a key element in building the alliance and fostering hope in both community mental health literature (Farrelly & Lester, 2014; Kidd et al., 2017; Redko et al., 2007; Tsoi et al., 2019) and psychotherapy research (Baldwin et al., 2007; Fluckiger, 2018; Wampold, 2015).

The finding that clients' descriptions of the goals focus fits with SMCM model theory is important because of considerations in case management research that case management "style" and individual case manager differences may be associated with the quality of the working alliance (De Leeuw et al., 2012; Farrelly & Lester, 2014; Kondrat & Early, 2010). If people with severe mental illness identify the practical goals focus of case management as a key element of the working alliance, and if the SMCM intervention has a strong focus on fostering the identification of goals and working towards achieving goals, it makes sense that SMCM is an intervention that equips case managers to build strong working alliances with their clients.

Bordin's Definition of the Working Alliance

Agreement on goals and the tasks to achieve those goals are also two of the three main components of Bordin's (1979) definition of the working alliance. According to Horvath (2018), there is much work to be done to clarify the concept of the alliance, both in psychotherapy and in additional interventions. The study participants' descriptions of their relationships with their case workers aligned well with Bordin's (1979) definition. Participants described the centrality of the goals process and many described the tasks they engaged in to work towards goals.

The final component of Bordin's (1979) definition is the existence and strength of the bond between a worker and client. In the interviews with participants, this component was perhaps the most clearly illustrated when people described their experiences with different case workers. They referred to a fit or compatibility that was sometimes missing in their working

relationships. This sometimes led to requests to switch case workers. Descriptions of the level of depth clients had in their relationships with their workers, or references to them being like family, also indicated the degree of the bond with them.

The therapeutic alliance literature raises questions around whether or not the definition of the alliance is applicable to settings outside of psychotherapy, such as in case management, where the practice takes place in community settings, and may be more focused on meeting basic needs, looking quite different from "office" therapy (Chinman et al., 2000; McCabe & Priebe, 2004; Rogers et al., 2008; Tsai et al., 2013). The types of goals and practical tasks that study participants identified as a focus of their case work highlight the structural barriers they face (e.g. lack of access to basic services and resources, poverty, vulnerable housing, and isolation). People described the working alliance with a very practical focus. The practical assistance they received from case workers to address these structural barriers tended to improve their mental health and overall feelings of well-being, as framed in their reports of life change. This practical focus is similar to the Housing First approach where meeting someone's basic housing needs leads to overall quality of life improvements (Aubry et al., 2017; Baxter et al., 2019). The practical focus also resembles the lower levels of Maslow's Hierarchy of Needs (Maslow, 1943), such as immediate physiological needs or safety needs, which must be met first in order for people to move forward in other areas of their lives. Study participants prioritized foci on meeting basic needs and pursuing highly pragmatic goals, which are likely quite different than tasks and goals of psychotherapy.

Some participants described how they chose not to share personal information or connect in a more personal way but were still satisfied with the practical tasks their case managers helped

them to do. This may have been an indication of a less important role of the bond in case management compared to the bond in psychotherapy. Overall, though, clients' descriptions of the core components of the working alliance fit with the definition of therapeutic alliance used in psychotherapy. Most valued both the bond and having their practical needs met, as well as a clarity around the goals and tasks of their case management practice. This would suggest that though the practices are different, the concept of the working alliance fits the SMCM intervention. As a result, SMCM may be fostering development of the specific construct within the working relationship (i.e., the alliance) that has been shown to lead to positive client outcomes across interventions, particularly in the psychotherapy field.

Goals Focus and Choice

The concept of choice and autonomy necessitates an acknowledgement and analysis of power in the working alliance. There is a power imbalance in a relationship between a mental health professional and a person navigating marginalization, stigma, and the structural barriers noted above. Individualized care, a focus on strengths rather than negative symptoms, and pursuing meaningful goals that vary greatly from one person to the next, are ways that power can shift towards a client within the case management context. At the same time, any relationship that promotes autonomy and strengths will be challenged when a worker says no, effectively over-ruling this autonomy.

Based on clients' descriptions, case workers seemed to balance prioritizing choice with offering guidance or advice. Some advised their clients not to pursue certain goals or pushed them to pursue others. Two clients highlighted their personal autonomy in the interviews, resisting the assumption that they may be dependent on their worker, and protecting their power

in the relationship. It is through the case worker that clients gain access to other mental health professionals, landlords, doctors, and resources (Ungar, 2004). This gatekeeping role usually leads to positive client outcomes; however, clients' examples of case workers not fully understanding or supporting their diagnoses could have served as a barrier to accessing support from other mental health professionals.

Flexibility and Responsiveness

In their meta-analysis of psychotherapy literature, Webb et al. (2010) speculated that therapist responsiveness and individualization may have explained a lack of a positive, statistically significant relationship between adherence to interventions and client outcomes. Therapists may adapt their use of an intervention based on people's behaviours, responses, and preferences (Webb et al., 2010). Kidd et al.'s (2017) review of common factors across community mental health interventions highlighted the centrality of the working alliance across interventions. They also identified a challenge that community mental health workers navigate: they must take the time to carefully foster strong working alliances in the midst of organizational responsibilities around paperwork and caseloads. Workers navigate this tension carefully because it is through their working alliances that they are able to engage people in their work together (Kidd et al., 2017).

Client responses to paperwork in this study illustrated workers' flexibility. In Kidd et al.'s (2017) review, documentation and paperwork were perceived negatively in the community mental health field – as a burden on the alliance. People may relate paperwork to institutionalization in the mental health sector. They may distrust or raise suspicion when it is presented. In examples of three case workers using the SMCM tools flexibly in this study (but

not in a way that would jeopardize fidelity), workers removed the documentation from their contact with clients – they either completed the strengths tools without the client present or developed an alternative way to use the tool.

Descriptions of Life Change

While clients in this study described a wide variety of positive outcomes in this SMCM context, they clearly attributed their life change to their worker and the relationship they had with their worker. In this way, it was difficult to remove the working alliance from clients' accounts of life change. The previous quantitative study found that the relationship between SMCM fidelity and client outcomes was mediated by the working alliance. When the working alliance was not accounted for, there was no longer an association between fidelity and life change. Findings from this study also support the centrality of the working alliance in the SMCM intervention and the role of the working alliance in leading to positive client outcomes.

Contextual Considerations

I included the organizational context and broader community mental health context in the conceptual diagram of this study in order to acknowledge that the SMCM, and interactions between people with severe mental illness and their case workers, are influenced by these settings. While clients identified and valued a flexibility in their case workers, organizational context influences the extent to which case workers can exercise flexibility and promote choice and autonomy in their practice. Flexible organizations may purport choice and individualized service, create space for clients to navigate resources relevant to them, and be open to clients negotiating their needs (Ungar, 2008). Regarding concerns around fit and compatibility (or the "bond" between a client and worker), organizations may develop policies that allow for clients to

switch case workers under certain circumstances, sometimes simply due to “fit” issues (Briand & Menear, 2014; Damschroder et al., 2009; Tsoi et al., 2019).

The community mental health field also influences organizations’ implementation of interventions and the extent that they may lead to strong working alliances and client outcomes. For example, the current community mental health field is recovery-oriented, across interventions, which fosters case management practice that is individualized, client-centered, and strengths-focused. This, in turn, influences the development of the working alliance in individual client-case manager interactions. We can identify elements of the working alliance that clients value and prioritize, but overall, the approach of a field – broad policies, funding frameworks, and reporting requirements – can facilitate and hinder the ability of case managers to foster strong working alliances.

Limitations and Implications for Further Study

The study had several limitations. The researchers relied on a convenience sample of people recruited through a community mental health organization via their workers, on a topic related to those same workers. Many of the participants mentioned isolation, which was likely even more heightened in the second half of data collection, which took place during the COVID-19 pandemic. Their worker was sometimes the only person with whom they were interacting. They also highlighted their experiences with substantial structural barriers, such as homelessness and poverty. With these study contexts in mind, clients presented their workers in a highly positive light, possibly partly due to a social desirability response bias. When discussing negative experiences with present or past workers, they cushioned their comments by taking responsibility for the challenging dynamic at the time.

When the study was introduced to clients, the primary researcher assured them of confidentiality, that their responses would not be shared with their current or previous workers, and that we were looking for examples of weaker, as well as strong, client-case worker connections. However, even with these assurances, clients were likely careful and reluctant to share negative aspects of their relationship with the interviewer. Kidd et al. (2017) highlighted the need for further study on alliance compared to compliance, particularly with people with severe mental illness, and De Leeuw et al. (2012) encouraged future research on challenging case worker relationships that do not form into an alliance. Further research could more actively recruit clients with weaker working alliances with case managers, such as by screening people with the RPRS prior to an interview.

The organization in this study underwent its most recent fidelity assessment almost two years prior to the start of this study's data collection. Some of the study findings, such as the lack of familiarity with the Strengths Assessment, were possibly an indication of some drift away from fidelity to the SMCM within the organization. In addition, some clients were from teams that would have not been in the same stage of implementing SMCM. For example, the case management light teams and community treatment order teams did not undergo the intense SMCM training and fidelity assessment that the intensive case management teams did. Hence, we were not able to determine clients' case workers' (present and past) stage of SMCM implementation or level of SMCM fidelity, which complicated interpretability of the findings. In this way, findings around implementation of elements of the SMCM intervention should be interpreted cautiously.

Conceptually, Horvath (2018) highlighted challenges defining the therapeutic alliance in psychotherapy research and more broadly. Some of these challenges were in determining how different variables fit together and overlap. Due to the open-ended, conversational nature of the qualitative interviews in this study, the distinction between the relationship and the alliance was not clear in the interviews. Also, there was an overlap between the definition of the alliance and the SMCM intervention. For example, the focus on goals is part of the definition of the alliance, which we found in the interviews. However, this focus on goals was also a key part of the SMCM intervention itself, thus making it challenging to distinguish the SMCM goals focus from the goals focus in the alliance definition. This challenge highlights the need for more research on the concept of the alliance across interventions, as well as the close alignment of the SMCM intervention and the working alliance (Horvath, 2018; McCabe & Priebe, 2004).

The data analysis for this study included a start list of codes based on already-tested mediation analyses, as well as concepts from strengths model theory and working alliance research. While in our coding we actively looked for instances of misalignment with the findings of the previous quantitative mediation analysis, or concepts that contradicted the working alliance definitions or SMCM concepts, we were still basing the analysis and coding on pre-determined theories and model relationships. The findings, therefore, highlight some relationships between concepts (in addition to descriptions of mechanisms within constructs), but these perceptions of connections should be interpreted with caution, particularly attributions to life change. In addition, the findings of this study, based on a convenience sample, provide insight into the working alliance and SMCM, but should not be generalized to a broader population of people with severe mental illness or other experiences of the SMCM model.

Some demographic information was not available in the administrative database provided by the organization. Gender identity, sexual orientation, and ethnocultural identity were not adequately captured in this study; however, this did not interfere with the quality of the analysis.

Additional suggestions for further research are to continue to develop and test the working alliance definition in case management, considering how Bordin's (1979) definition may fit well in case management practice. Further examination of SMCM fidelity could consider how to incorporate the centrality of the working alliance into measures of fidelity to the model, and how to add further flexibility to the use of the tools, such as the use of the Strengths Assessment and Personal Recovery Plan.

When examining outcomes in case management practice, the study points to the need to consider various outcome measures and concepts of quality of life. Tsoi et al. (2019) also reported the need for more individualized measures in the SMCM intervention context. The measurement of individualized goal achievement on a wide range of goals could be a particular focus of SMCM outcome measurement. In addition, idiographic, or self-defined, measures of quality of life could be appropriate for measuring SMCM client outcomes, (Ruta et al., 1994; Scott & Lewis, 2015). Finally, future research examining fidelity-outcome associations could incorporate the working alliance as a mediator of the relationship. Future studies can also test the conceptual diagram, examining underlying mechanisms within a fidelity-alliance-outcome mediation model and their different roles in the overall indirect effects.

Conclusions

People with severe mental illness and histories of vulnerable housing value their working alliance with their case manager, particularly its pragmatism, goals focus, and flexibility. A working alliance is necessary in order for an intervention to lead to improvements in people's lives, such as exiting homelessness, accessing needed services, and experiencing improved overall well-being. One strength of the SMCM intervention is that it focuses on fostering the client-case manager relationship. In addition, its conceptualization of the relationship aligns well with definitions of the therapeutic alliance, or working alliance, in that it prioritizes agreement on the goals of case management and the tasks to achieve those goals, while also providing case managers with tools to connect well with clients (i.e., foster a bond). Hence, through the principles, tools and practice of the SMCM, strong working alliances are cultivated, which foster improvements in people's lives.

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General Discussion

Study Findings

This thesis supports the hypothesis that the client-case manager working alliance mediates the fidelity-outcome association in SMCM. Following the SMCM leads to stronger working alliances. Strong working alliances predict better client quality of life and hope. The quantitative study path analysis supported this mediation with small effect sizes. In the qualitative study, clients described the importance of the working alliance in their lives, and how it led to a wide range of life improvements.

These findings align with strengths model theory, which describes the SMCM working alliance as a vehicle to positive outcomes (Rapp & Goscha, 2012). The results of both studies also build on a body of literature showing that the working alliance in community mental health interventions predicts quality of life outcomes of people with severe mental illness (De Leeuw et al., 2012; Farrelly & Lester, 2014; Kidd et al., 2017; McCabe & Priebe, 2004; Tsoi et al., 2019). The thesis supports the common elements of Bordin's (1979) definition of the alliance: the bond, and agreement on goals and tasks.

The thesis findings encourage case management organizations to consider whether or not an intervention, or their organizations in general, foster and prioritize the development of the client-case manager working alliance. Finally, the findings also support the addition of working alliance considerations in studies of the effects of intervention fidelity on client outcomes (De Leeuw et al., 2012; Farrelly & Lester, 2014; Kidd et al., 2017; McCabe & Priebe, 2004). These broad findings and implications are discussed in more detail in this General Discussion.

When considering perceptions of the working alliance, people with severe mental illness in this thesis were most likely to attribute their personal life change to their case manager, to their relationship with them, and to their work together on common goals and tasks. This alliance-outcome association was described by people with severe mental illness in study two and it was supported, quantitatively, in study one. In study two, clients' descriptions of the relationship with their case manager resembled the common definition of the alliance, which consists of agreement on goals and tasks, and descriptions of bonds or a closeness between a client and their worker (Bordin, 1979; Horvath, 2018). In study two, sometimes a bond was of a lower priority to clients if their practical needs were being met. In other words, some clients did not feel close with their case manager but they were still satisfied with the working relationship because of how the case manager was helping them to meet practical needs. The focus on practical tasks indicated a difference between case management interventions and psychotherapy, which may also affect the working alliance concept. However, overall, the concept from psychotherapy fit in this SMCM context, particularly because of the common description of the relationship in terms of the focus on goals and tasks.

The association between fidelity and alliance in study one raised questions about what elements of SMCM lead to a strong working alliance. In study two, people with severe mental illness identified some of these elements; namely, a practical goals focus, fostering hope, and providing choice and autonomy. The practical goals focus of the SMCM was particularly important to people. As with findings in case management and psychotherapy research, study two participants closely linked a goals focus with the effectiveness of their work with their case manager (Baldwin et al., 2007; Farrelly & Lester, 2014; Fluckiger et al., 2018; Kidd et al., 2017;

Wampold, 2015). Since SMCM fosters a strong focus on goals, it makes sense that fidelity to the intervention would be associated with strong working alliances.

The goals focus aligns with strengths model theory as well as common factors theory in psychotherapy (Baldwin et al., 2007; Fluckiger et al., 2018; Kidd et al., 2017; Wampold, 2015). Both suggest that a focus on tasks and goals that are meaningful to a person clarify the work between the case manager and person with severe mental illness. As one meaningful goal is achieved, there is an increase in hope and motivation, which strengthens the alliance further, and leads to the pursuit of additional goals, and improved overall quality of life and well-being (Baldwin et al., 2007; Farrelly & Lester, 2014; Wampold, 2015). These descriptions of the role of the working alliance, building goal upon goal, in a mutually-reinforcing way, resemble the description of a reciprocity in the alliance-outcome relationship in psychotherapy. In a 2020 meta-analysis, Fluckiger et al. reported that the alliance and outcomes reinforced each other in a reciprocal manner in psychotherapy. In study one in this thesis as well, while strong alliances predicted positive outcomes, positive outcomes also predicted strong alliances. Fluckiger et al. (2018) identified an ongoing research challenge in psychotherapy to explore the direction of the alliance-outcome relationship in more depth.

In addition to the importance of a goals focus, clients also described their case managers as responsive to their interests, circumstances, goals, and needs. As an individualized, strengths-focused, client-driven intervention, this responsiveness is built into SMCM (Rapp & Goscha, 2012). Psychotherapy and case management researchers have also identified the importance of flexible and responsive therapists and case managers (Baldwin et al., 2007; Fluckiger et al., 2018; Webb et al., 2010), as well as a flexibility built into organizations (Tsoi et al., 2019).

Interestingly, direct associations between fidelity and client outcomes were not supported in the study. Without a strong working alliance, the particular intervention was not associated with positive outcomes. One possible explanation of this lack of a direct association between fidelity and outcomes is that even if a case manager follows an intervention closely, but without a strong working alliance, people will not experience the intended outcomes of the intervention. Also, a client may not be prepared to engage meaningfully with their case manager for various reasons (e.g., severity of mental illness or substance use) and that absence of a connection results in the lack of an association between fidelity and outcomes. Psychotherapy researchers have reported a negative relationship between a rigid application of an intervention and client outcomes (Fluckiger et al., 2018; Wampold, 2015; Webb et al., 2010). At the same time, a focus on fidelity to an intervention can be balanced with a responsiveness to people's needs and preferences, which can foster a strong working alliance. An organization, training programs, and fidelity measures can build such responsiveness into case management practice (Aarons et al., 2012; Bond & Drake, 2019; Fluckiger et al., 2018; Mowbray et al., 2003; Tsoi et al., 2019).

Another way to explain the lack of fidelity-outcome relationship is that the specific intervention may not matter as much, as long as it sets up a context that fosters strong working alliances. While a strength of the SMCM is that it fosters strong working alliances, there may be other case management interventions or strategies that foster strong working alliances too, apart from the SMCM. It is a construct that is relevant across interventions. Case managers across interventions may also benefit from being trained in specific skills to foster a working alliance. Organizational policies and performance indicators may also foster strong working alliances,

such as having small client-worker ratios, allowing for longer client meetings, and providing individualized programming.

There may have also been methodological reasons for the lack of a direct fidelity-outcome relationship that are discussed below as study limitations. Regardless of the reason, overall, SMCM fidelity was not directly associated with positive client outcomes of mental health functioning, hope, and quality of life. This change only occurred through the working alliance.

The mediation model was moderated by language/location of agencies at 18 months. Only the relationship between the alliance and QOLI-20 was significant when considering together the agencies located in Ontario and Newfoundland. While highly exploratory, and with small sample sizes, this finding highlights the need to further explore contextual and organizational variables in the alliance-outcome relationship.

The effects in study one were small, indicating that more factors are contributing to people's outcomes. These may be due to individual client characteristics (e.g. engagement in the intervention), case manager differences (e.g. case manager style, empathy, respect), other elements of case management practice (e.g. continuity of care), particular mechanisms within SMCM (goals focus, shared decision-making, viewing the healthy side of a person), organizational characteristics, and cultural differences that were not included in the models (Briand & Menear, 2014; Calsyn et al., 1999; Damschroder et al., 2009; Farrelly & Lester, 2014; Tsoi et al., 2019).

Study Limitations

The studies present several limitations that restrict the generalizability of the results and also provide implications for further research. The data in study one were nested. The sample varied by case manager, team, organization, and location. Testing location as a dichotomous moderator of the mediation model was a preliminary way to explore this nested data. Moreover, we were not able to account for variability in the data based on organization or team, nor case manager differences. In some study sites, individual clients changed case managers during the study, making it difficult to track differences at these levels. Multi-level modeling would require a larger sample size of teams or organizations.

In study one, fidelity was assessed at the team-level and then team fidelity scores were matched to individual clients over the course of the study. A team-level fidelity score is often how fidelity to an intervention is measured in community mental health programs (Bond & Drake, 2019). Determining the level of fidelity to an intervention at an individual case manager- or client-level is more resource-intensive and time-consuming but could provide a more precise level of fidelity to SMCM. Using team fidelity scores in study one as opposed to case manager-level fidelity was a study limitation. In addition, fidelity to SMCM was not measured in study two, which was a study limitation. We only knew that the organization had implemented the model, had had past fidelity assessments, and was following the intervention.

Study two was partially conducted during the COVID-19 pandemic and participants mentioned high levels of isolation and different foci of their work with case managers due to COVID-19 restrictions. This context likely influenced people's perceptions of their case manager and possibly how they chose to describe the relationship. They mentioned focusing more on

practical needs rather than personal goals and strengths because of their isolation. Also, possibly influenced by high levels of isolation in the pandemic and a social desirability response bias, in study two all participants reported strong alliances with their case managers. Descriptions of the alliance from people with low alliances, or a lack of an alliance, would have provided more diverse perspectives in the data. At the same time, most clients identified that they had changed case managers at least once and descriptions of their past case managers included information about challenges and poor alliances, providing this insight from past experience.

Regarding changes in case managers, study one RPRS scores did not account for changes in case managers. A person's RPRS score at 4.5 months may have been referring to a different case manager than the RPRS score at 13.5 months. Thus, the study did not isolate just one case manager relationship for each client. If a person switched case managers in the study, and had to re-build an alliance, this likely influenced client outcomes. In study two, case manager switches were common in people's descriptions of case managers. Different organizations had different practices around switching case managers, and switches were not as common in other organizations. As well, it is inevitable with turnover of personnel that case managers assigned to clients will change. Overall, case manager switches were not accounted for in the study and may have influenced the outcome findings.

Implications for Further Research

This thesis contributes to the SMCM evidence base, supporting the relationship between SMCM fidelity and client outcomes through the working alliance. It demonstrates the importance of the working alliance in SMCM. It also reinforces future areas of study in the SMCM field. With the emphasis in study two on the goals focus of SMCM, further research

could isolate the specific goals-related SMCM fidelity items and explore their relationships with the working alliance and outcomes. Study two also highlighted the nuanced nature of the strengths focus. Brun and Rapp (2001) and Rapp and Sullivan (2014) describe the strengths focus as interacting with all areas of SMCM practice. The Strengths Assessment is only one aspect of the model, and strengths are considered when identifying goals, collaborating and agreeing on a plan moving forward, and drawing on naturally-occurring resources, as examples. More research could further explore how this strengths focus is incorporated into all areas of practice and the impacts of such a focus.

This thesis highlights the importance of further developing fidelity measurement and outcomes measurement in the SMCM field, which Rapp and Sullivan (2014) also prioritized. Measures of fidelity at the level of the case manager would be beneficial in fidelity-outcome studies; however, development of such measures would need to be sensitive to time and resources. The thesis findings also suggest examination of fidelity to the strengths focus and goals focus independent of paperwork, or accounting for different uses of the Strengths Assessment and Personal Recovery Plans, such as without the client's signature and without the client present. Further study could use outcomes measures in SMCM that summarize movement on a wide range of individualized client goals and life areas. Measures of goal achievement, hope, or self-defined quality of life measures, like the PGI that was used in the current study, may be a good fit. As an additional consideration, Tsoi et al. (2019) suggested a distinction between functional recovery and personal recovery when examining SMCM outcomes.

The thesis also continues to highlight the need to clarify the definition of the working alliance. Researchers have identified a challenge defining the working alliance in case

management independent of psychotherapy (Chinman et al., 2000; Howgego et al., 2003; Kondrat & Early, 2010; Tsai et al., 2013). In study two, we found that Bordin's (1979) definition of the alliance fit well with clients' explanations of their relationships with their case managers. De Leeuw et al. (2012) called for more research that examines challenging case managers' working alliances or situations where alliances do not form. Based on study two's limitations, this would be a worthwhile area for further research. An in-depth focus on past case managers may also bring to light a more nuanced conversation around the alliance.

The RPRS measure in study one may not have fully operationalized the working alliance according to Bordin's (1979) definition. Further SMCM research could use the Working Alliance Inventory, which measures Bordin's (1979) construct, to again test the fidelity-alliance association, and the alliance-outcomes association. Along these lines, we propose that future fidelity-outcome research continues to include the working alliance as a variable influencing outcomes. More research is needed to support the significant quantitative findings in this thesis in particular. Future study could examine additional factors influencing the fidelity-alliance-outcome path, such as organizational and cultural differences, client differences, case manager variability, and changes in case managers over time.

Implications for Policy and Program Development

This thesis presents several implications for policy and program development. At a program-level, the findings suggest that across interventions, case managers would benefit from training that focuses on working alliance development, such as providing clarity on the goals of case management, the tasks to achieve those goals, and forming bonds with clients, even while the tasks of case management may address practical needs (Baldwin et al., 2007). Training

programs could support practitioners to balance a practical, individualized, goals focus with the techniques and tools of an intervention. The SMCM intervention provides such training. Fluckiger et al. (2018) presented training suggestions for improving the alliance in psychotherapy, which apply to this study's findings. Their suggestions included: forming collaborative attachments with people, developing therapy goals early on, being inclusive, negotiating the goals of therapy, and being responsive to a person's needs and preferences.

At an organizational-level, the findings of the study also encourage flexibility in organizations when implementing SMCM in order to develop a responsiveness and a focus on the working alliance. Organizations can also include flexibility in their program evaluation processes, and in their descriptions of a program's theory of change or logic model. They can add measures of the working alliance into evaluation plans. A focus on the working alliance can be built into supervision, organizational policies, and organizational cultures. Organizations can build programs that foster individualization of services.

The thesis findings support the use of SMCM in case management for people with severe mental illness, as an intervention that helps clients and case managers develop strong and effective working relationships with each other. SMCM focuses on goals that are meaningful and important to people. It is a structured approach with a fidelity measure, allowing for organizations to monitor their implementation of the model. SMCM's alignment with recovery principles makes it relevant in the current community mental health context. In order for SMCM implementation to expand, as recommended, governments would need to commit to funding community mental health programming broadly, and SMCM specifically. This funding

commitment would need to include targeted funding for ongoing training and fidelity assessment.

The OECD (2014) has identified Canada's poor performance in investing in mental health for Canadians. ICM serves people in their communities, and often focuses on highly marginalized people experiencing vulnerable housing and social isolation (Kidd et al., 2017; OECD, 2014). This thesis, on a small-scale, continues to build on the evidence base, supporting the development and use of a specific ICM intervention, SMCM, for people with severe mental illness.

Conclusions

Overall, this thesis highlights the working alliance as a mechanism for change in people's lives. It supports the SMCM model as promoting a strong working alliance. People with severe mental illness value working with case managers who are pragmatic, flexible, can form bonds with their clients, are clear on goals, and are task-focused. SMCM fosters these case manager qualities. Prioritizing these qualities in case management is associated with change in many different areas of people's lives, such as in achieving practical life goals, and experiencing overall well-being and quality of life.

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Appendix A

The Strengths Assessment

For:

Current Strengths: What are my current strengths? (i.e. talents, skills, personal and environmental resources)	**Desires and Aspirations:** What do I want in my life?	**Past Resources – Personal, Social, & Environmental:** What strengths have I used in the past?
Home/Daily Living		
Assets - Financial/Insurance		
Employment/Education/Specialized Knowledge		
Supportive Relationships		

Wellness/Health		
Leisure / Recreational		
Spirituality/Culture		

What are my priorities?

1. 3.

2. 4.

Additional comments or important things to know about me:

Appendix B

The Personal Recovery Plan

For _____

My goal (This is something meaningful and important that I achieve as part of my recovery): **Why this is important to me**:				
What will we do today? (Measurable Short-Term Action Steps Toward Achievement)	Who is Responsible?	Date to be Accomplished	Date Accomplished	Comments:

The goal listed above is something important for me to achieve as part of my recovery. _____ My Signature Date	I acknowledge that the goal listed above is important to this person. Each time we meet, I will be willing to help this person make progress towards this goal. _____ _____ Service Provider's Signature Date

Appendix C

Strengths Model Case Management Fidelity Scale

Domain 1. Caseload Ratios					
1) Average caseload size for the team.	≥ 31	28–31	24–27	20-23	≤ 19
Domain 2. Community Contact					
2) Percentage of client contact that occurs in the community.	≤ 49% or information cannot be determined.	50–64%	65–74%	75–84%	≥ 85%
Domain 3. Strengths-Based Group Supervision					
3a) Group supervision occurs once a week lasting between 90 minutes and 2 hours.	Does not occur	<1 hour per week, or less than once per week	1 hour, once per week	90 minutes, once per week	≥2 hours, once per week
3b) Group supervision focuses primarily on discussion of clients rather than administrative tasks.	≤40% client-focused	41-50% client-focused	51-69% client-focused	70-79% client-focused	≥80% client-focused
3c) A specific set of clients are presented using the formal group supervision process.	Formal group supervision not used		1 client presented	2 clients presented	≥3 clients presented
3d) Strengths Assessments are distributed to each team member for all presentations.	Never		Occasionally		Always
3e) The direct service worker clearly states the client's goal(s) during the presentation.	Never		Occasionally		Always
3f) The direct service worker clearly states what they want help with from the group during the presentation.	Never		Occasionally		Always
3g) The team asks constructive questions based on the client's Strengths Assessment (SA) during the presentation.	No questions are based on the client's SA		Minority of questions are based on the client's SA	The questions were 50%-50% based on client's SA	Majority of questions are based on the client's SA

3h) The team brainstorms constructive suggestions related to the Strengths Assessment to help the client achieve their goal or help the worker engage with the client and/or develop a goal.	0-4 ideas per presentation	5-9 ideas per presentation	10-14 ideas per presentation	15-19 ideas per presentation	≥20 ideas per presentation
3i) At the end of each case presentation, the presenting staff person will: State when they will see the person next or what their plan is to contact the person, state what ideas they will present to the person and/or what strategy they will use to engage with the person.	No plan, next steps. Or strategy clearly stated in any presentation		Clear plan, next steps, or strategy stated in some presentations		Clear plan, next steps. Or strategy clearly stated in all presentations
Domain 4. Supervisor					
4a) Supervisor spends at least 2 hours per week providing a quality review of tools related to the Strengths Model (i.e. Strengths Assessments and Personal Recovery Plans) and integration of these tools into actual practice.	< 30 minutes	30–59 minutes	60–89 minutes	90–119 minutes	≥ 2 hours
4b) Supervisor spends at least 2 hours per week giving direct service workers specific and structured feedback on skills/tools related to the Strengths Model of Case Management.	< 30 minutes	30–59 minutes	60–89 minutes	90–119 minutes	≥ 2 hours
4c) Supervisor spends at least 2 hours per week providing field mentoring for direct service workers.	< 30 minutes	30–59 minutes	60–89 minutes	90–119 minutes	≥ 2 hours
4d) Ratio of direct service workers to supervisor.	≥ 9 : 1	8 : 1	7 : 1	6 : 1	5 : 1
Domain 5. Strengths Assessment					
5a) There is evidence that the Strengths Assessment is used regularly in practice.	≤ 60% used and updated at least monthly	61–70% used and updated at least monthly	71–80% used and updated at least monthly	81–90% used and updated at least monthly	91–100% used and updated at least monthly

5b) Client interests and/or aspirations are identified with detail and specificity.	≤ 60% identified at least 3	61–70% identified at least 3	71–80% identified at least 3	81–90% identified at least 3	91–100% identified at least 3
5c) Client language is used (e.g. "I want more friends" rather than "increase socialization skills") and it is clear that client was involved in developing the SA.	≤ 60% demonstrate predominant use of client language	61–70% demonstrate predominant use of client language	71–80% demonstrate predominant use of client language	81–90% demonstrate predominant use of client language	91–100% demonstrate predominant use of client language
5d) Talents and/or skills are listed on the SA in some detail and specificity.	≤ 60% identified at least 6	61–70% identified at least 6	71–80% identified at least 6	81–90% identified at least 6	91–100% identified at least 6
5e) Environmental strengths are listed on the SA in some detail and specificity.	≤ 60% identified at least 6	61–70% identified at least 6	71–80% identified at least 6	81–90% identified at least 6	91–100% identified at least 6
5f) Percent of clients who have a Strengths Assessment.	≤ 60%	61–70%	71–80%	81–90%	91–100%
Domain 6. Integration of Strengths Assessment With Treatment Plan					
6) Strengths Assessment is used to help clients develop treatment plan goals.	≤ 60% of treatment plan goals link directly to the SA	61–70% of treatment plan goals link directly to the SA	71–80% of treatment plan goals link directly to the SA	81–90% of treatment plan goals are linked directly to the SA	91–100% of treatment plan goals are linked directly to the SA
Domain 7. Personal Recovery Plan					
7a) Agency uses the Personal Recovery Plan (PRP) as a tool for helping clients achieve goals.	Not used	1–25% of clients used a PRP in the last 90 days	26–50% of clients used a PRP in the last 90 days	51–75% of clients used a PRP in the last 90 days	≥ 76% of clients used a PRP in the last 90 days
*Only rate Items 7b through 7e if the agency stated they use the Personal Recovery Plan; otherwise, the rating for 7a will serve as the final rating for this domain.					
7b) Goals on the Personal Recovery Plan should use the client's own language, the actual passion statement, and state why the goal is important to the person.	≤ 44% of goals use client's language	45–59% of goals use client's language	60–74% of goals use client's language	75-89% of goals use client's language	≥90% of goals use client's language
7c) Long-term goal on the Personal Recovery Plan is broken down into smaller, measurable steps.	≤ 44% of steps on the PRP are broken down and measurable	45-59% of steps on the PRP are broken down and measurable	60-74% of steps on the PRP are broken down and measurable	75- 89% of steps on the PRP are broken down and measurable	≥90% of steps on the PRP are broken down and measurable

7d) Specific and varying target dates are set for each step on the Personal Recovery Plan.	≤ 44% of dates on the PRP are specific and have variation	45-59% of dates on the PRP are specific and have variation	60-74% of dates on the PRP are specific and have variation	75- 89% of dates on the PRP are specific and have variation	≥90% of dates on the PRP are specific and have variation
7e) There is evidence that Personal Recovery Plans are used during nearly every contact with the client.	≤ 44% of PRP's are used nearly every contact with the client.	45-59% of PRP's are used nearly every contact with the client.	60-74% of PRP's are used nearly every contact with the client.	75-89% of PRP's are used nearly every contact with the client.	≥90% of PRP's are used nearly every contact with the client.
Domain 8. Naturally Occurring Resources					
8a) Direct service workers' help clients access naturally occurring resources to help people achieve goals.	≤ 10% of goals have evidence of the direct service worker helping to access at least one naturally occurring resource	11–25% of goals have evidence of the direct service worker helping to access at least one naturally occurring resource	26–40% of goals have evidence of the direct service worker helping to access at least one naturally occurring resource	41-75% of goals have evidence of the direct service worker helping to access at least one naturally occurring resource	≥ 75% of goals have evidence of the direct service worker helping to access at least one naturally occurring resource
8b) Direct service workers' use more naturally occurring resources than formal mental health resources to help people achieve goals.	≤ 10% of goals clearly reflect a trend toward the use of naturally occurring resources	11–25% of goals clearly reflect a trend toward the use of naturally occurring resources	26–40% of goals clearly reflect a trend toward the use of naturally occurring resources	41-75% of goals clearly reflect a trend toward the use of naturally occurring resources	≥ 75% of goals clearly reflect a trend toward the use of naturally occurring resources
Domain 9. Hope Inducing Practice					
9a) Direct service workers' interactions with people are directed toward movement on a goal that is meaningful and important to the person.	Direct service worker actively detracts from movement on a goal that is meaningful and important to the person	Direct service worker discourages movement on a goal that is meaningful and important to the person	Direct service worker is neutral relative to movement on a goal that is meaningful and important to the person	Direct service worker is accepting and supportive of movement on a goal that is meaningful and important to the person	Direct service worker actively contributes to movement on a goal that is meaningful and important to the person
9b) Direct service workers' interactions with people are directed toward expanding the person's autonomy and choice.	Direct service worker actively detracts from or denies client's perception of choice or control	Direct service worker discourages client's perception of choice or responds to it superficially	Direct service worker is neutral relative to client autonomy and choice	Direct service worker is accepting and supportive of client autonomy	Direct service worker adds significantly client's autonomy, to markedly expand client's choice

Appendix D

Recovery-Promoting Relationships Scale (RPRS)

The following statements describe different aspects of the relationship people with psychiatric conditions might have with a mental health or rehabilitation provider.

Please think of the relationship you have with _____

_____

Please check the box of the answer that best describes your relationship with this provider. (Disagree, Somewhat Disagree, Somewhat Agree, Agree, Not Applicable)

1. My provider helps me recognize my strengths.
2. My provider tries to help me see the glass as "half-full" instead of "half-empty."
3. My provider helps me put things in perspective.
4. My provider helps me feel I can have a meaningful life.
5. I have a trusting relationship with my provider.
6. My provider helps me not to feel ashamed about my psychiatric condition.
7. My provider helps me recognize my limitations.
8. My provider helps me find meaning in living with a psychiatric condition.
9. My provider helps me learn how to stand up for myself.
10. My provider accepts my down times.
11. My provider encourages me to take chances and try things.
12. My provider reminds me of my achievements.
13. My provider understands me.
14. My provider tries to help me feel good about myself.
15. My provider helps me learn from challenging experiences.
16. My provider really listens to what I have to say.
17. My provider cares about me as a person.
18. My provider treats me with respect.
19. My provider helps me feel hopeful about the future.
20. My provider helps me build self-confidence.
21. My provider sees me as a person and not just a diagnosis.
22. My provider helps me develop ways to live with my psychiatric condition.
23. My provider has helped me understand the nature of my psychiatric condition.
24. My provider believes in me.

Appendix E

Quality of Life Interview (QOLI-20)

Now I'll read a list of things about your life overall. For each item, I'd like you to tell me how you feel, on a scale of 1 to 7, where 1=terrible and 7=delighted.

1. How do you feel about your family in general?
2. How do you feel about how often you have contact with your family?
3. How do you feel about the way you and your family act toward each other?
4. How do you feel about the way things are in general between you and your family?
5. How do you feel about how comfortable and well off you are financially?
6. How do you feel about the amount of money you have available to spend for fun?
7. How do you feel about the way you spend your spare time?
8. How do you feel about the amount of time you have to do the things you want to do?
9. How do you feel about the chance you have to enjoy pleasant or beautiful things?
10. How do you feel about the amount of fun you have?
11. How do you feel about the amount of relaxation in your life?
12. How do you feel about the living arrangements where you live?
13. How do you feel about how safe you are in your neighbourhood?
14. How do you feel about how safe you are where you live?
15. How do you feel about the chance of finding someone to help in an emergency?
16. How do you feel about your personal safety?
17. How do you feel about the things you do with other people?
18. How do you feel about the amount of time you spend with other people?
19. How do you feel about the people you see socially?
20. How do you feel about your life overall (as a whole)?

Now two questions about relationships.

21. Do you have a close confidante, that is, someone that you can share sensitive personal information with?

Health, social service or other providers do not count as close confidantes.

21.a Do you see this person at least once a month? 'See' can include having contact on the phone or on-line as well as seeing the confidante in person.

Appendix F

The Patient-Generated Index (PGI)

This questionnaire is presented in three stages. Your answers should be entered on the answer sheet, which is marked “stage 1”, “stage 2” and “stage 3”. The instructions on how to fill it in also are divided into three stages. You might find it easiest to read through the instructions for stage one, then go to the answer sheet and fill in stage one, and then do the same for stages two and three. When you are filling in each stage, we would like you to think about when you were at your worst with your *mental health* in the last month. If you are at your worst now, then think about how you feel now.

Stage 1

At this stage, we would like you to think of the different areas in your life, or activities in your life that have been affected by your mental health in the last month. When you think of areas or activities, you might think of some small area or activity that may be quite personal and special to you such as “I can't play with my kids”. We want you to write the five most important areas or activities of your life that are affected by your mental health illness in the boxes provided in stage one on the answer sheet. Put one area or activity in *each* box.

You may be able to think of more than five areas, but you can only write down the five most important ones. If you can't think of five areas or activities that are affected, there is a list of areas and activities that have been mentioned by other people suffering of a mental illness. You might want to use these areas or activities to fill in the boxes if you feel that they apply to you. You don't have to write down five areas of your life if you don't feel that five areas of your life have been affected. If you have less than five, you can write “none” in the empty boxes and move on to stage two.

If you feel that your life is not affected by your mental health illness at all, then just send back the questionnaires with “none” in each box. In this case you don't need to go on to stages two and three. Once you have written down the most important areas or activities that have been affected by your mental health illness, you can move on to stage two.

Stage 2

Looking at the answer sheet, you will see a scale from 0 to 100 in multiples of 10. This scale is supposed to show you how badly affected you are for each of the areas or activities you have mentioned. A score of 0 would mean that you were at your worst in the last month, you felt that this was really the worst you could imagine for yourself. The score of 100 is meant to represent exactly how you would like to be, in that area or activity of your life (even if it is impossible for you to reach). For each area or activity that you have mentioned, write down a score out of 100 that you would give to reflect how you were affected when you were at your worst in the last month. You will notice that we filled in “all other aspects of your life” as the final “area or activity”. This is

meant to include all the other areas of your life affected by you mental health, but that are not important enough to go in the top five boxes. It will also include areas in your life that might be totally unaffected, such as the size of your house.

You might suffer from another illness as well as your mental health illness, and any other areas that are affected by this illness would be included in this box.
Please give a score out of 100 to the "all other areas of your life" box in the same way that you scored the other "areas and activities". Even if you leave other boxes empty, you *must* fill in this box.

100 Exactly as you would like to be
90 Close to how you would like to be
80 Very good but not how you would like to be
70 Good but not how you would like to be
60 Between fair and good
50 Fair
40 Between poor and fair
30 Poor but not the worst you could imagine
20 Very poor but not the worst you could imagine
10 Close to the worst you could imagine
0 The worst you could imagine

Stage 3
For the final stage, we would like you to imagine that we can grant you a wish to improve *any* area of your life, including the areas that have nothing to do with you mental health illness. Imagine that you are given 60 *points* to improve you score in any of the areas you have mentioned. You cannot have more than 60 points in total, but you can spend them anyway you like. For example, you could give 10 points to each area, or you might give 60 points to one area. The choice is yours to split the points up any way you like, but you cannot have more than 60 points in total. If you don't give any points to an area of your life, you must try to imagine that this area will stay exactly as it is. Go through the boxes in stage three and distribute your points to those areas or activities in which you would most like to improve. You can keep changing your mind until you feel that you have reached the best distribution of points. Remember that the total across all areas must add up to 60. You have finished this section. It will tell us how your mental health has affected your life and also which aspects of your life you would most like to see improved.

1. Did the participant need suggestions to generate areas/activities? Yes/No
2. If yes, was he able to provide areas/activities on his own? Yes/No
3. If yes, how many? Number of areas/activities:_____

Appendix G

The Trait Hope Scale (THS)

Directions: Read each item carefully. Using the scale shown below, please select the number that best describes you and put that number in the blank provided.

1. = Definitely False
2. = Mostly False
3. = Somewhat False
4. = Slightly False
5. = Slightly True
6. = Somewhat True
7. = Mostly True
8. = Definitely True

___ 1. I can think of many ways to get out of a jam.
___ 2. I energetically pursue my goals.
___ 3. I feel tired most of the time.
___ 4. There are lots of ways around any problem.
___ 5. I am easily downed in an argument.
___ 6. I can think of many ways to get the things in life that are important to me.
___ 7. I worry about my health.
___ 8. Even when others get discouraged, I know I can find a way to solve the problem.
___ 9. My past experiences have prepared me well for my future.
___10. I've been pretty successful in life.
___11. I usually find myself worrying about something.
___12. I meet the goals that I set for myself.

Note. When administering the scale, it is called The Future Scale. The agency subscale score is derived by summing items 2, 9, 10, and 12; the pathway subscale score is derived by adding items 1, 4, 6, and 8. The total Hope Scale score is derived by summing the four agency and the four pathway items.

Appendix H

The Multnomah Community Ability Scale (MCAS)

Now rate the MCAS items based on all of the information from this interview, and your observations. If you need to use the probes for a few items, explain that you just need to clarify a couple of things to finish up the interview.

1. Physical health. How impaired is the participant by his/her health status?
    1. Extreme health impairment (Major medical problem that precludes participant's participation in most daily activities)
    2. Marked health impairment (Major medical problem that interferes with most of participant's activities, e.g. multiple sclerosis that requires use of walker)
    3. Moderate health impairment (Medical problem that interferes some with participant's activities, e.g. an uncontrolled seizure condition)
    4. Slight health impairment (e.g., Controlled seizure condition or recent tooth abscess)
    5. No health impairment

2. Intellectual functioning. What is the participant's level of general intellectual functioning?
    1. IQ < 60, Extremely low intellectual functioning (Not literate)
    2. IQ in the 60's, Moderately low intellectual functioning (Mild mental retardation or has literacy problems or major deficits in orientation)
    3. IQ in the 70's, Low intellectual functioning (Borderline intellectual functioning; very limited conceptual thinking; 2 or more deficits in orientation)
    4. IQ in the 80's, Slightly low intellectual functioning (Low average IQ; mild deficits in organization)
    5. IQ in the 90's and above, Normal or above intellectual functioning (Well oriented; cognitive skills demonstrated in interview)

3. Thought processes/psychosis. How impaired are the participant's thought processes as evidenced by such symptoms as hallucinations, delusions, tangentiality, loose associations, response latencies, ambivalence, incoherence, etc.?
    1. Extremely impaired though processes (Speech word salad or inability to focus on anything but psychotic ideas)
    2. Markedly impaired thought processes (Speech which is difficult to follow or preoccupation with psychotic ideas)
    3. Moderately impaired thought processes (Hallucinations, delusions, or disorganization which interfere with functioning some of the time)
    4. Slightly impaired thought processes (Mild hallucinations or disorganized thinking or occasional delusional thinking)
    5. No impairment, normal thought processes

4. Mood abnormality. How abnormal is the participant's mood as evidenced by such symptoms as constricted mood, extreme mood swings, depression, rage, mania, etc.?

1. Extremely abnormal mood (Despondence or uncontrolled mania or rage)
2. Markedly abnormal mood (Mania or marked irritability or severe depression)
3. Moderately abnormal mood (Moderate depression or marked blunted affect or significant irritability or passive suicidal ideation)
4. Slightly abnormal mood (Mild depression or mild blunted affect or mild irritability)
5. No impairment, normal mood

5. Response to stress and anxiety. How impaired is the participant by inappropriate and/or dysfunctional responses to stress and anxiety?

1. Extremely impaired response (Extreme reactiveness to stressors, from acting out to paralysis, resulting in inability to adapt)
2. Markedly impaired response (Marked reactiveness; very limited problem solving in response to stress; need for large amount of support and intervention from others; daily panic attacks or severe anxiety)
3. Moderately impaired response (Moderately reactive to stress; needs assistance in order to cope)
4. Slightly impaired response (Somewhat reactive to stress; has some coping skills; responsive to limited intervention)
5. Normal response

6. Ability to manage money. How successfully does the participant manage his/her money and control expenditures?

1. Almost never manages money successfully (Only manages pocket money)
2. Seldom manages money successfully (Only manages money which is handed out daily)
3. Sometimes manages money successfully (Money doled out weekly by supervised housing or family; can buy food, cigarettes and manage that money okay; or, manages money on own, but with difficulty)
4. Manages money successfully a fair amount of the time (Does more than a 3 rating, i.e., pays for rent, treatment, or other bills by self; or, manages all monthly bills with assistance)
5. Almost always manages money successfully (Generally independent in managing money)

7. Independence in daily living. How well does the participant perform independently in day-to-day living? ADL = activities of daily living

1. Almost never performs independently (Minimal to no ADLs even with repeated staff interventions)
2. Often does not perform independently (Completes only some ADLs, even with prompt and direction)
3. Sometimes performs independently (Needs consistent prompts for ADLs, but usually does complete most of them)

4. Often performs independently (May need occasional prompts or has difficulty in one area of ADLs)
5. Almost always performs independently

8. Acceptance of illness. How well does the participant accept (as opposed to deny) his/her psychiatric disability?
1. Almost never accepts disability (Adamantly denies illness and need for treatment)
2. Infrequently accepts disability (Consistently misunderstands illness or symptoms)
3. Sometimes accepts disability (Some denial evident in attributing problems to external factors or minimizing seriousness or denying specific symptoms)
4. Accepts disability a fair amount of the time (Much of the time acknowledges having an illness and/or some specific symptoms)
5. Almost always accepts disability (Identifies illness and symptoms consistently)

9. Social acceptability. In general, what are other people's reactions to the participant?
1. Very negative (Consistently elicits avoidant reaction from others)
2. Fairly negative (Presentation elicits some negative reaction from others)
3. Mixed, mildly negative to mildly positive
4. Fairly positive (Presentation slightly impaired, but can navigate in public without attracting negative attention)
5. Very positive (No outward appearance of mental illness or impairment)

10. Social interest. How frequently does the participant initiate social contact or respond to others' initiation of social contact?
1. Very infrequently (Almost never participates in social activities; usually avoids available social situations)
2. Fairly infrequently (Limited response to invitation or opportunity for social interaction; does not go on recreation outings; e.g., passive interation with others when smoking)
3. Occasionally (Sometimes initiates and responds to social activities; e.g., goes on outings with program which are arranged by staff, may have some withdrawal from others)
4. Fairly frequently (Respond consistently and initiates occasionally; e.g., has some social contacts outside of activities which are organized by staff)
5. Very frequently (Ongoing initiation and responses to social interactions; e.g., actively maintains social activities outside of household)

11. Social effectiveness. How effectively does the participant interact with others?
1. Very ineffectively (Lacking in almost any social skills; inappropriate response to social cues)
2. Ineffectively (Uses only minimal social skills, can not engage in give-and-take of instrumental or social conversations; limited response to social cues)
3. Mixed or dubious effectiveness (Marginal social skills, not always appropriate)
4. Effectively (Is generally able to carry out social interactions with minor deficits, can generally engage in give-and-take conversation with only minor disruption)
5. Very effectively (Social skills are within the normal range)

12. Social network. How extensive is the participant's social support network?
    1. Very limited network (Nobody)
    2. Limited network (Family member or case manager)
    3. Moderately extensive network (Family member AND: case manager, friend, or socialization group)
    4. Extensive network (Family member and case manager AND: friend or socialization group)
    5. Very extensive network (Most of the above and close friends or a partner with some experience of intimacy)

13. Meaningful activity. How frequently is the participant involved in meaningful activities that are satisfying to him or her? (Rate the participant's perception)
    1. Almost never involved (Does nothing outside of meeting basic needs)
    2. Seldom involved (May be involved in some passive activities with little enthusiasm)
    3. Sometimes involved (Does passive activities such as listening to music, watching TV, with some enthusiasm; at day program, has only passive involvement or skips groups)
    4. Often involved (Has some constructive activities with others which are identified as meaningful; active involvement at day program, may include part-time sheltered work activity at day program)
    5. Almost always involved (Consistently involved in an interactive activity like work, school, or volunteering outside of a sheltered psychiatric setting)

14. Medication compliance. How frequently does the participant comply with his/her prescribed medication regimen?
    1. Almost never complies
    2. Infrequently complies (Does not take medication independently; staff directly monitors self-administration of all medications)
    3. Sometimes complies (Takes medication on own, but misses frequently and/or needs periodic checks, monitoring, or help with packing medications)
    4. Usually complies (Takes medication perfectly with prompting, or takes medication on their own, but misses occasionally)
    5. Almost always complies (Takes medication completely independently or compliantly) Not applicable

15. Cooperation with treatment providers. How frequently does the participant cooperate, e.g., with appts., complying with treatment plans, and following through on reasonable requests?
    1. Almost never cooperates (Does not cooperate at all with treatment plans or keep appointments)
    2. Infrequently cooperates (Non-compliant with treatment efforts; does not follow daily schedule, though may keep some appointments)
    3. Sometimes cooperates (Follows through some of the time with daily schedule or other treatment activities; is minimally involved in treatment planning)
    4. Usually cooperates (Usually keeps doctor's appointments and attends day programs on scheduled days; involved in treatment planning)

5. Almost always cooperates (Rarely misses appointments or scheduled activities, actively engaged in treatment planning/goal setting)

   Not applicable

16. Alcohol/drug abuse. How frequently does the participant abuse drugs and/or alcohol?
    1. Frequently abuses (Drug/alcohol dependence; daily abuse of alcohol or drugs which causes severe impairment of functioning; inability to function in community secondary to alcohol/drug abuse)
    2. Often abuses (Recurrent use of alcohol or abuse of drugs which causes significant effect on functioning)
    3. Sometimes abuses (Some use of alcohol or abuse of drugs with some effect on functioning)
    4. Infrequently abuses (Occasional use of alcohol or abuse of drugs without impairment)
    5. Almost never abuses (Abstinence; no use of alcohol or drugs during rating period)

17. Impulse control. How frequently does the participant exhibit episodes of extreme acting out?
    1. Frequently acts out (Frequent and/or severe acting out behavior; e.g., behaviors which could lead to criminal charges)
    2. Acts out fairly often (Impulsive acts which are fairly often and/or of moderate severity)
    3. Sometimes acts out (Some acting out behavior; moderate severity; at least one episode of behavior that is dangerous or threatening)
    4. Infrequently acts out (Maybe one or two lapses of impulse control; minor acting out, such as attention-seeking behavior which is not threatening or dangerous)
    5. Almost never acts out (No noteworthy incidents)

Appendix I: Study 1 Mediation Analyses - Coefficient Tables

Table 6

Coefficients of Effects - RPRS as Mediator (M_1) Between Fidelity to SMCM (X_1) and QOLI-20 at 9 months (Y_1)

		M_1						Y_1				
		RPRS at 4.5 mos.						QOLI-20 at 9 mos.				
		β	*B*	*SE*	*p*	*B 95% CI*		*β*	*B*	*SE*	*p*	*B 95% CI*
X_1 (fidelity at 4.5 mos.)	*a*	.16	0.64	0.22	.00	0.21, 1.08	c'_1	.05	0.20	0.18	.28	-0.16, 0.56
M_1 (RPRS at 4.5 mos.)		-		-	-	-	b_1	.10	0.10	0.05	.04	0.01, 0.20
constant			38.11	9.78	.00	18.86, 57.36		-	36.47	8.16	.00	20.41, 52.53
c_1 (age)		.13	0.18	0.08	.02	0.03, 0.32		-.01	-0.01	0.06	.88	-0.15, 0.10
c_2 (gender)		.11	3.98	1.98	.05	0.09, 7.88		-.01	-0.38	1.63	.82	-0.13, 0.11
c_3 (employment)		-.07	-3.74	2.92	.20	-9.48, 2.01		.03	1.45	2.38	.54	-3.24, 6.14
c_4 (education)		-.18	-1.6	0.48	.00	-2.55, -0.57		.07	0.58	0.42	.16	-0.24, 1.40
c_5 (housing)		.02	0.91	2.51	.72	-4.02, 5.84		-.09	-3.86	2.04	.06	-7.88, 0.15
c_6 (ACE)		.10	0.71	0.40	.07	-0.07, 1.50		.03	0.21	0.33	.53	-0.44, 0.85
c_7 (site)		-.17	-1.75	0.58	.00	-2.89, -0.62		-.04	-0.37	0.48	.44	-1.32, 0.58
c_8 (hospitalization)		-.02	-1.12	0.05	.01	0.03, 0.23		-.01	-0.72	2.75	.79	-6.13, 4.69
c_9 (baseline outcome)		.15	0.13	0.40	.07	-0.07, 1.50		.55	0.46	0.04	.00	0.38, 0.54
				$R^2 = .15$						$R^2 = .37$		
				F (10, 300) = 5.25 p =.00						F(11, 299) = 16.16 p = .00		

Notes. *β*= standardized coefficient; *B* = unstandardized coefficient; *SE* = standard error; *CI* = confidence interval; RPRS = Recovery Promoting Relationships Scale; QOLI-20 = 20-item Quality of Life Interview; ACE = adverse childhood experiences; SMCM = Strengths Model Case Management

Table 7
Coefficients of Effects - RPRS as Mediator (M_1) Between Fidelity to SMCM (X_1) and PGI at 9 months (Y_2)

		M_1						Y_2				
		RPRS at 4.5 mos.						PGI at 9 mos.				
		β	*B*	*SE*	*p*	*B* 95% CI		*β*	*B*	*SE*	*p*	*B* 95% CI
X_1 (fidelity at 4.5 mos.)	*a*	.16	0.63	0.23	.01	0.19, 1.07	c'_2	.04	0.18	0.26	.51	-0.34, 0.68
M_1 (RPRS at 4.5 mos.)		-		-	-	-	b_2	.10	0.11	0.07	.08	-0.02, 0.24
constant			45.86	9.32	.00	27.52, 64.21		-	20.77	11.01	.06	-0.90, 42.45
c_1 (age)		.12	0.17	0.08	.03	0.02, 0.32		-.05	-0.08	0.09	.36	-0.25, 0.09
c_2 (gender)		.12	3.84	2.00	.06	-0.10, 7.77		-.00	-0.15	2.29	.95	-4.65, 4.35
c_3 (employment)		-.06	-3.33	2.95	.26	-9.13, 2.48		-.01	-0.58	3.36	.86	-7.19, 6.02
c_4 (education)		-.19	-1.7	0.50	.00	-2.69, -0.71		-.06	-0.56	0.58	.34	-1.71, 0.59
c_5 (housing)		.03	1.25	2.53	.62	-3.73, 6.23		-.00	-0.04	2.88	.99	-5.70, 5.63
c_6 (ACE)		.13	0.93	0.40	.02	0.16, 1.71		-.04	0.28	0.45	.53	-0.60, 1.17
c_7 (site)		-.19	-1.92	0.59	.00	-3.08, -0.77		-.14	-1.55	0.68	.02	-2.89, -0.21
c_8 (hospitalization)		-.02	-0.93	3.41	.79	-7.64, 5.79		-.06	-4.11	3.88	.29	-11.74, 3.52
c_9 (baseline outcome)		.05	0.04	0.05	.38	-0.05, 0.14		.23	0.22	0.05	.00	0.12, 0.33
				$R^2 = .13$						$R^2 = .12$		
				F (10, 300) =4.58 p =.00						F (11, 299) = 3.84 p = .00		

Notes. *β*= standardized coefficient; *B* = unstandardized coefficient; *SE* = standard error; *CI* = confidence interval; RPRS = Recovery Promoting Relationships Scale; PGI = Patient Generated Index; ACE = adverse childhood experiences; SMCM = Strengths Model Case Management

Table 8
Coefficients of Effects - RPRS as Mediator (M_1) Between Fidelity to SMCM (X_1) and THS at 9 months (Y_3)

		M_1						Y_3				
		RPRS at 4.5 mos.						THS at 9 mos.				
		β	*B*	*SE*	*p*	*B 95% CI*		*β*	*B*	*SE*	*p*	*B 95% CI*
X_1 (fidelity at 4.5 mos.)	*a*	.17	0.67	0.22	.00	0.23, 1.12	c'_3	.03	0.07	0.10	.51	-0.14, 0.27
M_1 (RPRS at 4.5 mos.)		-		-	-	-	b_3	.05	0.03	0.03	.31	-0.03, 0.08
constant			37.90	9.86	.00	18.50, 57.31		-	28.79	4.60	.00	19.73, 37.84
c_1 (age)		.11	0.15	0.08	.05	-0.00, 0.30		.05	0.03	0.03	.33	-0.03, 0.10
c_2 (gender)		.11	3.78	1.98	.06	-0.12, 7.68		-.01	-0.26	0.91	.78	-2.05, 1.53
c_3 (employment)		-.07	-3.62	2.92	.22	-9.36, 2.12		.06	1.55	1.33	.25	-1.08, 4.17
c_4 (education)		-.19	-1.7	0.50	.00	-2.69, -0.72		.11	0.49	0.23	.04	0.03, 0.93
c_5 (housing)		.02	0.83	2.51	.74	-4.10, 5.77		-.04	-0.96	1.14	.40	-3.21, 1.29
c_6 (ACE)		.13	0.93	0.39	.02	0.16, 1.69		-.10	-0.37	0.18	.04	-0.72, -0.01
c_7 (site)		-.18	-1.83	0.57	.00	-2.96, -0.70		-.08	-0.43	0.27	.11	-0.95, 0.10
c_8 (hospitalization)		-.02	-1.01	3.38	.77	-7.65, 5.64		-.06	-1.82	1.54	.24	-4.85, 1.21
c_9 (baseline outcome)		.14	0.21	0.09	.01	0.04, 0.38		.48	0.38	0.04	.00	0.31, 0.46
				$R^2 = .15$						$R^2 = .29$		
				F (10, 300) = 5.20 p =.00						F (11, 299) = 11.26 p = .00		

Notes. *β*= standardized coefficient; *B* = unstandardized coefficient; *SE* = standard error; *CI* = confidence interval; RPRS = Recovery Promoting Relationships Scale; THS = Trait Hope Scale; ACE = adverse childhood experiences; SMCM = Strengths Model Case Management

Table 9
Coefficients of Effects - RPRS as Mediator (M_1) Between Fidelity to SMCM (X_1) and MCAS at 9 months (Y_4)

		M_1						Y_4				
		RPRS at 4.5 mos.						MCAS at 9 mos.				
		β	*B*	*SE*	*p*	*B 95% CI*		*β*	*B*	*SE*	*p*	*B 95% CI*
X_1 (fidelity at 4.5 mos.)	*a*	.17	0.70	0.22	.00	0.26, 1.14	c'_4	.10	0.13	0.07	.07	-0.01, 0.27
M_1 (RPRS at 4.5 mos.)		-		-	-	-	b_4	.16	0.05	0.02	.02	0.02, 0.09
Constant			29.40	12.89	.02	4.04, 54.76		-	38.05	4.13	.00	29.93, 46.17
c_1 (age)		.13	0.17	0.08	.02	0.03, 0.32		-.07	-0.03	0.02	.16	-0.08, 0.01
c_2 (gender)		.09	3.30	2.01	.10	-0.66, 7.26		.09	1.08	0.64	.09	-0.18, 2.34
c_3 (employment)		-.08	-4.17	2.98	.16	-10.03, 1.68		.05	0.81	0.95	.39	-1.06, 2.67
c_4 (education)		-.21	-1.86	0.51	.00	-2.86, -0.86		.04	0.14	0.16	.40	-0.19, 0.46
c_5 (housing)		.02	0.74	2.52	.77	-4.23, 5.71		.04	0.61	0.80	.45	-0.97, 2.19
c_6 (ACE)		.12	0.84	0.39	.03	0.07, 1.62		.01	0.02	0.13	.85	-0.22, 0.27
c_7 (site)		-.21	-2.14	0.57	.00	-3.27, -1.02		.07	0.26	0.19	.17	-0.11, 0.62
c_8 (hospitalization)		-.01	-0.80	3.39	.81	-7.47, 5.87		.00	-0.00	1.08	.99	-2.12, 2.12
c_9 (baseline outcome)		.11	0.27	0.14	.05	-0.01, 0.55		.42	0.36	0.05	.00	0.27, 0.44
				$R^2 = .14$						$R^2 = .28$		
				F (10, 300) = 4.92 p =.00						F (11, 299) = 10.36 p = .00		

Notes. *β*= standardized coefficient; *B* = unstandardized coefficient; *SE* = standard error; *CI* = confidence interval; RPRS = Recovery Promoting Relationships Scale; MCAS = Multnomah Community Ability Scale; ACE = adverse childhood experiences; SMCM = Strengths Model Case Management

Table 10
Coefficients of Effects - RPRS as Mediator (M_2) Between Fidelity to SMCM (X_2) and QOLI-20 at 18 months (Y_5)

		M_2						Y_5				
		RPRS at 13.5 mos.						QOLI-20 at 18 mos.				
		β	*B*	*SE*	*p*	*B 95% CI*		*β*	*B*	*SE*	*p*	*B 95% CI*
X_2 (fidelity at 13.5 mos.)	*a*	.17	0.63	0.21	.00	0.22, 1.05	*c'*$_5$	.01	0.06	0.21	.78	-0.36, 0.48
M_2 (RPRS at 13.5 mos.)		-		-	-	-	b_5	.12	0.14	0.06	.01	0.03, 0.26
Constant			42.17	9.58	.00	23.31, 61.03		-	41.66	9.89	.00	22.20, 61.12
c_1 (age)		.03	0.03	0.07	.65	-0.11, 0.17		.00	0.00	0.07	.95	-0.13, 0.14
c_2 (gender)		.16	5.22	1.81	.00	1.65, 8.78		-.04	-1.34	1.84	.46	-4.96, 2.27
c_3 (employment)		-.07	-3.45	2.67	.20	-8.70, 1.80		.00	0.11	2.68	.97	-5.16, 5.37
c_4 (education)		.06	-0.47	0.46	.31	-0.43, 1.37		-.03	-0.29	0.46	.52	-1.20, 0.61
c_5 (housing)		-.01	-0.60	2.29	.79	-5.11, 3.90		-.04	-1.85	2.29	.42	-6.35, 2.66
c_6 (ACE)		-.01	-0.06	0.36	.86	-0.78, 0.65		.08	0.58	0.36	.11	-0.13, 1.30
c_7 (site)		-.18	-1.83	0.57	.00	-2.96, -0.70		-.12	-1.22	0.52	.02	-2.24, -0.20
c_8 (hospitalization)		-.09	-4.86	3.08	.12	-10.92, 1.21		.04	2.74	3.10	.38	-3.35, 8.83
c_9 (baseline outcome)		.17	0.13	0.05	.00	0.04, 0.22		.46	0.42	0.05	.00	0.33, 0.51
			R^2 = .10						R^2 = .33			
			F (10, 300) = 3.07 *p* =.00						*F* (11, 299) = 13.19 *p* = .00			

Notes. *β*= standardized coefficient; *B* = unstandardized coefficient; *SE* = standard error; *CI* = confidence interval; RPRS = Recovery Promoting Relationships Scale; QOLI-20 = Quality of Life Interview; ACE = adverse childhood experiences; SMCM = Strengths Model Case Management

Table 11
Coefficients of Effects - RPRS as Mediator (M_2) Between Fidelity to SMCM (X_2) and PGI at 18 months (Y_6)

		M_2						Y_6				
		RPRS at 13.5 mos.						PGI at 18 mos.				
		β	*B*	*SE*	*p*	*B 95% CI*		*β*	*B*	*SE*	*p*	*B 95% CI*
X_2 (fidelity at 13.5 mos.)	*a*	.16	0.60	0.21	.01	0.18, 1.02	*c'₆*	.07	0.33	0.27	.21	-0.19, 0.86
M_2 (RPRS at 13.5 mos.)		-		-	-	-	b_6	.16	0.21	0.07	.00	0.07, 0.35
Constant			51.54	9.16	.00	33.51, 69.56		-	14.27	11.93	.23	-9.20, 37.74
c_1 (age)		.02	0.03	0.07	.71	-0.11, 0.17		-.07	-0.11	0.09	.21	-0.28, 0.06
c_2 (gender)		.16	5.09	1.84	.01	1.48, 8.70		.03	1.09	2.30	.64	-3.44, 5.62
c_3 (employment)		-.06	-2.82	2.70	.30	-8.14, 2.51		.04	2.18	3.36	.52	-4.43, 8.78
c_4 (education)		.04	0.32	0.46	.50	-0.59, 1.23		.04	0.38	0.57	.51	-0.75, 1.51
c_5 (housing)		-.01	-0.32	2.32	.89	-4.89, 4.24		.01	0.56	2.87	.84	-5.09, 6.22
c_6 (ACE)		.03	0.18	0.36	.62	-0.53, 0.88		.02	0.16	0.44	.71	-0.71, 1.04
c_7 (site)		-.15	-1.39	0.52	.01	-2.42, -0.36		-.23	-2.77	0.66	.00	-0.28, 0.06
c_8 (hospitalization)		-.08	-4.56	3.13	.15	-10.71, 1.59		.00	-0.00	3.88	.99	-7.65, 7.64
c_9 (baseline outcome)		.02	0.01	0.04	.75	-0.07, 0.10		.21	0.21	0.05	.00	0.11, 0.32
				$R^2 = .08$						$R^2 = .18$		
				F (10, 300) = 2.63 p =.00						F (11, 299) = 6.06 p = .00		

Notes. *β*= standardized coefficient; *B* = unstandardized coefficient; *SE* = standard error; *CI* = confidence interval; RPRS = Recovery Promoting Relationships Scale; PGI = Patient Generated Index; ACE = adverse childhood experiences; SMCM = Strengths Model Case Management

Table 12
Coefficients of Effects - RPRS as Mediator (M_2) Between Fidelity to SMCM (X_2) and THS at 18 months (Y_7)

		M_2						Y_7				
		RPRS at 13.5 mos.						THS at 18 mos.				
		β	*B*	*SE*	*p*	*B 95% CI*		*β*	*B*	*SE*	*p*	*B 95% CI*
X_2 (fidelity at 13.5 mos.)	*a*	.16	0.61	0.21	.00	0.20, 1.03	c'_7	.03	0.07	0.11	.52	-0.14, 0.27
M_2 (RPRS at 13.5 mos.)		-		-	-	-	b_7	.12	0.07	0.03	.02	0.01, 0.12
Constant			45.84	9.59	.00	29.96, 64.73		-	25.60	4.89	.00	15.96, 35.23
c_1 (age)		.01	0.01	0.07	.88	-0.12, 0.15		.09	0.06	0.03	.10	-0.01, 0.13
c_2 (gender)		.16	5.04	1.82	.01	1.45, 8.63		-.12	-2.10	0.91	.02	-3.88, -0.31
c_3 (employment)		-.07	-3.09	2.68	.25	-8.37, 2.19		.00	0.08	1.32	.95	-2.52, 2.68
c_4 (education)		.04	0.32	0.46	.49	-0.59, 1.22		-.02	-0.09	0.23	.71	-0.53, 0.36
c_5 (housing)		-.01	-0.58	2.31	.80	-5.12, 3.97		-.05	-1.11	1.14	.33	-3.34, 1.12
c_6 (ACE)		.03	0.17	0.36	.64	-0.53, 0.87		.01	0.03	0.18	.87	-0.32, 0.37
c_7 (site)		-.14	-1.27	0.52	.01	-2.28, -0.26		-.07	-0.36	0.26	.16	-0.87, 0.14
c_8 (hospitalization)		-.09	-4.68	3.11	.13	-10.79, 1.43		.02	-0.61	1.53	.69	-2.41, 3.62
c_9 (baseline outcome)		.11	0.15	0.08	.06	-0.01, 0.31		.43	0.33	0.04	.00	0.25, 0.41
			$R^2 = .09$						$R^2 = .25$			
			F (10, 300) = 3.00 p =.00						F (11, 299) = 9.22 p = .00			

Notes. *β*= standardized coefficient; *B* = unstandardized coefficient; *SE* = standard error; *CI* = confidence interval; RPRS = Recovery Promoting Relationships Scale; THS = Trait Hope Scale; ACE = adverse childhood experiences; SMCM = Strengths Model Case Management

Table 13
Coefficients of Effects - RPRS as Mediator (M_2) Between Fidelity to SMCM (X_2) and MCAS at 18 months (Y_8)

		M_2						Y_8				
		RPRS at 13.5 mos.						MCAS at 18 mos.				
		β	*B*	*SE*	*p*	*B 95% CI*		*β*	*B*	*SE*	*p*	*B 95% CI*
X_2 (fidelity at 13.5 mos.)	*a*	.17	0.65	12.34	.00	0.23, 1.07	c'_8	.00	0.00	0.08	.97	-0.16, 0.16
M_2 (RPRS at 13.5 mos.)		-		-	-	-	b_8	.12	0.05	0.02	.03	0.01, 0.09
Constant			35.64	12.34	.00	11.37, 59.92		-	48.10	4.71	.00	38.84, 57.37
c_1 (age)		.02	0.03	0.07	.68	-0.11, 0.17		-.08	-0.04	0.03	.15	-0.09, 0.01
c_2 (gender)		.14	5.60	1.84	.01	0.97, 8.22		-.03	-0.37	0.70	.59	-1.75, 1.01
c_3 (employment)		-.08	-3.73	2.72	.17	-9.09, 1.63		.03	0.61	1.03	.55	-1.41, 2.63
c_4 (education)		.02	0.17	0.46	.71	-0.74, 1.09		.09	0.30	0.18	.09	-0.05, 0.64
c_5 (housing)		-.02	-0.74	2.31	.75	-5.29, 3.81		-.05	-0.79	0.87	.36	-2.51, 0.92
c_6 (ACE)		.01	0.09	0.36	.81	-0.62, 0.79		.03	0.08	0.14	.54	-0.18, 0.35
c_7 (site)		-.17	-1.50	0.51	.00	-2.51, -0.50		.02	0.07	0.19	.15	-0.09, 0.01
c_8 (hospitalization)		-.08	-4.54	3.10	.14	-10.65, 1.56		.01	-0.26	1.17	.83	-2.56, 2.05
c_9 (baseline outcome)		.11	0.25	0.13	.05	-0.00, 0.50		.34	0.30	0.05	.00	0.20, 0.39
				$R^2 = .09$						$R^2 = .17$		
				F (10, 300) = 3.02 p =.00						F (11, 299) = 5.71 p = .00		

Notes. *β*= standardized coefficient; *B* = unstandardized coefficient; *SE* = standard error; *CI* = confidence interval; RPRS = Recovery Promoting Relationships Scale; MCAS = Multnomah Community Ability Scale; ACE = adverse childhood experiences; SMCM = Strengths Model Case Management

Appendix J

Study 2: Qualitative Semi-Structured Interview Protocol

Introductory Script:

Thank you for meeting with me to talk about this research. Its purpose is to understand people's experiences with case workers. Our hope is that the study will help to improve services and supports for people. The interview will take about an hour. It will be audio recorded and you will receive $20 for participating. Before we start, I will review the consent form with you and you can then decide whether or not you want to participate.

[Interviewer reviews consent form]

Do you have any questions before we begin?

[Any questions raised are answered and discussed. If consent is given, interviewer continues]

I am now going to start the recorder.

This is Maryann. It is [date]. This is interview number [insert] and the consent form has been signed.

Recovery-Promoting Relationships Scale

The following statements describe different aspects of the relationship people have with their workers. Please think of the relationship you have with [name of case worker] and choose the best response that describes your relationship.

1. My worker helps me recognize my strengths.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
2. My worker tries to help me see the glass as "half-full" instead of "half-empty."
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
3. My worker helps me put things in perspective.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
4. My workers helps me feel I can have a meaningful life.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
5. I have a trusting relationship with my worker.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
6. My worker helps me not to feel ashamed about my psychiatric condition.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
7. My worker helps me recognize my limitations.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
8. My worker helps me find meaning in living with a mental illness.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA

9. My worker helps me learn how to stand up for myself.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
10. My worker accepts my down times.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
11. My worker encourages me to take chances and try things.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
12. My worker reminds me of my achievements.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
13. My worker understands me.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
14. My worker tries to help me feel good about myself.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
15. My worker helps me learn from challenging experiences.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
16. My worker really listens to what I have to say.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
17. My worker cares about me as a person.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
18. My worker treats me with respect.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
19. My worker helps me feel hopeful about the future.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
20. My worker helps me build self-confidence.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
21. My worker sees me as a person and not just a diagnosis.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
22. My worker helps me develop ways to live with a mental illness.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
23. My worker has helped me understand the nature of my mental health condition.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA
24.My worker believes in me.
☐ Disagree ☐ Somewhat Disagree ☐ Somewhat Agree ☐ Agree ☐ NA

Dimensions and factors influencing the working relationship:

1. Thinking back over your relationship with your case worker, [insert name], how would you describe the relationship? Would you say it's:

   ☐Mostly good ☐Mostly bad OR ☐A bit of both

   If "mostly good":

   What's good about it?

   Probes: Is it something about what you do together? Something about how you get along together?

   You said "mostly good" but are there some things you would say are not good?

If "mostly bad":

What's bad about it?

Probes: Is it something about how they are? Is it something about what you do together? Something about how you don't get along together?

You said "mostly bad" but are there some things you would say are not bad?

If "a bit of both":

What's good about it?

Probes: Is it something about what you do together? Something about how you get along together?

What's bad about it?

Probes: Is it something about how they are? Is it something about what you do together? Something about how you don't get along together?

2. One thing I'm interested in is the connection you have with your case worker. By this I mean how close you are and how well you work together. Would you say you are:
   ☐Well-connected OR ☐Not well-connected?

   a. What makes a good connection?
      Probes: Is it correct to say that what you're referring to is [e.g. personal qualities / professional skills / things they do for you / ways they talk to you / choice you have]? Is that correct or not?

      You've mentioned three things: [name them]. Let's take some time to break these down a bit more.

      E.g. You mentioned _____. What do you mean by this? Can you give me an example of it?

   b. What are things that hinder a connection?
      Probes: Is it correct to say that what you're referring to is [e.g. personal qualities / professional skills / things they do for you / ways they talk to you / choice you have]? Is that correct or not?

      You've mentioned three things: [name them]. Let's take some time to break these down a bit more.

      E.g. You mentioned _____. What do you mean by this? Can you give me an example of it?

   c. Have you had another case worker before this one?
   d. If yes, what were the differences between them?

3. Thinking back over your time with your case worker, what, if anything, would you say has changed for you?
   Probes: Has something changed about you? About the people around you? About plans you have for yourself? About your ability to meet your needs and look after yourself?
   a. Was there something you and your case worker worked on together that brought about these changes, or not?

Questions related to Fidelity Scale:
Now I'm going to ask more specific questions about what case workers do with the people they're working with. We may or may not have already talked about these.

4. Where do you meet?
   a. Do you have choice over where you meet?
   b. How often do you meet? (weekly, less than weekly or not at all)
   c. Is where you meet this important to you?
   d. Does it have anything to do with your connection?

5. When you meet, what kinds of things do you talk about?
   a. Who gets to decide what you talk about?

6. Do you ever talk about strengths? It's okay if you don't. (Refer to Item 1 of RPRS)? By strengths I mean talents, skills, or resources.
   a. Can you give me an example of what this kind of conversation looks like? (An example of a conversation you might have had).
   b. Is there ever a sheet you complete?
   c. Would you say you talk about strengths some of the time, all of the time, or never?
   d. Is this an important focus to you?
   e. Do you think talking about strengths is related to change in your life?

7. Do you ever talk about your goals? It's okay if you don't. By goals I mean something you plan to achieve in your life.
   a. Can you give me an example of what this kind of conversation looks like? (An example of a conversation you might have had).
   b. Is there ever a sheet you complete?
   c. Would you say you talk about goals some of the time, all of the time, or never?
   d. Is this an important focus to you?
   e. Do you have choice around what goals to focus on?
   f. Does this play a role in your relationship with your worker?
   g. Do you think talking about goals is related to change in your life?

We are now at the end of the interview. Is there anything else you would like to add? Do you have any questions/suggestions/concerns you would like to share? Thank you for participating in the interview. I appreciate your willingness to share your experiences and thoughts. I am now turning off the audio recorder [Turn recorder off].