Moving research into clinical practice: Usage of Progress Monitoring measures

Gabriela Ionita

Department of Educational and Counselling Psychology

McGill University, Montreal

June 2014

A thesis submitted to McGill University in partial fulfillment of the requirements of the degree of Doctor of Philosophy in Counselling Psychology

Abstract

Progress Monitoring (PM) measures have been shown to provide clinicians with a number of benefits, including identifying clients who are not progressing or deteriorating in treatment, increasing the effectiveness of psychotherapy, and provide data for quality improvement purposes. This research examines the prevalence, challenges, and facilitators related to use of these measures. Study 1 is a national survey examining the usage of PM measures in Canada, the profiles of PM users and psychologists who are aware of PM measures, the PM measures commonly used, and other means that psychologists use to monitor clients' progress among 1,668 Canadian psychologists. Results suggest that 67% of psychologists were unaware of PM measures and only 12% of psychologists were using these measures. Profiles of psychologists who were aware and using PM measures are also presented. Findings indicate that psychologists not using PM measures tend to rely on clients' report of improvement, attainment of treatment goals, and clinical judgment as their top three methods of assessing client progress.

Study 2 examined the barriers and facilitators to the usage of PM measures. Survey results suggest that the top barriers for users, non-users and previous-users were limited knowledge, limitations in training, burden on clients, and concerns regarding additional work and time. Results point to a number of strategies for overcoming barriers; offering training in different formats, in extended time periods, and from colleague-to-colleague appear to be promising strategies. The top factors that initially motivated previous-users to use a PM measure are also presented. Participants for Study 2 were 1,668 Canadian Psychologists.

Study 3 examined challenges to the usage of PM measures using consensual qualitative methodology. Twenty-five clinicians were interviewed regarding challenges experienced with PM measures and advice to others considering the usage of PM measures. This research shows

that there is great variability in the challenges experienced and advice provided. The most commonly experienced challenges were negative responses from some colleagues or clientele, practical concerns, dissatisfaction with specific characteristics of the measures, and concerns regarding the measures fit with clientele, the therapists' philosophy, the organization/practice, or the services provided. Clinicians most commonly advised others that the presentation of the measures impact their reception, to be open when starting to use a PM measure, and to seek out support or supervision when using a PM measure.

Overall, these results show that few psychologists in Canada are applying PM measures in their practice and point to the need for efforts to move research regarding PM measures into practice. As such a large percentage of psychologists are unaware of these measures, the first step in the process will need to be aimed at increasing psychologists' awareness. However, since the data indicates that awareness does not always predict usage, specific steps towards increasing use will also need to be designed. By examining the user profile, barriers and challenges to usage, facilitators for increasing usage, and advice from clinicians, strategies can be identified for such a purpose. Based on this examination, a number of strategies seem to show promise, including offering training through workshops, making support accessible through supervision, online communities, or colleague-to-colleague, disseminating information about specific aspects of the measures, and integrating PM measures into clinical training programs.

Résumé

Les mesures de progrès psychothérapique (PP) ont démontré pouvoir fournir plusieurs avantages aux cliniciens tel que d'identifier les clients qui ne progressent pas ou qui se détériorent au cours du traitement, améliorer l'efficacité de la psychothérapie et fournir des données de qualité à des fins d'amélioration. Cette recherche examine la prévalence, les défis et les éléments facilitants de l'utilisation de ces mesures. L'étude 1 est une enquête nationale examinant l'utilisation des mesures PP au Canada, les profiles des utilisateurs de mesures PP et des psychologues qui sont conscientisés aux mesures PP, les mesures PP les plus communément utilisées, ainsi que d'autres moyens utilisés par les psychologues pour surveiller les progrès des clients parmi 1668 psychologues canadiens. Les résultats suggèrent que 67% des psychologues ne sont pas conscientisés aux mesures PP et que seulement 12% des psychologues les utilisent. Les profiles des psychologues conscientisés aux mesures PP et qui les utilisaient sont également présentés. Les résultats indiquent que les psychologues qui n'utilisent pas les mesures PP ont tendance à se fier aux indications des clients de leur propre amélioration et de l'atteinte de leurs objectifs de traitement, ainsi qu'à leur jugement clinique comme étant les trois méthodes les plus utilisées pour évaluer les progrès des clients.

L'étude 2 examine les obstacles et les éléments facilitant l'utilisation des mesures PP. Les résultats de l'enquête suggèrent que les obstacles principaux pour les utilisateurs, les non-utilisateurs et les anciens utilisateurs sont les connaissances limitées, les limites de la formation, le fardeau pour les clients, et les préoccupations à l'égard du travail et du temps additionnels. Les résultats indiquent un certain nombre de stratégies pour surmonter les obstacles; offrir de la formation sous différents formats, sur les périodes prolongées dans le temps, et entre collègues apparaîssent comme étant des stratégies prometteuses. Les éléments facilitants qui ont motivé au

départ les anciens utilisateurs à employer les mesures PP sont également présentés. Les participants de l'étude 1 et 2 étaient 1668 psychologues canadiens.

L'étude 3 examine les défis de l'utilisation des mesures PP en utilisant une méthodologie de concensus qualitatif. Vingt-cinq cliniciens ont été interviewés à l'égard des défis rencontrés avec l'utilisation des mesures PP et des conseils à donner à d'autres quant à l'utilisation des mesures PP. Cette recherche démontre qu'il y a beaucoup de variabilité dans les défis rencontrés et les conseils prodigués. Les défis les plus couramment rencontrés étaient les réponses négatives de certains collègues ou de la clientèle, des considérations pratiques, une insatisfaction en lien à des caractéristiques spécifiques des mesures, et des préoccupations à savoir si les mesures conviennent bien à la clientèle, la philosophie des thérapeutes, l'organisation/la pratique, ou les services prodigués. Les cliniciens ont souvent conseillé aux autres que la présentation des mesures avait un impact sur leur réception, à l'ouverture à utiliser les mesures PP, et à chercher du soutien ou de la supervision lors de l'utilisation des mesures PP.

Dans l'ensemble, les résultats démontrent que peu de psychologues au Canada appliquent les mesures PP dans leur pratique. Ceci indique le besoin de faire des efforts pour l'avancement des mesures PP dans la pratique. Étant donné qu'un grand pourcentage de psychologues est méconnaissant des mesures, la première étape dans le processus sera d'augmenter la conscientisation des psychologues. Cependant, comme les données indiquent que la conscientisation ne prédit pas toujours l'utilisation, des étapes spécifiques visant l'utilisation devront aussi être conçues. En examinant le profil des utilisateurs, les obstacles et les défis de l'utilisation, les moyens facilitants pour l'augmentation de l'utilisation, et les conseils entre cliniciens, des stratégies peuvent être identifiées à de telles fins. Basé sur cette étude, plusieurs stratégies se montrent prometteuses, incluant l'offre de formation à travers des ateliers, rendre le

soutien accessible – supervision, communauté en ligne, ou entre collègues, diffuser l'information à propos des aspects spécifiques des mesures, et l'intégration des mesures PP dans les programmes de formation.

Acknowledgements

I owe my deepest gratitude to Dr. Marilyn Fitzpatrick, who has been an incredible supervisor, mentor, and role model. She has continually inspired and supported me throughout my degree and helped spark my love for research and scholarship. Her belief in me gave me the confidence and motivation to take on this project, to constantly strive to excel in my work, and to face challenges in life head on. Without her guidance and persistent help this dissertation would not have been possible, nor would I be on my current path in life. I feel I have been incredibly lucky to have worked with her and I am indebted to her for her kindness, friendship, advice, humour and support.

I would like to thank my committee member, Dr. Martin Drapeau for all of his feedback, insight, expertise, and assistance with my dissertation. He has played a key role in making these studies possible. I would also like to acknowledge my committee member Dr. John Lyons for his support, encouragement, and thoughtful suggestions.

I would also like to extend my sincere gratitude to Jann Tomoro and Vivian Chan. Not only were they an essential part of the research team for the qualitative study, but their dedication, positive outlook, and enthusiasm made it a pleasure to get through any tasks together. Their hard work helped move this research forward, while their moral support kept me moving in the right direction.

A special thank you to the members of the McGill Psychotherapy Process Research Group, especially Terra Kowalyk for her assistance in organizing the database; Robin Grumet, Thea Comeau, and Megan Knoll for their assistance with editing; and Eric Morris for his friendship, support, and advice throughout my degree. I am also indebted to Julia Dimillo and Pascale Gendreau for their help with translating and editing the French version of the survey; to

Marie-Élaine Thibeault for her help translating the abstract; and to Ian Bercovitz for his statistical consultation. Thank you also to Jennifer Woo and Melanie Levy for their assistance in transcribing interviews. I am also grateful to Julia Dimillo and Kelly Stelmaszczyk for their support, friendship and many hours of debriefing.

I would like to express my appreciation to Dr. Scott Miller, Dr. Sue Eisen, staff at McLean Hospital, and the Ordre des psychologues du Québec for helping me access participants and to all of the clinicians who participated in these studies.

I am deeply grateful to Drs. Jack DeStefano, Laurel Townsend, Shirley Graham, Valentin Mbekou, and Luisa Camelli, for greatly contributing to my development as a clinician and to helping me understand the value of integrating research into practice and monitoring clients' outcomes.

None of this would have been possible without the inspiration and motivation provided by my family. My husband, Marius Purcel, has helped me persist in this great adventure. His unconditional love, commitment, and unwavering confidence gave me the strength and courage to follow my dreams. Having him by my side to get through the challenges and celebrate the victories has made this an incredible journey. My children, Tristan and Natalia Purcel who were both born during my doctoral degree, have given meaning to this work, as they give the deepest meaning to my life. I thank my parents who taught me to fight for what I want and provided many different forms of support to help make this work possible. To my brother, Mike Ionita whose humour and outlook on life have always helped balance me, I thank you for everything that you have done for me and for your support during my "edumacation". To my sister, Raluca Paraschiv I appreciate the listening ear you have always offered. To Lola and Radu Purcel, I am forever indebted to you for everything you have done to take care of us. I would have never

been able to get this work done without your love, kindness and support. Knowing that you were there to help allowed me to focus on getting this work done. To Anca and Ionut Imre, I wish you were closer, but even at a distance your love has always been a great support.

I would also like to thank my closest friends Paulo Matos, Tiffany Weiland, and Kirk Johnson for their encouragement and advice - you eased the challenges and kept me laughing. To Charlene Popovici, thank you for being one of the first to believe in me. I hope you know how much you have inspired me.

Contribution of Authors

The three manuscripts that comprise this dissertation are original scholarship and are co-authored. I am the first author on each, as I completed the literature reviews, designed the studies, collected and analyzed the data, and wrote the dissertation in its entirety. The first manuscript, published in Canadian Psychology, is co-authored by Dr. Marilyn Fitzpatrick. The second manuscript is co-authored by Drs. Fitzpatrick and Martin Drapeau. The third manuscript is co-authored by the team of researchers involved in the consensual qualitative research (CQR) methodology involved in this study - Dr. Marilyn Fitzpatrick, Louise Overington, Vivian Chan, and Jann Tomaro.

My doctoral supervisor, Dr. Fitzpatrick, contributed to the conceptualization of the dissertation, the formulation of research questions, the design of the survey used in Study 1 and Study 2 and provided editorial assistance for all three manuscripts. She also provided training on CQR methodology and served as an auditor for Study 3. My committee member, Dr. Drapeau assisted in the design and translation of the survey used in Study 1 and Study 2, and provided editorial comments on all three manuscripts. In regards to the CQR team, Louise Overington served as an auditor; Vivian Chan and Jann Tomaro were active in the consensus process required for CQR.

This research was made possible in part by a bourse de formation de doctorat en formation (doctoral fellowship) from Le Fonds de la Recherche en Santé Québec.

Table of Contents

List of Tables

List of Abbreviations

APA	American Psychological Association
BASIS	Behavioral and Symptom Identification Scale
BHL	Behavioral Health Laboratories
BHM	Behavioral Health Measure
CBT	Cognitive Behavioural Therapy
CIHI	Canadian Institute for Health Information
CIHR	Canadian Institute of Health Research
CORE	Clinical Outcome in Routine Evaluation
CPA	Canadian Psychological Association
D/P	Doctoral and post-doctoral degree
DSO	Deteriorating Suicide Outcomes
EBP	Evidence Based Practice
HMO	Health Maintenance Organizations
ISO	Improved Suicide Outcomes
KT	Knowledge Translation
KTA	Knowledge-to-Action Framework
M/D	Master's degree and diploma
MPPRG	McGill Psychotherapy Process Research Group
NOT	Not on Track
Non-users	Clinicians who do not use PM measures
NREPP	National Registry of Evidence-Based Programs and Practice
OPR	Ordre des psychologues du Québec
OQ	Outcome Questionnaire
ORS	Outcome Rating Scale
OT	On Track
PCOMS	Partners for Change Outcome Management System
PM	Progress Monitoring
Polaris-MH	Polaris Mental Health
Previous-user	Clinicians who have used PM measures in the past
RCI	Reliable Change Index
SAMHSA	Substance Abuse & Mental Health Services Administration
SPSS	Statistical Package for the Social Sciences
TEAM	Treatment Evaluation and Management System
TOP	Treatment Outcome Package
Users	Clinicians who use PM measures

Introduction

For psychotherapy to be effective, clinicians need to be able to recognize when their clients are not progressing as expected in therapy to adjust treatment to client needs. One evidence-based method of detecting clients who are not progressing or deteriorating in treatment is through the use of progress monitoring (PM) measures (i.e., Finch, Lambert, & Schaalje, 2001; Lunnen & Ogles, 1998). Aside from identifying clients who need extra attention, these measures have been shown to improve outcomes (e.g., Lambert & Shimokawa, 2011), increase treatment efficiency (e.g., Lambert, Hansen, & Finch, 2001; Lambert & Vermeersch, 2008; Whipple et al., 2003), and provide data for quality improvement purposes (e.g., Behavioral Health Laboratories, 2003). This research examines the prevalence, barriers, and facilitators related to the use of PM measures.

Chapter 1 presents a review of the literature on PM measures, including their benefits, the use of these measures in Canada and the United States, and a model for increasing evidence-based practices. This literature review provides the rational for Study 1, Study 2, and Study 3 and concludes with an overview of the research questions each study will address.

Chapter 2 is a study that examines: the usage of PM measures in Canada, profiles of PM users and those aware of PM measures, PM measures commonly used, and other means that psychologists use to monitor clients' progress. Implications for practicing clinicians are discussed. Chapter 3 is a study that examines the barriers and facilitators to the usage of PM measures from the perspective of current users, past users and those not using PM measures. Implications for practicing clinicians are again discussed. Chapter 4 is a qualitative study that uses consensual qualitative research methodology to examine the challenges faced by users of PM measures and the advice users would offer to those considering PM. Chapter 5 summarizes

the research, explores the connections between studies, and discusses the overall contributions to knowledge of the three studies, including limitations and directions for future research. Tables, figures, and appendices are presented at the end of each study. A complete reference list follows the concluding chapter.

Chapter 1

Using Progress Monitoring Measures to Increase the Effectiveness of Psychotherapy

Empirical support for the general effectiveness of psychotherapy has been well established for some time (Lambert, 2013; Smith, Glass & Miller, 1980). However, not all clients respond to psychotherapy in the same manner and there is evidence that some people do not benefit. For example, Mohr (1995) presented a review of 41 studies that contained data on negative outcomes. Not including case studies, the percentage of clients who did not improve or worsened ranged from 1-3% to 80%. More recently, Lambert and Ogles (2004) reviewed studies on the efficacy and effectiveness of psychotherapy and found a relatively consistent rate of 5% to 10% deterioration. Although a causal relationship between psychotherapy and deterioration cannot be determined from the studies in these reviews, the results suggest that there are some clients entering therapy who are not benefitting from the service that they are receiving and others who may deteriorate because of it. Considering the resources invested into psychotherapy by practitioners, clients and, third-party payers, these results highlight a problem that warrants attention.

To focus on finding ways to provide clients who do not benefit with more effective psychotherapy, practitioners first need to be able to identify when clients are not responding to treatment. In routine practice, practitioners usually rely on their clinical judgment to monitor client response (Gard, 2003; Stewart & Chambless, 2010). However, evidence suggests that practitioners are not very good at predicting response, especially when it is negative. For example, in a study examining practitioners' ability to identify clients who were not progressing in therapy, Hannan and colleagues (2005) found that, although therapists were informed that the deterioration rate of their clinic had been at 8% over the past year, practitioners only identified 3

out of 550 clients (0.54%) as potential treatment failures at the beginning of therapy; they were only accurate in one of those cases. Further, practitioners were only able to identify 5 of the 26 participants who actually experienced deterioration during the course of therapy as measured by the Outcome Questionnaire-45 (OQ-45; Lambert et al., 1996). Hatfield, McCullough, Frantz, and Krieger (2010) conducted two studies to examine practitioners' abilities to detect client deterioration. They measured practitioners' identification of deterioration by reviewing clients' chart notes for the mention of deterioration. Seventy charts of clients who had scores on the OQ-45 that indicated client deterioration (14 or more points higher on the OQ-45 than their intake score) were examined. Therapists had access to the scores, but did not receive systematic feedback on client severity (i.e., no alerts that clients had worsened were provided). They found that only 15 (21.4%) charts mentioned the client's deterioration. They then examined the charts of 41 clients who had more extreme deterioration (a negative change on the OQ-45 by at least 30 points). They found that only 13 (31.7%) charts mentioned the client's deterioration. The results of these studies suggest that clinical judgment may not be sufficient to accurately identify clients who are deteriorating during treatment.

Predicting Change Using PM

One method that can help practitioners identify when clients are not responding or are deteriorating in therapy is the use of Progress Monitoring (PM) measures (see Duncan, 2012; Halstead, Youn, & Armijo, 2013; McAleavey, Nordberg, Kraus, & Castongay, 2012; Sundet, 2012). PM measures allow practitioners to assess clients' outcomes throughout the course of treatment. These measures have been referred to as the "optimal outcome measure" (Barkham et al., 2001, p. 177), the "Swiss Army Knife" of psychotherapy (Kane, 1987); they are short and are easily carried into practice, while still having enough "blades and attachments to fit any number

of circumstances" (Barkham et al., 2001, p. 177). A few examples of PM measures are the Outcome Questionnaire-45 (OQ-45; Lambert et al., 1996), the Clinical Outcome in Routine Evaluation-Outcome Measure (CORE-OM; Barkham et al., 2001), the Treatment Outcome Package (TOP; Kraus, Seligman, Jordan, & Behavioral Health Laboratories, Inc., 2005), the Polaris-MH formerly known as the Treatment Evaluation and Management System (TEAM; Grissom, Lyons, & Lutz, 2002), the BASIS-32 (Eisen, Dill, & Grob, 1994), and the Outcome Rating Scale (ORS; Miller, Duncan, Brown, Sparks, & Claud, 2003) which is a part of the Partners for Change Outcome Management System (PCOMS; Miller, Duncan, Sorrell, & Brown, 2005). All of the measures considered above are fairly short, atheoretical, have good reliability and high validity, and are sensitive to change, and provide information regarding functioning and symptoms (Lueger & Barkham, 2010). They also appear to have been fairly well accepted by clinicians and practitioners when used (Barkham et al., 2001; Finch, Lambert, & Schaalje, 2001) and work in most private settings.

To generate information regarding the progress of a specific client from session to session, these measures have been used with dosage curves. Dosage curves illustrate the relationship between the number of psychotherapy sessions and outcome. Howard, Kopta, Krause, and Orlinsky (1986) first designed dosage curves using probit analyses to aggregate results from 15 studies (N = 2,431). The resulting curves represented the relationship between number of sessions and improvement using a variety of improvement criteria. They indicated a negatively accelerating pattern; the largest improvements occurring at the beginning of treatment. Further, analyses revealed that patients with specific diagnoses (i.e., depression, anxiety, and borderline personality disorder) had differential responsiveness to treatment, leading to different curves. Thus, a client's expected course of progress in treatment and outcome

involves a great deal of variability based on the symptoms and diagnosis of the client (Howard, Moras, Brill, Martinovich, & Lutz, 1996). This variability appears to be captured by dosage curves.

To create dosage curves that could be used with a PM measure, improvement was operationally defined using the reliable change index (RCI) and other principles related to clinical significant methodology (calculation procedures are outlined in Jacobson and Truax, 1991). Lunnen and Ogles (1998) examined the utility of the RCI as a marker of improvement. Participants were 52 outpatient clients who completed the OQ-45, 8 therapists, and 39 partners of clients. Measures of improvement were the Patient Questionnaire to assess client perceived change, the Therapist Questionnaire (Strupp, Fox, & Lessler, 1969) to assess therapist perceived change, the Helping Alliance Questionnaire (Alexander & Luborsky, 1986) to assess the alliance, and the Client Satisfaction Questionnaire to assess client and partner satisfaction. The RCI for the OQ-45 was used to separate clients into three groups: those deteriorating, improvers, and no-changers. Results indicated that improving clients had significantly lower scores from those who were deteriorating on measures of client perceived change, client perceived alliance, therapist perceived change, and therapist perceived alliance and significantly lower scores from those who experienced no change on measures of client alliance, client perceived change and therapist perceived change. These results indicate that the RCI can signal clinically significant improvement (i.e., client and therapist perceived improvement).

Finch and colleagues (2001) generated dosage curves that could be used with the OQ-45 to assess clients' level of progress in treatment. Participants were 11,492 psychotherapy clients who had completed the OQ-45 during treatment. Clients' scores were separated into 50 groups (minimum of 220 participants in each group) based on the percentile of their intake scores. The

researchers established different recovery curves for each group and calculated tolerance intervals, which allowed for the identification of the 10% of clients in each group whose rate and trajectory was significantly different from what would be expected based on their intake score. Tolerance intervals were then used to create a warning system that could indicate when a client was beginning to deviate (68 - 80% tolerance interval) or was significantly deviating (90% tolerance interval) from what would be expected based on intake score.

Barkham and colleagues (1996) also created dosage curves. Participants (N = 1,868) were psychotherapy clients who had completed the CORE during their treatment. Results indicated that the dosage curve - representing the relationship between clients' improvement and number of psychotherapy sessions - did not follow the expected negatively accelerating pattern (i.e., found in Howard et al., 1986). Instead the dosage curves followed a slope that appeared to be more or less linear. This pattern has been labeled the Good Enough Model and has been used in combination with the CORE.

The advantage of establishing dosage curves and RCIs for individual instruments is that it allows practitioners to compare their client's progress against established progress norms. Algorithms are used to help practitioners identify clients who are progressing as expected or not meeting recovery expectations (Finch et al., 2001). In this way an early alert system can be in place for predicting and identifying failure to progress.

Using recovery expectations, Hannan and colleagues (2005) examined the ability of OQ-45 to predict treatment failure in 492 clients. They found that the OQ-45 was able to identify all 36 (100%) clients who experienced deterioration at termination, 86% of whom were identified by the third session. Deterioration was defined as a negative change of 14 points or more on the OQ-45 between the beginning and end of therapy. They also found that the OQ-45 was able to

correctly predict 82% of the participants who experienced a positive outcome in therapy; producing a false negative rate of 18% (i.e., predicting clients would have a negative outcome when they actually had a positive outcome). Others have also combined the Polaris-MH with expected treatment curves and a RCI (Grissom & Lyons, 2006). Creators of the other popular PM measures – including the ORS (Miller et al., 2006) and the TOP (Kraus & Castonguay, 2010) - have also designed their measures to signal clinical concern or provide warnings of client deterioration based on a reliable change index. Identifying deteriorating clients and clients who are not progressing allows practitioners to focus their attention on modifying their practice so as to alter a negative course (Lambert & Vermeersch, 2008).

Improve Outcomes for Deteriorating Clients

Not only do PM measures help practitioners identify when clients are not progressing as expected, but research suggests that the clients of practitioners who receive feedback, have better outcomes than when no feedback is given. Lambert and Vermeersch (2008) combined the results of five feedback studies of the OQ-45 (with between 201 and 1374 clients each); clients whose therapists received feedback had significantly better outcomes than clients whose therapists did not. When focusing on the clients that had been signaled as not on track (NOT), 20% of NOT clients in the no feedback condition experienced deterioration, while only 15% of the NOT clients in the feedback condition experienced deterioration even though the feedback did not provide suggestions for improving treatment (Finch et at., 2001).

Miller and colleagues (2005) examined the impact of using the PCOMS to provide client progress feedback to practitioners. Data were collected from 6,424 clients over a period of two years. They found that the effect size of treatment significantly increased from $ES = .37$ to $ES = .79$ after the PCOMS was introduced. Reese, Toland, Slone and Norsworthy (2010) also

examined the impact of providing practitioners with PCOMS feedback to the therapists of 46 heterosexual couples who were assigned to either the feedback condition (client's therapist received feedback on the clients progress; $n = 54$) or the control condition (treatment as usual; $n = 38$). The results demonstrated that significantly more clients in the feedback condition (65%) experienced clinically significant change than in the control condition (31.6%). Bohanske and Franczak (2010) also examined the impact of feedback by examining client-rated outcome data from clients prior to the PCOMS and 18 months after implementation at a community agency with 1500 psychotherapy clients. After the PCOMS was implemented, there was an increase of more than 20% in client-reported successful completion.

Meta-analytic findings further support the effectiveness of PM. A meta-analysis examining the effectiveness of the PCOMS aggregated the results of three studies and found that clients in the feedback condition tended to be better off than approximately 68% of clients in the no feedback condition (Lambert & Shimokawa, 2011). The odds of experiencing reliable improvement between clients in the feedback conditions and clients in the no feedback condition, was 3.5 times greater. A meta-analysis of three studies examining the effectiveness of using the OQ-45 with trainees and experienced therapists (with 609 to 1020 clients per study), found that although, trainees had a higher percentage of deteriorating clients than experienced therapists (25.5% versus 20.6%), trainees who received feedback had clients who experienced better outcomes at termination than trainees who did not receive feedback (Lambert et al, 2003).

A recent, meta-analysis of six studies (Shimokawa, Lambert, & Smart, 2010) re-analyzed data ($N = 6,151$) for clients not progressing as expected; those in the feedback condition tended to be better off than 70% of clients in the no feedback condition. When examining clinical significance at termination, 38% of clients in the feedback condition experienced

improvement and 9% experienced deterioration; in the no feedback condition, 22% of clients experienced improvement and 20% of clients deteriorated. Clients in the feedback condition had less than half the odds of deteriorating and 2.6 times higher odds of improving compared to those in the no feedback condition.

Hawkins, Lambert, Vermeersch, Slade, and Tuttle (2004) examined the impact of providing OQ-45 feedback to 715 clients of five practitioners randomly assigned to one of the following three conditions: treatment as usual, feedback to practitioner only, and feedback to practitioner and client. Providing feedback to practitioners and clients, whether the clients were not on track or progressing as expected, led to significantly better outcomes. Clients also reported a strong interest in receiving feedback regarding their progress in therapy.

Taken together, the results of these studies suggest that using feedback measures (i.e., the PCOMS and the OQ-45) to provide feedback to clinicians, to trainees, and perhaps to clients, can lead to improved outcomes. No studies have yet been conducted with the CORE or the TOP to evaluate the effects of providing feedback on client outcomes (Lambert & Vermeersch, 2008) as these two systems have focused more on the administrative use of data (i.e., benchmarking). The BASIS-32 also appears to have been used extensively for administrative purposes (i.e., benchmarking); it has won several awards in outcome and quality assessment (McLean Hospital, 2002). The benefits of such administrative applications will be discussed in the section on quality improvement.

In summary, PM measures have the potential to help practitioners identify when clients are not responding favourably to therapy and to improve these outcomes. Thus, it seems that these measures are able to help practitioners achieve one of their main goals – providing effective therapy to clients who are in need of services. A number of other benefits resulting

from the use of these measures have also been identified, including time and cost effectiveness, quality evaluation through benchmarking, and closing the gap between research and practice.

Time and cost effectiveness. Lambert and Vermeersch (2008) found that in four of five studies, NOT clients in the feedback condition remained in treatment two to three sessions longer than NOT clients in the control condition. These results suggest that the OQ-45 may help NOT clients from dropping out of therapy prematurely. In addition, clients who were on track and had therapists who received feedback generally had *fewer* therapy sessions than OT clients whose therapists did not receive feedback indicating that the OQ-45 can help reduce the number of sessions provided to on-track clients without reducing the effectiveness of therapy. As all PM measures have the potential to be used to provide feedback, other measures might also increase the efficiency of psychotherapy by offsetting the cost of having NOT clients remain in therapy longer with the cost of having on track clients remain in therapy for less time.

Bohanske and Franczak (2010) examined the potential cost and time effectiveness of implementing the PCOMS at two community behavioural health organizations. A pilot study was conducted at one of the facilities by introducing the PCOMS into routine practice. Results indicated that attendance rates rose dramatically. Prior to implementation, only 16% of clients attended all scheduled sessions; four months after implementation, 92% of clients attended all scheduled sessions. At the completion of the pilot, two more sites began using the PCOMS and no-show appointments dropped by 70%. In addition, in-home services were reduced from 150 to 90 days. The study was expanded to 1500 clients over an 18-month period and indicated a decrease of approximately 3 months in the length of stay in programs. These results suggest that using the PCOMS can decrease cancellation and no-show rates, reduce the time that clients require services, and decrease demands on organizational resources.

Most of the popular PM measures have centralized scoring systems and take little time to administer. The OQ-45, which takes less than 5 minutes to complete (Lambert et al., 1996), is combined with the OQ-Analyst software that allows clients to: 1) enter data electronically (Smith, Glass & Miller, 1980; computer terminal), 2) record data on scan-able paper, or 3) complete a paper version with manual data entry by clerical staff (OQ Measures, 2014). Scoring is completed by the system and feedback is provided within 3 to 5 seconds (OQ Measures, 2014). The TOP is connected with the Behavioral Health Laboratories (BHL) Inc, which can provide a feedback report to practitioners within 16 minutes of receiving data by fax and 3 seconds of receiving data by computer. The TOP also provides practitioners the option of computer administration, thus eliminating time costs related to data entry (BHL, 1992). The Polaris-MH, which takes less than 15 minutes to administer (Grissom et al., 2002), provides multiple-choice questions to clients on a personal computer. Data are immediately analyzed and feedback is provided to practitioners in the form of a detailed report (Grissom & Lyons, 2006). The BASIS-32, which takes 5 to 10 minutes to administer (Lambert & Hawkins, 2004), is combined with McClean BASIS plus, which provides a computer system intended to provide immediate feedback to practitioners and offers the possibility for custom analysis and reporting based on an organization's unique needs (McLean Hospital, 2002). The PCOMS, which includes the ORS and SRS, takes less than 2 minutes to administer (Miller et al., 2005) and is linked with MyOutcomes for the purpose of administration, scoring and interpretation (Miller, 2014).

Quality evaluation through benchmarking for organizations. PM measures can also offer quality evaluation features that can be used to compare across districts, organizations, practitioners and clients. These comparisons have been called benchmarking (Lueger &

Barkham, 2010). Inter-state or inter-province differences in outcomes can be examined. For example, the Behavioral Health Laboratories (BHL, 2003) used the TOP to examine inter-state differences in depression outcomes across 18 states over an 18-month period (between 1999 and 2001). Georgia, North Carolina, and Michigan had the highest levels of improvement in depression symptoms when compared to the other states, while Utah, Pennsylvania, and Ohio had the lowest levels. The authors argued that such results can highlight where efforts to improve services need to be directed. Data can also be compared to national averages so that a province or state can assess its progress. For example, TOP data collected from 23,000 clients in Washington between 2000 and 2001 were compared to the national averages and showed that panic treatment outcomes were relatively lower in Washington than the national standard. Through these kinds of comparisons, governments can identify where resources need to be allocated for maximum benefits.

Similarly, organizations can assess the quality of the different services that they provide (Barkham, Hardy, & Mellor Clark, 2010; Barkham et al., 2001; Lueger & Barkham, 2010). For example, the examination of TOP data from an outpatient organization suggested that the primary clinical problem treated was suicide symptoms, but that the level of client improvement in this area was below the national average. The organization was significantly above the national average on all other scales. Knowing where the main challenge is located highlights how to focus quality improvement strategies.

The CORE system, developed in Great Britain, has also been designed to provide such benchmarking information to organizations. It uses a graphical indicator in the form of a thermometer, with different colours and levels representing different levels of performance relative to national benchmarks. Scores falling within the green, upper quartile, where the top

25% of scores lie, suggest that an organization is offering high quality services, while scores in the red, lower quartile, where the lowest 25% of scores lie are considered to indicate low quality services (Barkham et al., 2010). Organizations can use this visual information to flag service deficiencies and rationalize requests for resources for areas such as training and skill development (Lueger & Barkham, 2010).

Quality evaluation through benchmarking for practitioners. Practitioners can use feedback measures to assess the effectiveness of their services relative to national benchmarks. For example, Brown, Lambert, Jones, and Minami (2005) were able to identify 71 highly effective practitioners (out of 281 practitioners) using PM measures. These highly effective practitioners had clients who experienced more change during therapy and had better outcomes at termination as compared to the rest of the practitioners. Okiishi and colleagues (2006) were able to use the OQ-45 to identify the top and bottom 10% of practitioners at a large university counselling center (employing 149 therapists). From a researcher standpoint, this information offers the possibility of studying the variables differentiating effective from ineffective therapists (Okiishi et al., 2006).

However, using such categories is likely to intimidate practitioners who fear being categorized as ineffective. Because even highly effective practitioners have vulnerabilities and deficits (Castonguay et al., 2010), it may be more useful to focus on identifying unique strengths and weaknesses, which is not only less intimidating but also more helpful in highlighting the skills and training areas in which practitioners could pursue continuing education.

PM systems such as the CORE or the TOP (Kraus et al., 2005), allow for case-mix adjustments. By statistically correcting outcomes using variables known to correlate with treatment outcomes (Lueger & Barkham, 2010), client variables such as comorbidity, distress

level, chronicity, previous exposure to therapy, medical conditions, and demographic variables can be considered in the results. While these are variables that are not within the control of the practitioner, they still influence outcome (Goldfield, 1999). Thus, the information can help direct practitioners in the treatment they provide.

Quality evaluation through benchmarking for clients. PM measures can also be used to identify clients who respond favorably to treatment and those who do not. For example, BHL (2003) compared the characteristics of clients who had improved suicide symptom outcomes (ISO) to the characteristics of clients who had deteriorating suicide symptom outcomes (DSO). They found that there were significantly more males (67%) than females (33%) in the DSO group, while there were significantly more females (65%) than males (35%) in the ISO group. They also found that DSO clients had fewer panic symptoms than other clients, and that clients in the ISO group reported more panic symptoms than other clients. The authors argue that these results can be used to create a profile to identify clients that tend to have the worst suicide outcomes so that practitioners can target those clients and provide them with additional interventions.

Thus, using PM measures for benchmarking has the potential to improve the quality of treatment provided through: 1) identifying specific practitioner needs for further skills and training; 2) identifying specific areas for resources allocation; and 3) identifying high responder and low responder clients for specialized intervention.

Reducing the research-practice gap. PM measures seem to have the potential to reduce the gap that exists between research and practice. In 1949, the Scientist-Practitioner or Boulder Model became the official training model in the field of psychology. This model proposes that training in research and in clinical practice should receive equal focus in the development of

psychologists (Barlow, 1981; Lau, Ogrodniczuk, Joyce, & Sochting, 2010; Sauer & Huber, 2007; Vespia & Sauer, 2006), and aims to create professionals who can integrate both science and clinical practice into their work (Vespia & Sauer, 2006). Although critics have argued that this goal is unrealistic and unattainable (Sauer & Huber, 2007), the CPA (2005) endorses the integration of science and practice through the Scientist-Practitioner Model or the Scholar-Practitioner Model. Thus, the intertwining of research and practice is the ideal. However, there is an extensive practice-research gap (Newnham & Page, 2010).

The gap was documented as early as 1961 (Barlow, 1981) and continues to be discussed as a major problem in psychology (Castonguay, Locke, & Hayes, 2011). Investigators argue that research has almost minimal impact on clinical practice (Barlow, 1981; Beutler, Williams, Wakefield, & Entwistle, 1995; Castonguay et al., 2011; Goldfried, Borkovec, Clarkin, Johnson, & Parry, 1999), while practitioners claim that researchers are not very interested in naturalistic or 'real-world' therapy and that research that has little relevance to them (Beutler et al., 1995; Goldfried et al., 1999).

In an attempt to minimize the gap between research and practice, the Canadian Psychological Association and American Psychological Association encourage psychologists to use *evidence-based practices*. Evidence-based practice involves the continuous monitoring of client progress (APA, 2005; CPA, 2012; Dozois et al., 2014). Thus, the application of PM measures fits within these policies. The application of feedback from the OQ-45 and the PCOMS has been accepted into the U.S. Substance Abuse & Mental Health Services Administration's (SAMHSA) National Registry of Evidence-Based Programs and Practices (NREPP; SAMHSA, 2014) as an evidence-based practice. Thus, PM measures can provide

practitioners with practice-based evidence grounded in solid research. By using PM data in routine practice, practitioners begin to close the gap between research and practice.

Progress Monitoring Measures in Canada

Results from a limited number of studies, mostly in the USA (Hatfield & Ogles, 2004), suggest that the majority of practitioners do not use outcome measures in routine practice. In 1998, a survey of 15918 psychologists (who all paid a special assessment fee to the American Psychological Association) included an item to assess the use of outcome measures in routine practice. Only 21% of respondents actually used outcome measures in their practice although they paid the fee (Phelps, Eisman, & Kohout, 1998). A survey of 539 social workers, psychologists, psychiatrists, counselors and other mental health practitioners who served adolescents in Pennsylvania found that only 23% of respondents used standardized outcome measures (Bickman, Rosof-Williams, Salzer, & Summerfelt, 2000)). Hatfield and Ogles (2004) surveyed 874 randomly selected members of the American Psychological Association regarding their use of outcome measures and barriers to the use of outcome measures. Only 37% used outcome measures of any kind. Gard (2003) also surveyed 175 mental health workers: 92% psychologists and found that while 55% of practitioners used outcome measures, only 14% used them on a regular basis.

These results suggest that most practitioners in the USA do not use outcome measures regularly. Since there are numerous differences between the American and Canadian context, (Bowman, 2000), generalizing these results to Canada may be problematic. Canada and the USA have different national organizations and health care policies, which likely impact the usage of outcome measures in practice. For example, Canada has universal health care that generally does not cover psychotherapy expenses, while many Americans have private insurance

through Health Maintenance Organizations (HMOs) that does cover psychotherapy services; only 17% of clients pay for psychotherapy services themselves in the USA (Olfson & Marcus, 2010). Thus, HMOs exert substantial control on the practice of psychotherapy including the requirement that psychotherapists document outcomes. Canadians, on the other hand, often pay privately or through group insurance for psychotherapy so insurance companies have not had such an influence on the practice of psychotherapy.

Only one study has assessed the usage of formal progress monitoring among Canadian psychologists. A survey of 269 psychologists working with adult clientele found that 33% of psychologists were using these measures (Westmacott, 2011). Although this survey provides some information, the study only examined psychologists working with adult clients and had a small sample. The broader usage of these measures remains unclear.

Applying a Knowledge Translation Strategy to PM Measures Implementation

Since the proportion of practitioners using these measures appears to be low, strategies for moving research into practice are needed to increase usage among psychologists. This process has been extensively studied. In 2006, there were 29 different terms for the process of moving knowledge to practice (Graham et al., 2006). *Knowledge Translation* is a term that has been integrated into the mandate of the Canadian Institutes for Health Research (CIHR), the federal funding agency for health research in Canada. According to the CIHR (2004), KT is broad concept that includes all steps between the creation of knowledge and its use in practice. It is defined as "the exchange, synthesis and ethically-sound application of knowledge – within a complex system of interactions among researchers and users – to accelerate the capture of the benefits of research for Canadians through improved health, more effective services and products, and a strengthened health care system" (CIHR, 2005, p. 1). The CIHR asserts that the

KT process should involve bringing together creators and users of knowledge throughout the research cycle, not only in the application of results, a process known as Integrated KT. Integrated KT implies interactions between knowledge creators and users that are symmetrical and reciprocal. Earlier linear conceptions of KT were based on, top-down relations from creators to users; researchers conducted research and then attempted to get practitioners to apply the research in their day-to-day practice. Some have argued that asymmetrical relationships have not been effective in closing the gap between research and practice. Symmetrical interactions are expected to reconcile the differences between researchers and practitioners so that they can work together to conduct and implement research, thereby minimizing the gap between research and practice (Baumbusch et al., 2008).

Knowledge-to-Action (KTA) Framework

One Integrated KT model that has gained a great deal of attention and has been adopted by the CIHR for KT activities (CIHR, 2005) is the Knowledge-to-Action Framework (KTA; Graham et al., 2006). This framework was created based on an analysis of constructs involved in 31 planned action theories of KT in general (Graham & Tetroe, 2007) and is the only framework that has been tested as a model of planning and evaluating KT strategies (Ward, Smith, Carruthers, House, & Hamer, 2010). The KTA model is divided into two parts: knowledge creation and knowledge application. Knowledge creation is represented by a knowledge funnel where information moves through the funnel, growing more relevant to stakeholders as it becomes more developed and specific. The funnel consists of three phases: the knowledge inquiry (including large numbers of primary studies), the knowledge synthesis (involving aggregated knowledge, for example systematic reviews, meta-analysis, and meta-synthesis) and the knowledge tools/products phase (involving tools aimed at facilitating the use of knowledge,

for example practice guidelines). The knowledge application part of the model refers to a seven phase action cycle involving: 1) the problem identification and the critical appraisal of the knowledge that is available; 2) the adaptation of knowledge to the local context; 3) assessing for potential barriers and facilitators; 4) selecting, planning and executing interventions; 5) monitoring the use of knowledge; 6) examining the impact that the implementation of knowledge has had; and 6) maintaining the knowledge use (Graham et al., 2006).

The KTA model was selected to guide the long-term efforts of moving information regarding PM measures into practice. The research discussed in this review suggests that PM measures can help practitioners recognize when clients are not progressing in therapy and can lead to better outcomes for their clients. This provides evidence to suggest that reducing the number of clients who do not respond positively to psychotherapy (*the problem*: Step 1) could be resolved by increasing practitioners' use of PM measures (*knowledge selection*: Step 2). Although there will likely always be more room for research at the knowledge creation level, the literature pointing to the benefits associated with the usage of these measures seems convincing enough for steps to be taken towards knowledge application. Thus, this project will be contextualized within the "action cycle" of the model, mainly on providing a picture of the current condition, identifying barriers and facilitators, and considering interventions. Based on the KTA framework's emphasis on the involvement of practitioners within research, an underlying goal of this research will be to give practitioners a voice to express their opinions, concerns, and experiences regarding the usage of PM measures.

Research Questions

One objective of this research is to examine the actual usage of PM measures by psychologists in Canada, which in KTA terms will improve problem identification. As part of

the barriers assessment and selecting strategies phases, another main objective of this research is to conduct an assessment of the barriers and challenges to using PM measures. Finally the studies will contribute to selecting strategies to increase knowledge use by assessing for potential facilitators to increasing the usage of PM measures from the perspective practitioners. The research will be conducted in three studies: Study 1 (usage of PM measures), Study 2 (barriers and facilitators to implementation), and Study 3 (challenges to use and advice from the perspective of PM users).

The first study will address the following research questions: 1) How many clinicians use PM measures? 2) What is the profile of PM measure users? 3) Which PM measures are being used? 4) What means of monitoring client progress are being used by clinicians who do not use PM measures?

The second study will examine the barriers and facilitators to the usage of PM measures among users profiled in Study 1. It will also examine barriers and facilitators to the usage of PM measures for psychologists who have stopped using PM measure (previous-users) and those who have never used these measures (non-users). Users will be asked about the barriers they experienced in implementing the measures and how they overcame their most challenging barriers. Previous users will be asked about the facilitators that were initially salient and the factors that led them to stop using PM measures. Non-users will be asked about barriers to PM use and the facilitators that they would need to become users.

The third study will further examine challenges involved in using PM measures and report on advice that practitioners believe is relevant to others considering the usage of PM measures. Qualitative methodology will be used in this study to frame practitioners' individual experiences and opinions in a way that mirrors clinical understanding. The following research

questions will be addressed: 1) what challenges to PM usage have users experienced? 2) What advice do users believe is relevant to others considering PM measure use?

Chapter 2

Bringing Science to Clinical Practice: A Canadian Survey of Psychological Practice and Usage of Progress Monitoring Measures

Gabriela Ionita and Marilyn Fitzpatrick, McGill University

Author Note

Gabriela Ionita and Marilyn Fitzpatrick, Department of Educational and Counselling Psychology, McGill University.

This research was supported by a grant from Fonds de la recherche en santé du Québec.

The authors would like to thank Jann Tomaro, Vivian Chen, Julia Dimillio, and members of the McGill Psychotherapy Process Research Group (MPPRG), especially Terra Kowalyk, Louise Overington, Thea Comeau, Jack DeStafano, Pascale Demers and Martin Drapeau for their help during the development as well as the Ordre des psychologues du Québec for disturbing surveys in Quebec.

Correspondence concerning this article should be addressed to Gabriela Ionita, Department of Educational and Counselling Psychology, McGill University, Montreal, Quebec. E-mail: gabriela.ionita@mail.mcgill.ca

Abstract

This national survey investigated the clinical practice of psychologists in Canada with particular reference to the usage of Progress Monitoring (PM) measures. Data from 1'668 registered psychologists were collected on demographic characteristics, years of experience, years since graduation, degree, professional activities, primary clientele, theoretical orientations as well as familiarity with PM measures, usage of PM measures, and usage of other methods to monitor client progress. Survey results indicated that more than two-thirds of psychologists were unfamiliar with PM measures and only 12% of psychologists were using these measures. Profiles of psychologists based on awareness and usage of PM measures are presented. Implications for practicing clinicians are discussed.

Keywords: progress monitoring (PM) measures; outcome assessment; evidence-based practice; psychotherapy; clinical practice; science; evidence-based practice; EBP.

Deterioration rates in psychotherapy are estimated in the 5% to 10% range (Lambert & Ogles, 2004). When combining rates of clients who do not improve and those who worsen, the rate has been estimated as high as 80% (Mohr, 1995). These results suggest that there are some clients engaging in psychotherapy who are not benefitting from the service they are receiving and others who may deteriorate because of it (for a review, see Hunsley, Elliott, & Therrien, 2014). Considering the resources invested into psychotherapy by practitioners, clients, and third-party payers, these results highlight a problem in need of attention. To find ways to provide clients with more effective treatment, practitioners need to be able to identify those clients who are not responding well to treatment. In routine practice, practitioners usually rely on their clinical judgment to monitor clients' response to treatment (Gard, 2003; Stewart & Chambless, 2010). However, evidence suggests that practitioners are not very good at identifying clients who are not progressing in therapy (e.g., Hatfield, McCullough, Frantz, & Krieger, 2010) or at predicting clients' response, especially when it is negative (e.g., Hannan et al., 2005).

One method to help practitioners identify when clients are not responding or are deteriorating is Progress Monitoring (PM) measures (see Duncan, 2012; Fitzpatrick, 2012; Halstead, Youn, & Armijo, 2013; McAleavey, Nordberg, Kraus, & Castongay, 2012; Sundet, 2012). These measures are used at regular intervals to systematically assess clients' response to psychotherapy during treatment (Overington & Ionita, 2012). The following are a few examples of these measures: the Outcome Questionnaire-45 (OQ-45; Lambert et al., 1996), the Clinical Outcome in Routine Evaluation-Outcome Measure (CORE-OM; Barkham et al., 2001), the Treatment Outcome Package (TOP; Kraus, Seligman, Jordan, & Behavioral Health Laboratories, Inc., 2005), the BASIS-32 (Eisen, Dill, & Grob, 1994), and the Partners for Change Outcome Management System (PCOMS), which includes the Outcome Rating Scale (ORS; Miller,

Duncan, Sorrell, & Brown, 2005). Research has shown that PM measures can be used to monitor change in clients (i.e., Finch, Lambert, & Schaalje, 2001: Lunnen & Ogles, 1998), so that clients who are not progressing as expected in sessions can be identified (Finch et al., 2001). PM measures can also be used effectively to predict client deterioration, sometimes as early as the third session (Hannan et al., 2005). Identifying deteriorating clients, especially early in the treatment process, allows practitioners to focus their attention on modifying their work with that client to alter a negative course (Lambert & Vermeersch, 2008). Numerous studies have found that when feedback from PM measures is given to practitioners, clients who are not responding well to therapy experience significantly better outcomes than when no feedback is given (Lambert & Shimokawa, 2011; Lambert & Vermeersch, 2008; Shimokawa, Lambert, & Smart, 2010) with effect sizes between .23 (PCOMS) and .25 (OQ system with not-on-track clients; Lambert & Shimokawa, 2011). The effect sizes reported by studies examining feedback versus treatment as usual have typically exceeded the effect sizes of other widely advocated evidence-based practices (Lambert, 2013). Thus, it seems that these measures are not only able to identify those clients who are not responding well to treatment, but using the feedback from the measures can also help practitioners increase the effectiveness of the therapy they are providing.

In addition, the measures tend to relate to therapist and client assessments of important therapeutic variables. Lunnen and Ogles (1998) compared 52 adult outpatient clients' (presenting with a range of diagnoses) scores on one PM measure - the OQ-45- with their scores on the following measures: 1) the Patient Questionnaire; 2) the Therapist Questionnaire (Strupp, Fox, & Lessler 1969); 3) the Helping Alliance Questionnaire (Alexander & Luborsky, 1986); and 4) the Client Satisfaction Questionnaire. Clients' scores on the OQ-45 were used to separate clients into three groups: deteriorating, improving, and no-change. Improving clients had significantly

lower scores than deteriorating clients on measures of client perceived change, client perceived alliance, therapist perceived change, and therapist perceived alliance. Further, clients in the improving group had significantly lower scores than those experiencing no change on measures of client alliance, client perceived change, and therapist perceived change. These results indicate that clients' scores on the OQ-45 can successfully signal client and therapist perceived improvement.

PM measures can also improve time and cost efficiency, permit quality evaluation through benchmarking, and provide clinicians with an evidence-base for treatment. In terms of effective time usage, research on the OQ-45 has found that when clinicians use this measure, clients who are not progressing as expected are less likely to drop out of therapy prematurely (Lambert & Vermeersch, 2008), while clients who are responding well to treatment require fewer sessions (Lambert, Hansen, & Finch, 2001; Whipple et al., 2003). Similarly, the PCOMS (Miller et al., 2005; see also Duncan, 2012) has been found to decrease treatment length for clients who are progressing by approximately 3 months, as well as reduce cancellation and no-show rates (Bohanske & Franczak, 2010). This allows clinicians to invest their valuable resources where they will make the most impact on clients.

PM measures can also be used to compare the data of different jurisdictions, organizations, practitioners and clients (i.e., benchmarking; Lueger & Barkham, 2010), so that the quality of psychotherapy can be evaluated and resources for quality improvement can be efficiently allocated. For example, examining inter-state or inter-province differences or comparing regional data to national averages can help locate where efforts to improve services need to be directed and highlight the processes that contribute to optimal performances (Behavioral Health Laboratories (BHL), 2003). Similarly, organizations can assess the quality of

the different services that they provide (Barkham, Hardy, & Mellor Clark, 2010; Barkham et al., 2001; Lueger & Barkham, 2010) to identify service deficits and provide data-based rationales for the resources needed to improved service quality. Individual practitioners can use feedback measures to assess the effectiveness of their services and skills relative to national benchmarks (Brown, Lambert, Jones, & Minami, 2005; Minami et al, 2008; Okiishi et al., 2006; see also Sales & Alves, 2012). This information can help practitioners to specialize their services in areas of excellence or to seek training to strengthen areas that are problematic. Lastly, PM measures can be used to compare the characteristics of clients who improve to those who do not. For example, BHL (2003) was able to use the Treatment Outcome Package (TOP; Kraus, Seligman, Jordan, & BHL, 2005; McAleavey et al., 2012) to identify clients who responded poorly to treatment. This allowed practitioners to target specific clients and provide them with specialized interventions to improve outcomes.

In effect, PM measures provide the means for clinicians to make their practice more evidence based. With data tailored to each client, practitioners have relevant research evidence to combine with clinical expertise in the moment-to-moment client interaction. This practice aligns with the CPA and APA emphasis on the need for continuous monitoring of client progress as part of evidence-based practice (EBP; APA, 2006; CPA, 2012; Dozois et al., 2014). Further, using feedback from two PM measures (OQ-45, PCOMS) has been designated as evidence based practice and these measures have been added to the US Department for Health and Human Services: Substance Abuse and Mental Health Services Administration's (SAMHSA, 2013) National Registry of Evidence-based Programs and Practices (NREPP). The measures help clinicians engage in evidence-based practice across different theoretical orientations and treatments.

Current Use of PM

Studies to date examining the extent to which practitioners use outcome measures suggest that the majority of practitioners do not use measures in routine practice (Bickman, Rosof-Williams, Salzer, & Summerfelt, 2000; Gard, 2003; Hatfield & Ogles, 2004; Phelps, Eisman, & Kohout, 1998). For example, Hatfield and Ogles (2004) found that 37% of practitioners in their American sample used some form of outcome measures. Gard (2003) found that only 14% of practitioners surveyed used outcome measures on a regular basis. These results suggest that a large percentage of practitioners in the USA do not use outcome measures regularly.

Due to the numerous differences between the American and Canadian context, practices in Canada may be different (Bowman, 2000) and generalizing these results to Canada may be problematic. More specifically, Canada and the USA have different health care policies and different national organizations, which likely influences the use of outcome measures in these two countries. For example, Canada has universal health care, while many Americans have private insurance through Health Maintenance Organizations (HMOs). HMOs exert substantial control on psychotherapy practice including the regular requirement that psychotherapists document outcomes. Only 17% of clients seeking psychotherapy services pay for the services themselves in the USA (Olfson & Marcus, 2010). Canadians, on the other hand, often pay privately or through group insurance for treatment so insurance companies have not had such an impact on psychotherapy treatment.

To our knowledge, only one study has examined the usage of formal progress monitoring among psychologists in Canada: Westmacott (2011) found that 81 (33%) of the 269 psychologists surveyed reported they often or always used formal progress monitoring. Although this survey provided a glimpse into the usage of PM measures in Canada, the small

sample surveyed was limited to psychologists working with adult clients. The broader use of PM measures remains unclear.

The aim of the current study was to examine the usage of PM measures by Canadian clinicians and to identify the characteristics of clinicians most likely to use these measures. More specifically, the first goal was to gather information on PM users so that a profile of users could be created. Creating such a profile will allow us to identify who needs to be targeted in efforts to increase the usage of PM measures and shed some light on factors influencing the usage of these measures. The second goal was to examine what PM measures are being used and the means of monitoring client progress being used by clinicians who do not use PM measures.

Method

Participants

Between April and December 2012, 4'615 Canadian psychologists were invited to complete an online survey. The initial sample consisted of 1'724 participants. Only responses from registered psychologists were included, resulting in a final sample of 1'668 registered Canadian psychologists (approximately 10% of all psychologists in Canada). Representation in the sample was fairly proportional to national representation: 53 (3.2%) participants were from British Columbia, 100 (6.0%) were from Alberta, 58 (3.5%) were from Saskatchewan, 23 (1.4%) were from Manitoba, 534 (32.0%) were from Ontario, 808 (48.4%) were from Quebec, 79 (4.7%) were from New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland, and the Northwest Territories (the data for these were combined due to low base rates), and 11 (0.7%) listed more than one province or territory. The large percentage of psychologists from Quebec reflects the larger proportions of practitioners in that province.

Measure

A survey on the usage of PM measures was developed as part of a larger study. This survey was uploaded into Qualtrics, a web-based tool for creating and distributing surveys (Qualtrics, 2012) and pilot-tested with 12 English-speaking and 6 French-speaking psychologists and graduate students. Adjustments were made to the survey based on concerns and suggestions of pilot participants.

The survey items were created based on existing surveys of psychological practice (Hatfield & Ogles, 2004; Hunsely & Lefebvre, 1990; Ronson, Cohen, & Hunsley, 2011; Warner, 1991) and from the literature on progress monitoring. The first section of the survey involved demographic questions and questions related to professional practice. Participants were also asked to rate (along a continuum) the extent to which they applied 11 theoretical orientations in their practice, to select their primary clientele and primary source of income and indicate whether they were involved in a variety of professional activities (e.g., supervision). The next section presented a definition of progress monitoring measures, which was similar to that presented by Overington and Ionita (2012): "This survey will ask you a number of questions about Progress Monitoring (PM) measures. These measures are used to carry out continuous assessment of client change and to give the clinician systematic feedback about treatment response. In contrast to pre-post assessments, PM measures are completed by the client on a routine basis and feedback is provided to the clinician throughout the therapeutic process." Participants were provided with a few examples of PM measures and asked if they had heard of PM measures prior to completing the survey. Participants who responded affirmatively were asked if they were currently, or had ever used, a PM measure. Participants who reported they were using a PM measure were asked to list the PM measure they used. All participants who

reported they were not currently using a PM measure were asked to place a mark along a continuum to indicate the degree to which they relied on seven different methods of monitoring client progress, including clinical judgment, observations of the client, client's report of improvement, attainment of treatment goals, standardized measures (not PM measures), feedback from others (e.g., employer, significant other, friends, etc.), and other.

Procedures

Psychologists' email addresses were gathered from the websites of the regulatory bodies of psychologists and from the Canadian Register of Health Service Providers in Psychology. Email addresses were compiled into a database of 1739 psychologists from Quebec and 2876 psychologists from the other provinces and territories. Email invitations were created to invite psychologists to participate in a survey on monitoring client progress in psychotherapy, including a brief description of the study, a link to the survey (French-version of the survey was also provided to psychologists in Quebec), and a section informing potential participants that they will be entered in a draw for three $100 gift certificates from Amazon to thank them for their participation. Emails were personalized and sent directly to psychologists except in Quebec where the college of psychologists (Ordre des psychologues du Québec) sent email invitations to its members. Following the initial invitations, three follow-up emails, at two-week intervals, were sent to psychologists whose emails were included in the database. The survey response rate was calculated for surveys sent directly to psychologists. The rate was 37.3%, slightly above the average response rate (36%) for online surveys (Sheehan, 2006). Survey data were downloaded into one large database in the Statistical Package for the Social Sciences (SPSS) version 21 for analyses.

The dataset was examined for missing data using guidelines provided by Enders (2010). The rates of missing data were low (<4%). To examine categorical data, Chi-square contingency tables were used. If the assumption for an expected count of ≥ 5 in all cells was not met, responses were regrouped as described below. Since the assumption for normality was violated for all continuous data, Kruskal Wallis and Mann-Whitney U tests were applied. A significance value of $p < .01$ was set to minimize error rates related to multiple comparisons.

Results

Demographic data

Approximately two-thirds of participants were female and the most prevalent age groups were 41-50 years (24.3%) and 51-60 years (29.6%; see Table 1 for all demographic information). Participants had an average experience level of 18.46 years (*SD* = 10.97; *Range* = 0 – 53 years) since graduation from their highest degree, which tended to be either a master's (47.3%) or a doctoral degree (41.9%). In regards to practice characteristics, over one-quarter of participants reported practicing psychotherapy between 5-10 years. In practice, registered psychologists provided an average of 16.92 hours of psychotherapy per week, most commonly to adults (reported by 60.1% of psychologists), and most commonly received payment directly from the client (62.7%).

The majority of registered psychologists reported they combined five or more theoretical orientations in their practice, of which Cognitive Behavioural Therapy was rated as the most influential theoretical orientation (*M* = 51.68; *SD* = 30.98), followed by Humanistic (*M* = 34.52; *SD* = 31.92), Dynamic (*M* = 27.21; *SD* = 30.59), Experiential (*M* = 24.13; *SD* = 29.49), Other (*M* = 22.81; *SD* = 35.51), Eclectic (*M* = 22.64; *SD* = 35.50), Behavioural (*M* = 22.29; *SD* = 28.80),

Existential (M = 16.89; SD = 26.44), Narrative (M = 15.63; SD = 24.79), Systemic (M = 15.00; SD = 25.18), and Interpersonal/Relational (M = 4.14; SD = 16.38).

How many Canadian clinicians use PM measures?

Results indicated that over two-thirds of registered psychologists (67.4%; n = 1124) were unfamiliar with PM measures prior to the survey; 14.5% (n = 242) reported they were aware of PM measures but had never used them, 6.1% (n = 101) reported they had quit using a PM measure, and 12.1% reported they were using a PM measure at the time of the survey.

What is the profile of clinicians using PM measures?

Due to the large percentage of psychologists who were unaware of PM measures, two separate profiles were examined: a profile of participants who were simply aware of PM measures and a profile of participants who were currently using a PM measure. To create a profile of aware psychologists, differences between those aware of PM measures (hereafter: aware) and those unaware (hereafter: unaware) were analyzed. To create a profile of users, differences between those currently using PM measures (hereafter: users) and those not using the measures but aware of them (hereafter: non-users) were examined.

Language. When examining the language in which participants completed the survey, there was a significant difference in regards to awareness (χ^2[1, N = 1668] = 67.95, p = .000). Participants who completed the survey in English (41.5%) were more likely to be aware than participants who completed the survey in French (22.5%). Participants who completed the survey in English (43.9%) were also significantly more likely to be users than participants who completed the survey in French (22.3%; χ^2[1, N = 1668] = 23.81, p = .000).

Primary clientele. Data regarding psychologists' primary clientele did not meet the assumption for expected cell counts for a Chi-square analysis. Because most of the popular PM

measures are designed for use with adult clients (Overington & Ionita, 2012), primary clientele data were regrouped to form two new groups: adults (including younger adults, adults, and older adults) and other (including children, families, couples, groups, and organizations). Psychologists primarily working with adults (33.9%) were significantly more likely to be aware of PM measures than those working primarily with other clientele (26.9%; χ^2[1, N = 1604] = 7.17, p = .007). Similar results were found in regards to usage; psychologists primarily working with adults (39.2%) were significantly more likely to be using PM measures than those working primarily with other clienteles (21.2%; (χ^2[1, N = 519] = 9.96, p = .002).

Source of payment. Participants were asked to select one of nine primary payment sources for psychotherapy. When awareness and usage was examined across the nine groups, results indicated that source of payment was not a significant predictor of being aware of or using PM measures (χ^2[1, N = 1601] = 16.31, p = .038, χ^2[1, N = 517] = 9.57, p = .296, respectively). Because these measures can be efficiently used to communicate evidence of client's progress to third-party payers, it was believed that participants who were paid by a third party might be more likely to use PM measures. To examine this possibility, sources of payment were regrouped into 1) third party payment and 2) no payment or direct payment from client. Results indicated that psychologists receiving payment from a third party (38.2%) were significantly more likely to be *aware* of PM measures than those receiving no payment or direct client payment (30.0%; (χ^2[1, N = 1574] = 9.96, p = .002). However, they were not significantly more likely to be *using* PM measures (χ^2[1, N = 509] = 1.58, p = .208).

Years since graduation. A Mann-Whitney *U* test was used to examine whether years since graduation was related to awareness or usage of PM measures. Results indicated that aware psychologists had significantly fewer years since graduation than unaware psychologists

(the average ranks for aware and unaware psychologists were 763.39 and 858.24 respectively; U = 265,259.50, z = -3.78, p = .000, r =-.092). There was no significant difference in the number of years since graduation between users and non-users (U = 31,576.50, z = -1.09, p = .276).

Education. Since psychologists' educational level did not meet the assumption for expected cell counts for a Chi-square analysis, data were regrouped into two groups: 1) master's degree and diploma (hereafter: M/D) and 2) doctoral and post-doctoral degree (D/P). We found that participants with D/P (40.4%) were significantly more likely to be aware of PM measures than participants with M/D (24.0%; χ^2[1, N = 1667] = 50.77, p = .000). D/P (41.0%) were also significantly more likely to be using PM measures than participants with M/D (29.5%); χ^2[1, N = 544 = 7.00, p = .008).

Sex. There was a significant difference in awareness between males and females; males (37.6%) were more likely to be aware than females (30.2%; χ^2[1, N = 1665] = 9.20, p = .002). No significant sex difference was found between users and non-users (χ^2[1, N = 543] = 4.64, p = .031).

In examining the demographic data for males and females, it was found that more males completed a doctoral or post-doctoral degree (330) than a master's degree or diploma (221). We hence examined whether there was a significant relationship between sex and level of education. Results indicated there were significantly more males with doctoral or post-doctoral degrees (59.9%) than females (49.0%; χ^2[1, N = 1664] = 17.73, p < .001). This result led us to believe that sex differences found in awareness could potentially be better accounted for by differences in the level of education of males and females; to examine this possibility, we ran chi-square analyses at each level of education. Sex differences in awareness became non-significant when separate analyses were conducted for M/D (χ^2[1, N = 789] = 2.65, p = .103) and D/P (χ^2[1, N =

875] = 2.85, p = .092). These results suggest that psychologists' level of education may be a confounding variable in the relationship between psychologists' sex and awareness.

Professional activities. Results indicated that participants involved in research (44.9%; χ^2[1, N = 1657] = 33.65, p = .000), teaching (43.4%; χ^2[1, N = 1657] = 30.67, p = .000), supervision (41.4%; χ^2[1, N = 1657] = 34.22, p = .000), and administration (45.8%; χ^2[1, N = 1657] = 36.72, p = .000) were significantly more likely to be *aware of* PM measures than those not involved in these activities (research = 29.0%, teaching = 28.8%, supervision = 27.4%, or administration = 31.7%).

In regards to usage, participants involved in supervision (57.5%; χ^2[1, N = 540] = 7.08, p = .008) and administration (52.1%; χ^2[1, N = 540] = 12.86, p = .000) were significantly less likely to be *using* a PM measure than those not involved in these activities (supervision: 68.5%; administration: 68.3%). Involvement in research and teaching was not a significant predictor of usage (research: χ^2[1, N = 540] = .50, p = .481; teaching (χ^2[1, N = 540] = 2.36, p = .124).

Theoretical orientations. When examining psychologists' theoretical orientations (Cognitive Behavioural, Behavioural, Psychodynamic, Humanistic, Existential, Experiential, Systemic, Narrative, Interpersonal/Relational, Eclectic, and Other), participants who were *aware* of PM measures were significantly more influenced by the following theoretical orientations: Cognitive Behavioural, Behavioural, Experiential, Systems, and Eclectic than those unaware of PM measures (see table 2 for results). Further, users (mean rank = 295.40) were significantly more likely to endorse eclecticism (U = 29,466.50, z = -2.94, p = .003, r =-.126), than non-users (mean rank = 257.41). No other significant differences were found between groups.

The number of years psychologists practiced psychotherapy (awareness: χ^2[1, N = 1659] = 0.73, p = .395; χ^2[1, N = 541] = 1.67, p = .196) and the number of weekly hours psychologists

were engaged in providing therapy (awareness: $U = 292{,}823.50$, $z = -0.729$, $p = .466$; usage: $U = 31{,}913.00$, $z = -1.06$, $p = .288$) were not significant predictors of awareness or usage of PM measures.

Which PM measures are Canadian psychologists using?

Participants using PM measures were asked to list all of the measures they used to routinely monitor client progress during the course of treatment (see Table 3 for PM measures endorsed by five or more participants). An examination of these responses ($n = 177$) showed that the most commonly reported PM measure was the Outcome Rating Scale (part of the Partners for Change Outcome Management System; Miller, Duncan, Sorrell, & Brown, 2005; Duncan, 2012; $n = 51$, 28.8%), closely followed by the Outcomes Questionnaire (e.g., Outcome Questionnaire-45; Lambert et al., 1996; $n = 47$, 26.6%). Other measures endorsed by five or more participants included: BASIS (e.g., Behavioral and Symptom Identification Scale-24; Eisen, Normand, Belanger, Spiro & Esch, 2004; $n = 11$; 6.2%), Depression Anxiety Stress Scales (Lovibond & Lovibond, 1993; $n = 7$, 4.0%), Working Alliance Inventory (Horvath & Greenberg, 1989; $n = 6$; 3.4%), Symptom Checklist-90 (Derogatis, 1994: $n = 6$; 3.4%), and Beck Scales and Inventories (e.g., Beck Depression Inventory; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961; $n = 6$, 3.4%). Over one quarter of respondents (n = 49, 27.7%) reported they were using more than one measure and approximately 11% ($n = 20$) of respondents did not specify a measure, but reported they used a "variety" of measures to monitor client's progress; a further 5% ($n = 9$) reported they had created their own PM measure.

How do non-users monitor client's progress?

Participants who were not currently using a PM measure were asked to indicate on a continuum the extent to which they relied on the following seven means of monitoring clients'

response to therapy: clinical judgment, observations of the client, client's report of improvement, attainment of treatment goals, standardized measures (not PM measures), feedback from others (e.g., employer, significant other, friends, etc.), and other. Responses to these questions were not mutually exclusive; percentages could exceed 100% when combined.

Participants who were not using a PM measure at the time of the survey reported they relied on clients' report of improvement and attainment of treatment goals as their top two methods of assessing client progress (see Table 3 for means and standard deviations for monitoring methods). When examining specific groups of non-users, an examination of the means indicates that participants who were unaware of PM measures (unaware group) rated clinical judgment and client reported improvement as their top two methods of monitoring client progress. Participants in the previous-users (who quit using a PM measure) and those in the never-used group (aware of PM measures but had never used them) both rated client report of improvement and attainment of goals as their top two methods.

Kruskal-Wallis Tests were used to examine whether there were significant differences between the three groups of non-users (unaware, quit, and never-used groups) in the extent to which they applied different methods of monitoring clients' progress in treatment. Results suggested that there were significant group difference in regards to usage of clinical judgment, observation of the client, client report of improvement, attainment of treatment goals, standardized measures, and feedback from others (see table 4 for chi-square values and mean ranks).

To examine for post-hoc paired group differences, Mann-Whitney tests were run with a Bonferroni adjusted p value of 0.017. Results suggested that unaware participants were significantly less likely than participants in the quit or never-used group to rely on clinical

judgment (U = 47,858.00, z = -2.63, p = .009, r = -.075, U = 110,048.50, z = -4.68, p = .000, r = -0.126, respectively), observations of clients (U = 44,225.00, z = -3.70, p = .000, r = -0.106, U = 107,955.00, z = -5.05, p = .000, r = -0.148, respectively), client report (U = 45,447.50, z = -3.33, p = .001, r = -0.095, U = 103,440.00, z = -5.87, p = .000, r = -0.159, respectively), goal attainment (U = 40,493.00, z = -4.81, p = .000, r = -0.137, U = 101,443.00, z = -6.24, p = .000, r = -0.169, respectively), and standardized measures (U = 40,862.00, z = -5.39, p = .000, r = -0.150, U = 113,902.00, z = -4.56, p = .000, r = -0.123, respectively) as methods to monitor client progress. Unaware participants were also significantly (U = 45,948.50, z = -3.51, p = .000, r = -0.100) less likely than those in the quit group to be relying on feedback from others. There were no other significant differences between groups in regards to the methods used to monitor client progress.

Discussion

The purpose of this study was to create profiles of psychologists based on awareness of usage of PM measures and to examine the usage of Progress Monitoring (PM) measures in Canada.

Usage and profiles

One of the major findings of this national survey was that only 12% of psychologists were using a PM measure. This is a much lower rate than reported by Westmacott (2011), who found that 33% of the psychologists in her sample were using a formal monitoring tool. The difference in rates may be due to the fact that Westmacott only included psychologists working with adults and our results indicate that psychologists who work with adults tend to use PM measures more than others. The fact that 67.4% of the sample for this study was unaware of PM measures suggests that lack of knowledge is one of the greatest barriers to PM measure usage in Canada.

For those psychologists who were aware of PM measures, there was a small percentage of psychologists who had quit using them (6.1%) and a percentage who had never tried them (14.5%). Examining the motives behind these psychologists' decision not to use PM measures may be essential to better understand the factors leading to PM measures usage.

Profile of aware psychologists. The second major goal of this study was to create profiles of aware psychologists and users. We found psychologists with the following characteristics were significantly more likely to be *aware* of PM measures: male, completing the survey in English, primarily working with adults, primarily receiving income from a third party, more recently graduated, holding a doctoral or post-doctoral degree, involved in research, teaching, administration or supervising, and influenced by Cognitive Behavioural, Behavioural, Experiential, Systems, and/or Eclectic theoretical orientations.

The finding that psychologists primarily receiving payment from a third party source (e.g., hospital, government, automotive insurance, etc.) or involved in a variety of professional activities (e.g., research, teaching, supervising, and administration work) were more likely to be aware of PM measures, suggests that psychologists with more expanded professional networks are more likely to become aware of advances such as PM measures. Similar to Hatfield and Ogles (2004), who found that clinicians involved in solo private practice were significantly less likely to be using any form of outcome measure, our results suggest that those in clinical practice, especially those receiving payment directly from clients or no payment, may be more isolated and less likely to learn about evidence-based practices. Psychologists receiving payment from other sources, or involved in supervision and administration may use PM measures as evidence that the services they are funding, supervising, or managing are effective. Some third party payers likely request this evidence from the services they are funding.

The differences in awareness across the different theoretical orientations may reflect training priorities related to outcome measurement and assessment emphasized by the different schools of psychology. This is further supported by the finding that psychologists who had more recently graduated from a training program or completed a doctoral or post-doctoral degree were more likely to be aware of these measures. It seems likely that training programs, especially those at the doctoral and post-doctoral, have incorporated instruction on means to routinely monitor client progress.

Although working with third parties, years since graduation, implementation of Cognitive Behavioural, Behavioural, Experiential, and/or Systems theory, and involvement in research and teaching appear to influence psychologists' awareness of PM measures, they were not relevant in determining actual use of the measures.

Profile of users. Of the factors that influenced awareness, only completing the survey in English, level of education, primary clientele, engagement in supervision and administration, and endorsing an eclectic theoretical orientation were found to significantly influenced usage. Participants who completed the French survey were less likely to be using a PM measure. There are several factors that may have led to this finding: supporting the use of PM measures has been primarily conducted on the English versions of measures; some PM measures are not available in French (e.g., BASIS-24, BHM-20, and TOP; Overington & Ionita, 2012); and the websites intended to support clinicians in using measures are rarely available in French. Further, participants who preferred to complete the French version of the survey may have attended French universities, where program differences in training and values may also account for differences in awareness and usage. This, along with the fact that level of education was found to be a significant predictor of usage, indicates that training impacts, not only awareness but also

the choice to use PM measures. Our finding that clientele is a significant predictor of both awareness and usage may result from the fact that many of the PM measures were initially designed and advertised for adult clients. While some of these systems have since created alternative measures to be used with children, adolescents or groups, these versions are rarely discussed in the literature or advertised; there also a number of systems that have only adult versions (e.g., the BASIS system and BHM-20; Overington & Ionita, 2012). These factors likely make it difficult for psychologists working primarily with children, adolescents and groups to become aware of PM measures and access measures appropriate to their practice.

Two factors were found to make usage of PM measures less likely – involvement in supervision and administration. Participants involved in these activities may have limited or no time to practice psychotherapy. Further, these psychologists likely have limited time and may perceive themselves to be too busy to implement and maintain PM systems. Time burden is believed to be one of the main barriers to the implementation of PM measures (Boswell, Kraus, Miller, & Lambert, 2013). Psychologists involved in administrative roles may also be reluctant to implement PM measures due to cost concerns and fears regarding others' response to measures (Boswell, Kraus, Miller, & Lambert, 2013).

Although almost all psychologists in our survey endorsed multiple psychological orientations, only those who endorsed eclecticism by name were more likely to be users of PM measures. It is not clear how psychologists who use multiple orientations differ from those who rate themselves as eclectic. One possible difference is the extent to which they apply different theories. Those endorsing multiple orientations may have a primary orientation they use and only occasionally add pieces of other approaches for situations where their primary approach fails. Those who define themselves as eclectic and regularly use multiple orientations may find

that the evidence-base for practice that PM measures provide is more important to them because the empirical support for a single theory treatment does not apply to their work. Further research could explore the unique features of psychologists who consider themselves as practicing eclectically.

PM measures used. While psychologists appear to be using a variety of different measures to monitor clients' progress, the most commonly reported measures (i.e., PCOMS, OQ measures, BASIS) were those specifically designed for progress monitoring (i.e., involving dosage curves or cut offs to routinely assess clients' change). The finding that a relatively large number of psychologists were using more than one measure or had created their own, suggests that psychologists may have difficulty finding a PM measure that can address all of their monitoring needs.

Other means to monitor progress. Similar to previous studies (Gard, 2003; Stewart & Chambless, 2010), our results suggest that psychologists not using PM measures rely on their clinical judgment as one of their top means of monitoring clients' response to treatment. Unfortunately, research has shown that clinical judgment is not the best method to identify or to predict client deterioration (e.g., Hatfield et al., 2010). Knowledge translation concerning PM, perhaps through Practice-Research Networks (see Tasca, Grenon, Fortin-Langelier, & Chyurlia, 2014) needs to highlight the idea that integrating more systematic monitoring into sessions is an adjunct to, not a replacement for, clinical judgment.

Comparisons between unaware, previous-users and never-used (aware but never used) groups of psychologists indicated that previous-users and never-used psychologists tend to apply the same methods to monitor clients' progress and share the extent to which they rely on each

method in practice. These findings suggest that when psychologists quit using a PM measure, they tend to revert back to the methods they had previously relied upon to monitor progress.

Unaware psychologists, however, were significantly less likely to use any means to monitor their clients' progress. It is possible that these psychologists are simply not aware of the benefits associated with monitoring client change. Given the CPA statements about regularly monitoring (Dozois et al., 2014) client response to treatment as a best practice, ascertaining the actual motives behind these psychologists' lack of progress monitoring would be an important area for future research.

Limitations

Although this study contains the largest sample to date of Canadian psychologists surveyed and has demographics similar to the Canadian Institute for Health Information (2011) professional profile report, only psychologists who listed their email addresses in online directories or provided their email address to their local regulatory body were recruited. Since there is no comprehensive list of registered psychologists in Canada, it is not possible to determine how representative this sample is. Only psychologists were surveyed regarding PM measures. However, other professions provide psychotherapy services that could shed light on the usage of these measures in clinical practice.

Although participants were given a definition and examples of PM measures used in our survey, we cannot determine whether many participants who had been unaware of the measures fully understood the requirement that measures to be applied on a regular basis during treatment.

Implications and Future Directions

Because only a small percentage of Canadian psychologists use PM measures and only a third have heard of them, there appears to be a need to move their effectiveness into action by

increasing psychologists' awareness of these measures. Since training programs seem to impact psychologists' awareness and usage, they will likely provide a valuable avenue for increasing psychologists' familiarity with these measures. Unfortunately, there is limited literature to indicate other knowledge sources that psychologists turn to gather information practice. Research should be directed at uncovering the informal knowledge sources psychologists use.

Since our findings indicate that awareness does not necessarily predict usage, it will be necessary to design strategies directly aimed at engaging psychologists in the usage of these measures. Assuring French-versions of PM measures exist, creating measures for populations other than adults, designing French resources (e.g., websites, manuals), and conducting research on the alternative version of measures are initial steps. Examining the specific factors that have motivated or hindered psychologists' usage of PM measures could shed light on the specific strategies that need to be implemented.

Regular surveying would allow us to continue examining trends as they develop in the field and assist Canadian psychologists in developing their evidence base for practice.

Table 1

Demographic Data for Psychologist Respondents

Variable		Frequency	%
Sex			
	Female	1114	66.9
	Male	551	33.0
Age			
	20-30 years	38	2.3
	31-40 years	366	22.0
	41-50 years	405	24.3
	51-60 years	494	29.6
	60-70 years	326	19.6
	71 years and older	38	2.3
Degree			
	Diploma	2	0.1
	Masters	789	47.3
	Doctorate	699	41.9
	Post-Doctorate	177	10.6
Years practicing			
	< 5 years	151	9.1
	5-10 years	278	16.8
	11-15 years	306	18.4
	16-20 years	210	12.7
	21-25 years	262	15.8
	26-30 years	179	10.8
	> 30 years	273	16.5
Primary clientele			
	Adults	1002	62.5
	Older adults	193	12.0
	Children	168	10.5
	Adolescent	122	7.6
	Younger adults	84	5.2
	Couples	13	0.8
	Families	12	0.7
	Group	5	0.3
	Organizations	5	0.3
Payment sources			
	Direct from client	1046	65.3
	Government	245	15.3

	No cost	75	4.7
	Organization (e.g., school, hospital, etc.)	61	3.8
	Employee assistance program	47	2.9
	Health insurance	40	2.5
	Automotive insurance	34	2.1
	Workers compensation	26	1.6
	Other	27	1.7
Number of theories endorsed			
	1	32	1.9
	2	132	8.0
	3	222	13.4
	4	232	14.0
	5	242	14.6
	6	169	10.2
	7	153	9.2
	8	134	8.1
	9	193	11.7
	10	127	7.7
	11	20	1.2

Table 2

Results of the Mann-Whitney U Test of Differences in the Mean Rank of Theoretical Orientations Between Aware and Unaware Respondents

Theoretical Orientation	Aware	Unaware			
	Mean Rank	Mean Rank	U	Z	*r*
Cognitive Behavioural	884.71	801.92	271,968.00*	-3.31	-.081
Behavioural	890.46	799.12	268,853.50*	-3.82	-.094
Experiential	877.00	805.67	276,150.50*	-2.98	-.073
Systemic	879.71	804.35	274,681.50*	-3.40	.084
Eclectic	923.03	783.29	251,201.00*	-6.39	-.157

*$p < .01$

Table 3

Means, Standard Deviations, Medians, and Results of the Kruskal-Wallis Test of Differences Between Unaware, Quit, and Never-Used Groups

Mode	Unaware		Previous-Users		Never-Used		Overall	
	M; SD	*Mean Rank*	*M; SD*	*Mean Rank*	*M; SD;*	*Mean Rank*	*M; SD*	χ^2
Clinical judgment	**48.71; 32.44;**	702.99	57.71; 29.39	817.97	59.98; 27.66	843.00	51.19; 31.80	26.17*
Observation of client	45.96; 32.93	697.93	58.85; 29.80	861.07	58.46; 28.40	848.51	48.85; 32.42	35.14*
Client reported improvement	**49.23; 32.90**	694.96	**60.51; 30.56**	842.51	**63.04; 27.85**	870.03	**52.28; 32.43**	41.31*
Attainment of goals	47.85; 34.90	688.78	**65.46; 29.48**	900.50	**63.19; 30.09**	874.55	**51.59; 34.34**	55.52*
Standardized Measures	14.49; 26.06	700.19	27.84; 32.42	905.66	22.29; 30.78;	819.39	16.70; 27.66	43.28*
Feedback from others	15.33; 25.57	713.77	25.18; 31.62	853.86	19.18; 27.40	777.95	16.64; 26.45	16.01*
Other	2.80; 13.50	728.00	7.14; 23.11	763.04	4.74; 17.47	749.74	3.41; 15.09	5.98

*$p < .01$; Note. Bolded values = Top 2 values for each group.

Linking Study 1 and Study 2

Study 1 examined the use of Progress Monitoring (PM) measures among psychologists and identified characteristics related to use and awareness. Study 2 will examine the barriers and facilitators to the use of Progress Monitoring measures from the perspective of users, non-users, and previous-users. Both studies are part of the *action* cycle of the KTA (Knowledge-to-Action; Graham et al., 2006) knowledge translation model, providing information about the current situation of PM measures in Canada and the barriers and facilitators to using these measures. Study 1 found that few psychologists use PM measures and only a small percentage are even aware of them, suggesting that the one of the greatest barriers to use is knowledge or awareness. Study 1 also examined the characteristics of users, pointing to other factors that hinder and facilitate use. The profile created in Study 1 suggests which clinicians are least likely to use PM measures. Study 2 will build on Study 1 by examining the specific barriers faced by these clinicians and expand the investigation of barriers and facilitators by surveying users, non-users, and previous-users about their experiences and opinions.

Finally, Study 1 proposed that research examine the knowledge sources psychologists use to gain information regarding clinical practice because this information could provide insight into effective ways to increase psychologists' awareness of PM measures. Study 2 will explore this question by asking clinicians the extent to which they rely on a variety of knowledge sources to gain information about clinical practice.

Chapter 3

Barriers and Facilitators to the Use of Progress Monitoring Measures in Psychotherapy

Gabriela Ionita, Marilyn Fitzpatrick and Martin Drapeau, McGill University

Author Note

Gabriela Ionita, Marilyn Fitzpatrick, and Martin Drapeau, Department of Educational and Counselling Psychology, McGill University.

This research was supported by a grant from Fonds de la recherche en santé du Québec.

The authors would like to thank Jann Tomaro, Vivian Chen, Julia Dimillio, and members of the McGill Psychotherapy Process Research Group (MPPRG), especially Terra Kowalyk, Louise Overington, Robin Grumet, Jack DeStefano, Pascale Demers and Martin Drapeau for their help during the development as well as the Ordre des psychologues du Québec for disturbing surveys in Quebec.

Correspondence concerning this article should be addressed to Gabriela Ionita, Department of Educational and Counselling Psychology, McGill University, Montreal, Quebec. E-mail: gabriela.ionita@mail.mcgill.ca

Abstract

This survey investigated barriers and facilitators to the usage of Progress Monitoring (PM) measures. Results from 1,668 licensed psychologists indicated that the top barriers to using PM measures were limited knowledge, limitations in training, burden on clients, and concerns regarding additional work and time. These barriers were similar across users, non-users, and previous-users. Results suggested that offering training in different formats, over extended time periods, and from colleague-to-colleague may be the best facilitators for overcoming these barriers. Other strategies that may prove effective for overcoming the identified barriers are presented. Implications for practicing clinicians and the field of psychology are discussed.

Keywords: progress monitoring (PM) measures; outcomes monitoring; evidence-based practice; psychotherapy; clinical practice.

The American and Canadian Psychological Associations promote the use of evidence-based practice, which involves ongoing monitoring of client progress in treatment (EBP; APA, 2006; CPA, 2012; Dozois et al., 2014). The fact that psychologists tend to rely on clinical judgment to monitor clients' response to therapy (Gard, 2003; Stewart & Chambless, 2010) suggests that there may be impediments to using formal tools for this purpose. Since clinical judgement is not a very reliable way to identify clients who are deterioring or not progressing (e.g., Hatfield, McCullough, Frantz, & Krieger, 2010), it is important that barriers to using more effective means to track client progress are identified.

Progress monitoring (PM) measures are a specific type of outcome measures that can be used regularly during the course of treatment (e.g., session-to-session) to systematically assess client change (Overington & Ionita, 2012). The measures are sensitive to change (Lueger & Barkham, 2010) and can be used with dosage curves or cut offs to provide alerts to clinicians when clients are not progressing as expected (e.g., Finch, Lambert, & Schaalje, 2001). Examples include the Outcome Questionnaire-45 (OQ-45; Lambert et al., 1996), the Partners for Change Outcome Management System (PCOMS; Miller, Duncan, Sorrell, & Brown, 2005), and the Treatment Outcome Package (TOP; Kraus, Seligman, & Jordan, 2005).

The measures are not intended to replace clinical judgment but to complement it (Lambert, 2010) and offer clinicians a reliable way to track client progress and make their practices more evidence-based. Both the OQ-45 and PCOMS have been added to the Substance Abuse and Mental Health Services Administration's (SAMHSA; 2013) National Registry of Evidence-based Programs and Practices (NREPP).

Aside from tracking client progress, PM measures can also *predict* which clients will have negative outcomes, sometimes as early as the third session (Hannan et al., 2005).

Identifying this 5% and 10% of all clients (Lambert & Ogles, 2004), especially early in treatment, allows psychologists to alter the course of treatment. There is mounting evidence suggesting that when psychologists are provided with PM feedback, clients – especially those who are deteriorating or not progressing – have significantly better outcomes (Lambert & Shimokawa, 2011; Lambert & Vermeersch, 2008; Shimokawa, Lambert, & Smart, 2010).

The limitations of all outcome tools (e.g., issues of validity and reliability, false negatives or false positives, etc.; Boswell, Kraus, Miller, & Lambert, 2013) are also true of PM measures. However, there is considerable evidence that these measures improve psychotherapy outcomes and can also reduce no-show and dropout rates (e.g., Bohanske & Franczak, 2010). Additionally, PM data can be used to compare the quality of psychotherapy services across different jurisdictions, organizations, and practitioners (e.g., Barkham, Hardy, & Mellor Clark, 2010; Barkham et al., 2001; Behavioral Health Laboratories; BHL, 2003; Lueger & Barkham, 2010) in order to highlight service limitations and strengths and to make data-based decisions about quality improvement strategies. Comparisons of client data can show the characteristics of clients who improve in treatment and those who do not and ultimately contribute to specialized treatment interventions for specific client profiles (e.g., BHL, 2003). Designing such specific strategies and treatment interventions will likely improve the effectiveness of treatment. As government, employers, insurance companies, and managed care companies increase the pressure for accountability, these measures can help to meet these demands.

Yet, the majority of psychologists are not using these measures. Studies examining usage indicate that the majority of practitioners do not use any type of outcome measures (Bickman, Rosof-Williams, Salzer, & Summerfelt, 2000; Gard, 2003; Hatfield & Ogles, 2004; Phelps, Eisman, & Kohout, 1998). When assessing the use of PM measures, Westmacott (2011) found

that 33% of psychologists working with adults used such a measure; Ionita and Fitzpatrick (2014) found that only 12% of Canadian psychologists used PM measures. Although there is still work to be done to refine the measures and to test them with different client populations, for clients and clinicians to fully benefit from this evidence-based practice, efforts to disseminate knowledge must improve.

Models of knowledge translation (KT) can help to understand how to move PM measures into practice. KT includes all of the steps between the creation of knowledge and its use in practice (CIHR, 2004). The Knowledge-to-Action Framework (KTA; Graham et al., 2006) was chosen to develop the current research; it integrates commonalities identified in a review of over 60 theories of planned action (Graham et al., 2006) and is one of the few models validated for planning and evaluating KT interventions (Straus, Graham, Taylor, & Lockyer, 2008; Ward, Smith, Carruthers, House, & Hammer, 2010).

According to the KTA model, an important step in implementation is the assessment of barriers to usage. Boswell, Kraus, Miller and Lambert (2013) have pointed to a number of philosophical and practical barriers to the usage of PM measures. Practical concerns included the cost of measures, time burden, the need to meet the demands of client, practitioner, and administration within one system of measures, and clinical staff turnover. Other concerns were potential client refusal, challenges in interpreting results, skepticism regarding the utility, validity, reliability and relevance of the measures, fears of how the data will be used, feeling that measures were imposed on practitioners, and ethical and confidentiality issues. Kordy, Hannover, and Richard (2001) highlighted two additional barriers: measures not specifying what to do when clients are not progressing, and therapist fears of losing autonomy.

A small number of qualitative studies have interviewed clinicians to identify challenges. For example, clinicians in an Australia study reported that client refusal and clinician attitude could negatively influence the rate of use of a PM measure (Callay, Hyland, Coombs, & Trauer, 2006). Student clinicians reported that although they generally had positive experiences with the OQ, concerns about the measures' impact on rapport, about valuable time away from sessions, about the validity or value of the scores, about fit with all clientele, and limited knowledge of how to use the measure or apply results were all salient (Yamin, Roval, Byrne, Burr, & Aubry, 2011). This literature points to a number of challenges that clinicians may face in regards to implementing and using PM measures. To learn more about these challenges and other barriers to implementation, a large-scale study was undertaken.

The aims of the current study were to assess the barriers to psychologists' use of PM measures and to examine ways to overcome these barriers to support KT efforts. A survey was designed for three groups: psychologists who use PM measures (users), psychologists who stopped using PM measures (previous-users), and psychologists who have never used PM measures (non-users). Users were asked about the barriers they experienced in implementing the measures and how they overcame their most challenging barriers. Previous users were asked about the factors that were initially salient and the factors that led them to stop using PM measures. Non-users were asked about barriers to PM use and the facilitators that they would need to become users.

Method

Participants

Psychologists' email addresses were gathered from the online Canadian Register of Health Service Providers in Psychology and online directories of psychologist regulatory bodies.

Email addresses were compiled into a database and an email invitation including a brief description of the study, a link, and a section informing potential participants of a draw for three $100 gift certificates from Amazon for participation was sent to psychologists from all provinces but one. To recruit participants from Quebec, l'Ordre des psychologues du Québec sent a similar email invitation to its members with links to the French and English-version of the survey. Following the initial invitations, three follow-up emails were sent at two-week intervals to the email addresses in the database.

A total of 4615 psychologists were invited to participate; 1724 psychologists completed the survey. Surveys sent directly to psychologists yielded a response rate of 37.3%, consistent with the average [36%] response rate for online surveys (Sheehan, 2001). Participants who did not identify themselves as registered psychologists were excluded from the sample, resulting in a final sample of 1668 participants (approximately 10% of registered psychologists in Canada). All participants were involved in providing psychotherapy. Geographical representation in the sample was proportional to the national population of psychologists (CIHI, 2011).

Measure

A survey on the barriers and facilitators to PM measures usage was created as part of a larger study. The survey was pilot-tested with psychologists and graduate students (12 English, 6 French) and all concerns were addressed.

Survey items were created based on 1) barriers and facilitators to PM usage from the literature (e.g., Kordy, Hannover, & Richard, 2001), 2) 32 barriers to knowledge translation efforts (Cochrane, Olson, Murray, Dupuis, Tooman & Hayes, 2007), 3) questions designed by Hatfield and Ogles (2004) to assess barriers and facilitators, and 4) suggestions presented by participants during the pilot-testing stage. The first section of the survey collected demographic

and professional practice information. Participants were given the following definition of PM measures "PM measures are used to carry out continuous assessment of client change and to give the clinician systematic feedback about treatment response. In contrast to pre-post assessments, PM measures are completed by the client on a routine basis and feedback is provided to the clinician throughout the therapeutic process", along with examples of PM measures. Participants were asked if they had previously been aware of PM measures; 32.5% (n = 544) were aware of PM measures. These participants were asked if they were currently, or had ever used, a PM measure; 242 participants were aware of the measures but had never used them (non-users), 101 participants had stopped using these measures (previous-users), and 201 participants were using the measures at the time of the survey (users). Table 1 presents demographic data for each group. The current study focused on the experiences of these 544 participants.

Users, non-users, and previous-users were all asked to rate the extent to which a list of potential barriers (37 for users, 36 for previous-users, 39 for non-users or others) had impacted decisions about usage of a PM measure. Users and non-users were then asked to rank their top three barriers. Based on these rankings, users and non-users were presented with potential facilitators and asked to rate the extent to which these strategies allowed them or would allow them to overcome their top three barriers. Previous users were asked to rate the extent to which 48 factors (including an "other" category) had initially impacted their use. Participants rated their responses on a 4-point response scale. For example, when questioned about barriers, non-users' response scale ranged from "not applicable" to "this prevents me." The wording of response scales depended on the question presented, intended audience (i.e., users, non-users, or previous-users), and communimetrics (Lyons, 2009).

As part of the larger study, users were asked to indicate which PM measure they used in their practice and a profile of users and non-users was created. Results from Ionita and Fitzpatrick (2014) indicated that the most commonly used measures were the Outcome Rating Scale (part of the PCOMS), the OQ-45, and Behavioral and Symptom Identification Scale (e.g., BASIS-24; Eisen, Normand, Belanger, Spiro, & Esch, 2004). Profiles suggested that psychologists with the following demographic and practice characteristics were significantly more likely to be users of PM measures: those who completed the survey in English, those working primarily with adults, those who completed doctoral or post-doctoral training, those who endorse an eclectic theoretical orientation, and those lacking involvement in supervision or administration.

Results

Survey data were downloaded into the Statistical Package for the Social Sciences (SPSS) version 21 for analyses. The dataset was examined for missing data using guidelines provided by Enders (2010). The rates of missing data were low (< 4.5%). To assess barriers and facilitators for each group, descriptive data were examined.

Barriers to the Use of PM Measures

In response to the question about the impact of different barriers, the mean ratings indicated that the top four barriers users faced were: requiring too much time, adding too much work, burdening clients, and limited access to training. Limited knowledge of measures and effectiveness concerns were tied for fifth place (see Table 2). Similar to users, previous-users rated: requiring too much time, adding too much work, burdening clients, and limited access to training as the barriers most relevant to their experience (based on means; see Table 2). Only previous-users rated not convinced of benefits as a top five barrier. Aside from these barriers, a

relatively large number of previous-users also indicated that the fear that clients would not respond honestly was a top barrier significant in their decision to stop using a PM measure.

Non-users had similar responses - requiring too much time, burdening clients, limited access to training and limited knowledge were among the top five barriers. However, non-users also cited lack of training as a top barrier. In addition to these barriers, almost 40% of non-users identified limited understanding of the differences among PM measures as a top barrier that was "preventing" or "substantially limiting" them from using a PM measure.

Factors Facilitating PM Usage

Users. Users were presented with a list of all the barriers that had "prevented" or "substantially limited" them and asked to select and rank the top three barriers and then to rate the extent to which a variety of facilitators helped them overcome those three barriers, on a four-point response scale (led them to overcome, was a significant factor, was a small factor, or had no impact/not applicable). Fifty-two users (26.4%) did not rate any barrier as having "prevented" or "substantially limited" and thus were not presented with the ranking question or the follow-up facilitator questions. This large proportion of potential users who do not seem to see many barriers suggests that there is a group who adapt easily to PM. Follow-up analysis of the profiles of this group indicated that 27 were male [51.9%], 41 had doctoral or post-doctoral studies [78.9%], and 31 were 51 years of age or older [58.5%], with an average of 18.04 (*SD* = 11.44) years since graduation. The barriers most commonly ranked by the 138 users who were presented with the ranking question were: limited knowledge of measures (*n* = 21; 15.21%), limited accessibility to training (*n* = 20; 14.49%), take up too much time (*n* = 20; 14.49%), burden clients (*n* = 19; 13.77%) and cost (*n* = 18; 13.04%). The top five facilitators associated with these barriers are presented in Table 3.

Non-users. Non-users were presented with a list of all the barriers they had rated as either "prevents" or "substantially limits" and asked to select and rank the most challenging three barriers. Ten participants (4.6%) were not asked this question, as they had not rated any barrier as "prevents" or "substantially limits". Responses from 216 non-users were examined; the top ranked barriers were: limited knowledge of measures (n = 77; 35.65%), not convinced of benefits (n = 38; 17.59%), lack training (n = 33; 15.28%), burden clients (n = 31; 14.35%) and adds too much work (n = 30; 13.89%).

To examine facilitators that could potentially help non-users overcome the knowledge barrier, participants were asked to rate the degree (0-100 continuous scale) to which they accessed 16 sources of information to gain knowledge regarding psychological practice. Results revealed that non-users, who identified knowledge as one of their top 3 barriers, most often turned to workshops (M = 48.23; SD = 29.39), journal articles (M = 37.44; SD = 28.88), colleagues (M = 36.35; SD = 29.97), books (M = 35.12; SD = 28.97), and conferences (M = 28.09; SD = 28.76) for information on psychotherapy. Non-user ranked all other facilitators on a four-point response scale (certainly lead me to use, lead me to plan to use, lead me to consider using, or would have no impact/not applicable). The top five facilitators associated with their top barriers are presented in Table 3.

Previous-users. Previous-users rated the extent to which 47 factors had initially motivated them to use a PM measure, on a four-point scale (led me to use, was a significant factor, was a small factor, or not applicable). The top five facilitators are presented in Table 3.

Discussion

The primary goal of this study was to identify the barriers to PM measure usage and examine ways to overcome these barriers to support knowledge translation efforts. Interestingly,

approximately 26% of users did not find *any* barriers difficult to overcome. Across user, non-user, and previous-user groups, there was a lot of commonality in the top barriers identified. Although demographic and practice differences existed between the groups (e.g., language, primary clientele, etc; Ionita & Fitzpatrick, 2014), the three groups reported similar key challenges. The low means associated with individual facilitators suggest that KT strategies aimed at overcoming barriers will need to involve a combination of the more highly rated facilitators. The weight of combining facilitators will probably have the most impact. The next section will discuss the top five barriers identified across groups and the strategies identified as relevant to overcoming these barriers.

Client burden. Concern about burdening clients was one of the most challenging and universal obstacles; all three groups rated this concern in their top five. The fear of burdening clients applies to outcome measurement in general; Hatfield and Ogles (2004) found that it was the third most endorsed reason for psychologists to avoid outcome measures. Our findings suggest that 1) finding measures that are very brief, 2) discovering that the measures facilitate discussions with clients, and 3) hearing positive testimonials from clients are most likely to help psychologists overcome initial reservations regarding client burden. However, this may not be sufficient to address these concerns in the long run.

Previous-users indicated that brevity and facilitating client discussions were among the strongest initial motivators, but almost one third stopped using a PM measure because of client burden. Burden is clearly related to benefits; that which is very useful is unlikely to be seen as burdensome. Since a large number of previous-users reported that *not being convinced of the benefits* and *concerns regarding clients' honesty* had strongly influenced their decisions to stop using the measures, it follows that client burden was a key concern. Although research suggests

that clients generally respond positively and see benefits of the tools (Unsworth, Cowie, & Green, 2011; Yamin, Roval, Byrne, Burr, & Aubry, 2011), psychologists concerns about burden may sometimes be well-founded. If PM is to be viable, it is important to study methods of optimal implementation and possible contraindications. Some situations in which measures may not be useful (e.g. clients who do not read well, some psychotic clients, clients who have reasons to distort their progress) have already been identified (Lambert, 2012), while the usefulness of measures in other clinical situations, such as with clients who are in the non-clinical range and want to remain in therapy for the purpose of self-discovery, will need to be further examined.

Unfortunately, we do not know if previous-users made efforts to minimize client burden by using versions available on handheld devices or whether they used the data in sessions to optimize benefits for clients. Research examining the relationship between different implementations strategies and fidelity to PM use could shed more light on how to reduce client burden. Our results did show that previous-users endorsed a large variety of barriers suggesting that rather than facing one main issue, they faced a combination of smaller challenges that may have overwhelmed their willingness to continue. Understanding how these challenges act jointly to lead clinicians to discontinue use will be important to KT strategy development.

Limited knowledge. Another important barrier is limited knowledge of PM measures; users and non-users ranked and rated this as a top barrier. More than two-thirds of the psychologists in the larger survey reported that they were unaware of PM and, even after psychologists became aware, they continued to struggle with limited knowledge. Users most commonly learned about these measures from journal articles. This finding is in line with previous research that finds psychologists most often gain knowledge regarding professional activities from journals or books (Hunsley & Lefebvre, 1990). However, non-users rated

workshops as their number one source for practice knowledge. The difference in preferred source of knowledge between users and non-users may indicate that users are more academically oriented than non-users. Workshops may facilitate greater dissemination of PM measures among less academically-oriented practitioners. Another important source of knowledge for both groups was colleagues. Older research shows that therapists often used discussions with colleagues to gain the knowledge they apply in practice (Cohen, Sargent & Sechrest, 1986; Prochasks & Norcross, 1983). With the growth of online forums, communities, and list-serves, psychologists can now connect with colleagues anywhere. Encouraging successful users to initiate discussions among colleagues in person and in online forums could prove effective in increasing the proportion of users. Since users were more likely to hold doctoral or post-doctoral degrees (Ionita & Fitzpatrick, 2014), there is an important role for graduate training programs in knowledge translation.

Previous-users indicated that their initial introduction to PM came from job training or from supervisor pressure or encouragement. It is possible that these practitioners did not have the same buy-in or the strong knowledge base to support long-term use once external supports or requirements were removed. Good ongoing training and support is necessary when using a PM measure (Unsworth, Cowie, & Green, 2011). Clinicians using the measures need information on how to best interpret and integrate feedback into sessions (Yamin et al, 2011). Training in PM usage may need a period of supervised or assisted practice to be well integrated.

Limitations in training. Limitations in training were identified as another major barrier to usage. Users most commonly reported overcoming this barrier with the help of instruction manuals or website training resources. A number of PM measures have free manuals or include them in the cost of using the measure (see Drapeau, 2012). Non-users did not consider these

methods helpful, which may help to explain why they remained non-users. They preferred brief training, from a seminar/webinar or a supervisor. Given the points raised above about the need for ongoing training, if brief training is all that is sought, practitioners may find that the measures are unhelpful. This may be compounded by the fact that nearly one quarter of psychologists work exclusively in independent practice (Hunsley, Ronson, & Cohen, 2013) and may not have ready access to day-to-day mentoring. Online help from colleagues, perhaps arranged by the companies that market and distribute the systems, could connect clinicians to the colleagues whose opinions they value and give assistance in the implementation of PM in practice. Another potential option for resolving this issue within organizations is the identification of "local champions" who can help assist in the introduction, implementation, and maintenance of good PM practices (Boswell, Kraus, Miller, & Lambert, 2013)

Additional work and time requirements. The additional work and time requirements of using measurement instruments are not unique to progress monitoring (Hatfield & Ogles, 2004). Ninety percent of clinicians believe that there is a significant time burden associated with using standardized outcome measures (Garland, Kruse, & Aarons, 2003). Users who discovered that PM measures take less than five or ten minutes to administer were persuaded to begin. Similarly, non-users believed that discovering the brevity of the measures and other time-minimizing strategies (e.g., administered prior to session) could help them overcome this barrier. However, work and time demands were among the main reasons that psychologists quit using PM. We do not know if these psychologists used strategies that might have reduced the time burden (e.g., online scoring program and reporting, and having clients complete the measures prior to sessions), whether they had used measures that took longer than five or ten minutes to administer, or whether there was some other difference that made this specific group more

vulnerable to this issue. Future research needs to examine why this barrier remained an issue for previous users.

Concerns about benefits. About a third of those who quit or never started using a PM measure were not convinced that the measures have significant benefits. Because these participants also reported limited training and knowledge, it is possible that they were simply unaware of the data. However, practitioners are more compelled by cases than by statistics (Stewart & Chambless, 2010) so it is also possible that they are aware of the data but do not find it compelling. Communicating with clinicians using case data to interpret and elaborate the statistics and illustrate *how* clients can see progress and improve their outcomes (the second and third highest facilitators nominated) might be a better strategy to disseminate knowledge of PM.

The top facilitator identified by non-users was discovering that the measures can help therapists identify their strengths and weaknesses. As psychotherapists receive increasing requests for accountability (Owen, 2013), identifying areas of strength and working to develop greater proficiency in areas of weakness is an important part of managing a successful practice. Manuscripts such as Youn, Kraus, & Castonguay (2012) explain how PM measures can be used to help clinicians identify their strengths and weaknesses. But because workshops are more effective method of reaching non-users, integrating this information into the many workshops available to clinicians on how to build a successful practice would seem to be a viable strategy.

Limitations

Although this study contains a large sample with demographics similar to psychologists in general, only those who advertised their email addresses online or provided their email address to their college of psychologists were recruited for the survey. We cannot know if willingness to be reached via email in some way limits the representativeness of the sample. Another limitation

is related to the questions presented to each group. Because few participants will respond to surveys that take more than 10 minutes (Crawford, Couper, & Lamias, 2001), participants were only asked to answer questions most relevant to their experience. Thus, not all participants had the opportunity to rate all facilitators, making the sample of participants who responded to each facilitator question selective but small. Finally, although participants were provided with a definition and examples of PM measures, we do not know if participants fully understood that measures are meant to be used regularly throughout the course of treatment with feedback from measures being integrated into practice. Failure to understand this important requirement could substantially impact the way participants responded to the survey.

Implications and Future Directions

For psychologists to embrace PM measures, the path to use needs to be straightforward. These findings suggest that limited knowledge, limitations in training, burden on clients, and concerns regarding additional work and time, are the primary barriers to be targeted. Offering training in different formats, in extended time periods, and from colleague-to-colleague appear to be promising strategies. However, the process that leads previous-users to quit using a PM measure remains unclear. Our findings allow us to identify *which* barriers led psychologists to quit, but we were not able to determine *why* they were not able to overcome the same barriers as others did. Research should focus on differences in the ways previous-users and users use measures to uncover the strategies that support continued usage. Evaluating the effectiveness of a variety of training strategies is an important step moving progress monitoring from the realm of a well-researched to a well-implemented method.

Table 1

Demographic data for Users, Previous-Users and Non-Users

Variable		Current Users	Non-users	Non-users
Sex				
	Male	88 (44.0%)	39 (38.6%)	80 (33.1%)
	Female	112 (56.0%)	62 (61.4%)	162 (66.9%)
Education				
	Masters[1]	56 (27.9%)	30 (29.7%)	104 (43.0%)
	Doctoral	111 (55.2%)	57 (56.4%)	104 (43.0%)
	Post-doctoral	34 (16.9%)	14 (13.9%)	34 (14.0%)
Years since graduation		*M* = 17.80 (*SD* = 0.80)	*M* = 14.67 (*SD* = 1.01)	*M* = 17.37 (*SD* = 0.69)
Hours providing psychotherapy per week		*M* = 18.01 (*SD* = 0.75)	*M* = 15.33 (*SD* = 1.01)	*M* = 17.77 (*SD* = 0.69)

[1] A Master's degree is the minimum educational requirement to become a psychologist in some provinces, while a doctoral degree is required in others.

Table 2

Means, Standard Deviations, and Frequencies and Percentages for Barriers for Users, Previous-Users and Non-Users

Barrier	Users (N = 197)		Previous-Users (N = 98)		Non-Users (N = 238)	
	M (SD)	N (%)[1]	*M (SD)*	N (%)[2]	*M (SD)*	N (%)[3]
Require too much time	**0.96 (0.84)**	**48 (24.37)**	**0.86 (1.40)**	24 (24.49)	**1.19 (0.96)**	81 (34.03)
Add too much work	**0.87 (0.86)**	**44 (22.34)**	**0.90 (1.06)**	**26 (26.53)**	1.04 (0.94)	68 (28.57)
Burden clients	**0.87 (0.87)**	**39 (19.80)**	**0.97 (0.99)**	**30 (30.61)**	**1.24 (0.97)**	**88 (36.97)**
Limited access to training	**0.81 (0.94)**	**46 (23.35)**	**0.80 (1.05)**	**28 (28.57)**	**1.29 (1.07)**	**108 (45.38)**
Limited knowledge of measures	**0.78 (0.86)**	35 (17.77)	-	-	**1.43 (0.99)**	**107 (44.96)**
Effectiveness concerns	**0.78 (0.91)**	32 (16.24)	0.51 (0.76)	16 (16.33)	0.76 (0.91)	49 (20.59)
Incompatible with clientele	0.76 (0.84)	34 (17.26)	0.66 (0.92)	20 (20.41)	1.08 (1.07)	85 (35.71)
Limited understanding of differences between measures	0.76 (0.81)	32 (17.77)	0.54 (0.90)	17 (17.35)	1.12 (1.01)	**93 (39.08)**
Cost	0.73 (0.91)	38 (19.29)	0.47 (0.86)	16 (16.33)	0.79 (0.98)	59 (24.79)
Do not capture valued changes	0.72 (0.88)	36 (18.27)	0.73 (1.00)	23 (23 .47)	0.65 (0.96)	51 (21.43)
Lack training	0.70 (0.89)	36 (18.27)	-	-	**1.37 (1.09)**	**112 (47.06)**
Limited procedures to support use of measures (e.g. forms, etc.)	0.69 (0.85)	36 (18.27)	0.55 (0.94)	19 (19.39)	0.70 (0.92)	50 (21.01)
Worried clients would not respond honestly	0.68 (0.81)	29 (14.72)	0.77 (0.93)	**25 (25.51)**	0.75 (0.89)	48 (20.17)
Not convinced of benefits	0.68 (0.85)	31 (15.74)	**0.90 (1.01)**	**29 (29.59)**	1.09 (1.09)	87 (36.55)
Limited material on measures (e.g. websites)	0.67 (0.89)	36 (18.27)	0.37 (0.74)	9 (9.18)	0.70 (0.91)	46 (19.33)
Limited knowledge of how to judge effectiveness	0.67 (0.81)	**40 (20.30)**	0.64 (0.94)	22 (22.45)	1.03 (1.00)	83 (34.87)
Lack of support when problems/questions arose	0.58 (0.85)	31 (15.74)	0.32 (0.68)	8 (8.16)	0.65 (0.96)	53 (22.27)
Measures too difficult to access	0.56 (0.84)	31 (15.74)	0.46 (0.83)	15 (15.31)	0.68 (0.94)	45 (18.91)
Limited knowledge of how to apply results into practice	0.54 (0.77)	23 (11.68)	0.53 (0.86)	16 (16.33)	1.06 (1.04)	79 (33.19)
Limited knowledge of how to	0.52	19	0.54	18	1.12	86

interpret results	(0.74)	(9.64)	(0.89)	(18.37)	(1.06)	(36.13)
Limited scientific evidence	0.51	22	0.36	8	0.53	30
	(0.77)	(11.17)	(0.66)	(8.16)	(0.81)	(12.61)
Concerned measures not as accurate	0.50	20	0.48	15	0.68	48
as clinical judgment	(0.76)	(10.15)	(0.83)	(15.31)	(0.92)	(20.17)
Lack of fit with theoretical	0.50	21	0.45	15	0.56	44
orientation	(0.79)	(10.66)	(0.85)	(15.31)	(0.97)	(18.49)
Colleagues not using measures	0.50	25	0.72	24	0.49	29
	(0.81)	(12.69)	(0.99)	(24.49)	(0.77)	(12.18)
Worried others would use data to	0.42	20	0.47	15	0.55	37
prescribe what occurs in practice	(0.78)	(10.15)	(0.85)	(15.31)	(0.87)	(15.55)
Limited awareness of benefits	0.42	19	-	-	1.08	76
	(0.73)	(9.64)			(1.01)	(31.93)
Challenges getting others in practice	0.42	25	0.35	8	0.16	9
to use measures	(0.76)	(12.69)	(0.85)	(8.16)	(0.49)	(3.78)
Lacked confidence in companies	0.40	20	0.20	4	0.48	30
analyzing data	(0.74)	(10.15)	(0.85)	(4.08)	(0.87)	(12.61)
Not available in language therapist	0.40	24	0.13	6	0.39	35
practices	(0.82)	(12.18)	(0.49)	(6.12)	(0.84)	(14.71)
Concerns data would impact self-	0.40	14	0.43	12	0.29	10
confidence / be used to evaluate	(0.71)	(7.11)	(0.79)	(12.24)	(0.57)	(4.20)
therapist						
Incompatible with practice (e.g.	0.40	19	0.44	14	0.46	31
group therapy)	(0.76)	(9.64)	(0.79)	(14.29)	(0.87)	(13.03)
Colleagues did not find measures	0.38	19	0.42	13	0.18	11
helpful	(0.76)	(9.64)	(0.79)	(13.27)	(0.51)	(4.62)
Do not fit with therapist's definition	0.37	20	0.38	11	0.52	37
of psychology practice	(0.75)	(10.15)	(0.79)	(11.22)	(0.91)	(15.55)
Do not fit with geographical	0.32	16	0.07	1	0.15	9
context/culture	(0.70)	(8.12)	(0.79)	(1.02)	(0.47)	(3.78)
Concerns regarding confidentiality	0.28	10	0.38	12	0.42	27
of data	(0.60)	(5.08)	(0.79)	(12.24)	(0.82)	(11.34)
No encouraged by licensing body	0.14	6	0.17	3	0.16	7
	(0.52)	(3.05)	(0.69)	(3.06)	(0.49)	(2.94)
Organization/supervisor stopped	-	-	0.34	11	0.34	28
using measures / has not started			(0.81)	(11.22)	(0.79)	(11.76)
Scoring system too expensive	-	-	0.34	10	-	-
			(0.69)	(10.20)		
Want to use measures but have not	-	-	-	-	0.79	54
got around to it					(0.97)	(22.69)
Other	0.21	8	0.18	6	0.23	18
	(0.67)	(4.06)	(0.69)	(6.12)	(0.74)	(7.56)

*Bolded cells indicate top 5 barriers for each column

[1] The frequency and percentage of "prevented me" or "substantially limited me" responses

[2] The frequency and percentage of "led me to stop" or "was a significant factor" responses

[3] The frequency and percentage of "preventing" or "substantially limiting" responses

Table 3

Top Facilitators for Users Top 5 Ranked Barriers

Barrier overcame	Facilitator	*M*	*SD*
Users			
Limited Knowledge			
	Read a journal article	1.48	1.12
	Heard from a colleague	1.24	1.22
	Attended a workshop	1.10	1.30
	Read a book	1.05	0.92
	Attended a conference	1.00	1.19
Limited access to training			
	Received manual	1.05	1.20
	Received training/support from a website	0.60	0.82
	Completed a seminar/webinar	0.55	0.89
	Received training/support from supervisor	0.40	0.88
	Received training/support from host company	0.36	0.70
Require too much time			
	Discovered some measures take < 5 min.	1.20	1.15
	Discovered some measures take < 10 min.	1.00	1.03
	Received a free trial	0.70	1.08
	Discovered measures could be completed before session	0.70	0.98
	Heard about others positive experiences	0.60	1.05
Burden clients			
	Discovered measures were very brief	1.16	1.01
	Discovered measures facilitate discussions with clients	1.11	1.10
	Heard positive client testimonials	0.47	0.84
	Found measures for specific clientele	0.42	0.76
	Received a free trial	0.31	0.82
Cost			
	Received measure at no cost	1.56	1.38
	Received measures at a low cost	1.00	1.37
	Received a free trial	0.94	1.21
	Heard about others' positive experiences	0.39	0.97
	Other	0.33	0.97
Non-users			
Not convinced of benefits			
	Discovering measures could help identify therapists' strengths and weaknesses	1.29	0.90
	Receiving evidence that measures can increase clients' outcome	1.26	0.86
	Finding measures can be used to show clients their progress	1.16	1.05
	Finding measures can provide data to use in practice	1.11	1.01
	Receiving evidence that measures are more accurate at assessing clients' progress than clinical judgment	1.11	1.06
Lack training			
	Receive a brief training on measures	1.76	0.94

Attend a seminar/webinar on measures	1.58	0.90
Receive training/support from a supervisor	1.48	1.25
Receive training/support from the companies hosting measures	1.45	0.90
Receive training/support on a website	1.36	0.96
Fear measures burden clients		
Discover measures facilitate discussions with clients	1.55	0.96
Hear positive client testimonials	1.26	1.00
Discover measures were very brief	1.16	0.97
Receive a free-trial	1.13	1.09
Discover some clients find therapists using measures more credible	1.13	0.96
Measures add too much work		
Finding benefits outweigh extra work/time	1.50	1.14
Receiving a free trial	1.22	0.99
Discovering some measures take > 5 min	1.30	0.95
Discovering measures can be completed before session	1.20	0.95
Discovering measures can be combined with advanced technology to reduce time and eliminate paperwork	1.13	0.97
Previous-users		
Learned about measures from job training / supervisor	1.37	1.28
Discovered measures were very brief	1.09	1.12
Discovered measures could be used to show clients their progress	1.07	1.12
Supervisor pressured/encouraged me to use a PM measure	1.04	1.28
Learned about measures from a journal / conference	1.01	1.11
Found measures could be used for quality evaluation	1.00	1.04
Discovered measures could facilitate discussions with clients	0.94	1.10
Heard positive testimonials from colleagues	0.88	1.06
Discovered measures could provide data to use in practice	0.85	1.07
Received evidence that measures could improve clients' outcomes	0.82	1.07

Linking Study 1 & 2 and 3

Study 1 and Study 2 surveyed clinicians to examine the barriers and facilitators to the use of PM measures. Study 3 will continue to examine and expand on the challenges faced by users of these measures through individual interviews. By interviewing users about their personal experiences with these measures, Study 3 allows participants to move beyond the choices offered in the survey and make links between different barriers and facilitators. The three studies contribute to the "barriers identification" stage of the KTA (Knowledge-to-Action; Graham et al., 2006) model, which proposes that identifying barriers will provide vital information for creating strategies to move knowledge into action. Study 1 and Study 2 surveyed psychologists' experiences with PM measures. Study 3 is qualitative and interview-based and will gives voice to clinician perspectives with a sample of therapists from a variety of professions.

Both Study 1 and Study 2 are aimed at creating a scientific basis for interventions to facilitate clinicians' usage of PM measures. Study 3 continues to examine facilitators by soliciting clinicians' advice for those considering the use of these measures. Study 1 and 2 provided insight into the challenges that arise during the pre-contemplation, contemplation and implementation phase of use. Study 3 will build on this by focusing on the challenges that arise during the application phase. The results of these three studies together will illuminate issues that arise throughout the process of beginning and continuing PM use.

Chapter 4

Progress Monitoring measures: Advice from your colleagues

Gabriela Ionita, Marilyn Fitzpatrick, Jann Tomaro, Vivian Chan and Louise Overington

Author Note

Gabriela Ionita, Marilyn Fitzpatrick, and Louise Overington, Department of Educational and Counselling Psychology, McGill University. Vivian Chan and Jann Tomaro, Montreal, Quebec.

This research was supported by a grant from Fonds de la recherche en santé du Québec.

The authors would like to thank members of the McGill Psychotherapy Process Research Group (MPPRG) for their help during the development of this study.

Correspondence concerning this article should be addressed to Gabriela Ionita, Department of Educational and Counselling Psychology, McGill University, Montreal, Quebec. E-mail: gabriela.ionita@mail.mcgill.ca

Abstract

Although, applying Progress Monitoring (PM) measures has been shown to lead to improved outcomes for clients, research suggests that few clinicians are applying these measures in their practice. This study applied consensual qualitative research (CQR) methodology to examine the challenges faced by clinicians using Progress Monitoring (PM) measures and the advice clinicians perceived as relevant to others considering implementing these measures. Open-ended, semi-structured interviews, with 25 clinicians using PM measures, revealed that while there is great variability in both the challenges experienced and advice provided, the most commonly experienced challenges were: negative responses from others, practical concerns, dissatisfaction with specific characteristics of the measures, and concerns regarding the measures fit. Clinicians most commonly advised that the presentation of the measures to clients has a strong impact on their reception. They counseled new users to be open when starting to use a PM measure and to seek out support or supervision; they advised organizations to avoid being coercive. Attending to the emotional impacts of implementation may be an important issue for practicing clinicians.

Keywords: progress monitoring (PM) measures; outcomes monitoring, evidence-based practice; psychotherapy; consensual qualitative research (CQR)

With the movement towards evidence-based practice, clinicians need to find ways to integrate research into practice (APA, 2005; CPA, 2005; Dozois et al., 2014). Unfortunately, this can be quite challenging; the gap between research and psychotherapy practice was documented as early as 1961 (Barlow, 1981) and continues to be a major problem (Castonguay, Locke, & Hayes, 2011). Researchers argue that research has almost no impact on clinical practice (Barlow, 1981; Beutler, Williams, Wakefield, & Entwistle, 1995; Castonguay et al., 2011; Goldfried, Borkovec, Clarkin, Johnson, & Parry, 1999), while clinicians claim that researchers disregard naturalistic or 'real-world' therapy, making research less relevant in a clinical setting (Beutler et al., 1995; Franklin & DeRubeis, 2006; Goldfried et al., 1999; Grol & Grimshaw, 2003).

Progress Monitoring (PM) measures may give clinicians a realistic way to bring research into practice. These measures are sensitive to client change (Lueger & Barkham, 2010) and can be used regularly to systematically assess client progress in treatment (Duncan, 2012; Evans, 2012; Fitzpatrick, 2012; McAleavey, Nordberg, Kraus, & Castonguay, 2012; Overington & Ionita, 2012; Sales & Alves, 2012; Sundet, 2012). A few examples of these measures are the Outcome Questionnaire-45 (OQ-45; Lambert et al., 1996), the Partners for Change Outcome Management System (PCOMS; Miller, Duncan, Sorrell, & Brown, 2005), and the Treatment Outcome Package (TOP; Kraus, Seligman, & Jordan, 2005). These measures provide clinicians with relevant evidence, tailored to the specific client, offering a way to integrate research evidence with clinical expertise in the evolving client-therapist interaction. Clinicians can use them to supplement their clinical expertise in making treatment appropriate decisions for clients.

Aside from making practice more evidence-based, the literature points to a number of other benefits of the measures. For example, PM measures can accurately detect clients who

deteriorate or do not progress (e.g., Finch, Lambert, & Schaalje, 2001; Lunnen & Ogles, 1998). By using these measures with cut offs or dosage curves or cut offs these measures are able to alert clinicians to clients who are not progressing as expected in therapy sessions (e.g., Finch, Lambert, & Schaalje, 2001). Additionaly, PM measures can predict which clients will deteriorate, as early as the third session (Hannan et al., 2005). Thus, PM measures can help clinicians identify the 5% and 10% of clients who typically do not respond well to psychotherapy (Lambert & Ogles, 2004), so that the course of treatment is altered to better meet their needs. There is mounting evidence of improved client outcomes when clinicians use PM measures to identify clients who are deteriorating or not progressing (Lambert & Shimokawa, 2011; Lambert & Vermeersch, 2008; Shimokawa, Lambert, & Smart, 2010). PM measures can also minimize the length of treatment for some clients and reduce dropout (e.g., Bohanske & Franczak, 2010; Whipple et al., 2003) and no-show rates (e.g., Bohanske & Franczak, 2010), effectively reducing caseloads without reducing the effectiveness of services.

Another benefit of PM measures is their potential for benchmarking. Data from the measures have been used to benchmark services across jurisdictions, organizations, and practitioners for the purpose of quality evaluation. These comparisons permit the identification of service strengths and limitations and facilitate optimal resource allocation (e.g., Barkham, Hardy, & Mellor Clark, 2010; Barkham et al., 2001; Behavioral Health Laboratories, 2003; Lueger & Barkham, 2010; Minami et al, 2008). At the client level, similar comparisons can be used to create profiles that identify clients who typically respond poorly to treatment; these clients can then be targeted for additional intervention (e.g., Behavioral Health Laboratories, 2003).

Although research and theory suggest that PM measures improve service delivery, only a small number of clinicians appear to be using them. Westmacott (2011) found that 33% of psychologists working with adults used a PM measure, and Ionita and Fitzpatrick found that only 12% of Canadian psychologists were using these measures. A number of authors have discussed the barriers that likely hinder usage (e.g. Boswell, Kraus, Miller, & Lambert, 2013; Kordy, Hannover, & Richard, 2001) and a recent survey of barriers impacting usage (Ionita, Fitzpatrick, & Drapeau, 2014) indicated that the most challenging barriers to implementation are: 1) limited knowledge, 2) limited training, 3) concerns that measures burden clients, and 4) concerns regarding additional work/time demands. As this was a survey, responses were restricted to the barriers presented in the survey.

Researchers in the UK have also examined challenges to the usage of routine outcome measures (e.g. Callaly, Hyland, Coombs, & Trauer, 2006; Johnston & Gowers, 2005; Unsworth, Cowie, & Green, 2011) which includes both clinician-rated and client-rated outcome measures. Findings from these studies indicate that challenges include clinician attitude/resistance, fit with clientele and clinician philosophy, resource constraints, staffing issues and resource shortfalls, initial feelings of anxiety, and fear of being judged. Yamin, Rosval, Byrne, Burr, and Aubry (2011) examined challenges to the usage of the OQ-45 in a training setting in Canada. Student clinicians reported issues regarding the frequency of usage, the usefulness of the measure, fit with clientele, fear that the measure would interfere with rapport or crisis management, concern that the measure takes time away from the session, difficulties communicating results to clients, and technical issues.

The aim of the current study was to examine clinicians' individual experiences of challenges involved in the usage of PM measures. A second aim was to elicit advice from

current users to potential users. Since clinicians tend to turn to colleagues for knowledge they apply in practice (Cohen, Sargent, & Sechrest, 1986; Prochasks & Norcross, 1983), it is important to disseminate clinicians perspectives in a way that allows their colleagues to hear their voices. To give maximum voice to clinician perspectives, a qualitative interview methodology was chosen. Examining clinicians' experiences and advice in this way is a strategy to reduce the gap between theory and research on PM and its ultimate application.

Method

Participants

Clinicians. Twenty-five registered clinicians, who were using a PM measure, participated in this study. Over three-fourths of participants were male and approximately two-thirds were over 51 years of age (see Table 1). The majority of participants worked in private practice; most participants working in a clinic were in a leadership position. Clinician ratings of theoretical orientation endorsed indicated that Eclectic/Integrative was the most influential (M = 62.04; SD = 38.80), followed by Other (M = 46.32; SD = 37.43), Humanistic (M = 43.84; SD = 25.49), Cognitive Behavioural Therapy (M = 40.64; SD = 30.75), Interpersonal/Relational (M = 40.04; SD = 29.16), Systemic (M = 39.80; SD = 30.91), Experiential (M = 34.88; SD = 30.74), Narrative (M = 31.12; SD = 28.41), Existential (M = 29.72; SD = 26.38), Behavioural (M = 25.04; SD = 27.50), and Dynamic (M = 23.20; SD = 23.80). Solution Focused (n = 6) was the most popular "Other" theoretical orientation reported. The majority of participants (76%) used the Outcome Rating Scale and Session Rating Scale (ORS and SRS; Miller, Duncan, Sorrell, & Brown, 2005), also known as the Partners for Change Outcome Management System (PCOMS).

Researchers. Six females (2 PhD and 1 MA level counselling psychology students, 2 undergraduate psychology students, and 1 full professor) comprised the team of researchers. All

members served as data analysts or judges; the first author of this paper conducted all interviews. Prior to collecting data, team members unfamiliar with consensual qualitative research (CQR) methodology underwent training in CQR. Team members discussed their views on progress monitoring measures prior to data collection. All of the researchers believed that PM measures were useful for improving clinical practice. Biases were addressed and discussed throughout the research process so that they did not unduly influence the data analysis. Four female undergraduate students transcribed interviews and checked each full transcript for accuracy.

Interview Protocols

Open-ended, semi-structured, interviews were designed as part of a larger program of research. Interviews were piloted with six graduate students, two clinical professors, and 2 clinicians. Adjustments were made to the interview protocol based on the concerns and suggestions of pilot participants. Participants were initially given a description of PM measures, with a number of examples. They were asked about all PM measures they were using, how often they used the measures, and with which clients. Clinicians were then asked to describe any challenges experienced in relation to using a PM measure and to provide advice to others considering or wanting to implement a PM measure. Lastly, clinicians were asked for demographic data (age, sex, years practicing psychotherapy, registration body and status, position held, primary clientele, and adherence to theoretical orientations).

Procedures

Participants who completed a survey on the usage of PM measures (Ionita & Fitzpatrick, 2014) were invited to participate in this study. Participants were also recruited through study notices placed on psychotherapy related pages of various social networking sites (e.g. Facebook and LinkedIn). Host-companies and creators of measures were asked to send study notices to

known users of PM measures. Those affiliated with the Behavior and Symptom Identification Scales (e.g., BASIS-24; Eisen, Normand, Belanger, Spiro, & Esch, 2004) sent study notices to users and one of the creators of the PCOMS placed a study notice on the International Center for Clinical Excellence website. Study notices included a brief description of the study, information that participants would be entered in a draw for a $100 gift certificate from Amazon to thank them for their participation, and a link to a secure website where participants could provide informed consent and list the telephone number where they could be reached to complete the interview. Telephone interviews lasted between 18 and 53 minutes.

Data Analysis

We used consensual qualitative research (CQR) as a data analytic strategy to capture similarities in perspectives across clinicians while also offering an in-depth examination of individual experiences and opinions (Hill, Knox, Thompson, Williams, Hess, & Ladany, 2005). Although research bias is inevitable, CQR provides an analytic process through which biases are discussed at length and minimized through the process of consensus. Another major strength of CQR is the inclusion of multiple perspectives in data analysis allowing for the identification of subtleties that may be missed by just one rater (Hill et al., 2005).

A primary team composed of three students read several transcripts and came to consensus on a list of domains (i.e., topics). After consultation with the auditor, and reading two more transcripts, the primary team altered the domain list to incorporate the auditors' feedback and to better reflect the interview data. Primary team members independently sectioned interview data into domains and later abstracted data in each domain into core ideas. Domains were refined based on emerging data. Weekly consensus meetings were held throughout to discuss discrepancies in domains and core ideas until consensus was reached. For cross-analysis,

primary team members and an additional researcher worked as a group to reach consensus on the responses that were grouped into categories. Two researchers served as auditors; both audited the data sorted into domains, one examined core ideas, and one audited the cross-analysis. The primary team discussed all comments made by the auditors' and adjusted domains, core ideas, or cross-analysis after reaching consensus on changes.

Connections between domains were charted to examine whether specific categories within one domain, aligned with categories in another domain. Hill, Thompson, and Williams (1997) recommend charting connections between general and typical categories; one connection between typical categories in different domains was identified and charted. We then examined the data set for all categories with overlapping cases. In a number of instances, we found substantial overlap in cases between variant categories in the different domains. To reflect this overlap in our model, we graphed all connections between categories with 5 or more cases that overlapped when at least 50% of the cases in one category matched the cases in the other category.

Results

Three domains emerged that portrayed the challenges clinicians experienced when using a PM measure and the advice clinicians had for others considering these measures; domains were: challenges, negative response from others, and advice. Each domain included a number of categories and subcategories (see Table 2).

Domain 1: Challenges

Of the challenges discussed, *practical concerns* was the most common. The two most frequently identified practical concerns were difficulties keeping track of the administration of the measure and technical issues. For example, one participant stated "I think the biggest barrier

was getting into the routine of it… it gets forgotten a few times and then suddenly you're not doing it anymore." One participant reported the following technical issue: "(I) wasn't all that happy with the original version of the software…was kinda clunky… they (the software company) didn't have any kind of computer support."

Relatively minor practical concerns included cost and confidentiality: each was mentioned only twice. One participant noted that, "The only real obstacle, luckily it wasn't expensive, but where I was (employed) wouldn't pay for the software part of it, so I was paying for that myself. So, minor obstacle there." Relative to confidentially, a participant noted concerns about the safety of information that led to procedures to disguise the identities of clients.

> Right now we use a software - a web software - so we do it on the computer…one of the problems is, where is this information going? It has to be confidential. You have to assign numbers. It's an added procedural thing, which I think is a challenge.

Another typically reported challenge was *dissatisfaction with a specific characteristic of a PM measure*. Within this category, the most commonly criticized characteristic was the length of the measure. In discussing the reasons the OQ-45 (Lambert et al., 1996) was not used in clinical practice, one participant reported the following:

> The practicality of using something that's 45 items long or even 20 items long, you know the time it would take you to score it, the time it would take for the client to fill it out is beyond what I think is reasonable in a clinical practice. In the setting where the expectations different, like a research setting or place where services were free, then I think people (clients and clinicians) might be more accepting of it, but I think in a private practice you know, people's time is precious. Either they've (clients) paid for a

> babysitter for their kids or they're coming out of work to do this. You know, asking to spend 15 minutes, 10 minutes filling out a form you know is a lot to ask. Well, 10 minutes let's say, between the form and my looking at it (results) and the items, and that sort of thing.

The next most commonly criticized characteristic was limited validity or reliability. When describing initial concerns regarding the PCOMS, one participant stated the following:

> I hadn't used the measures, but I was again reading a lot, just sort of interested in the ideas, but also very skeptical about whether something so brief could be that useful, could be valid, how you could ask such simple, vague questions to get at something as hard to pin down as well-being.

Concern regarding the variability of the measures' score was also reported by a number of participants.

> I saw that it has the same problem as …any other official psychometric measure. It's very good at tracking variability in the mid-range of the construct but at the extreme, at extreme high and extreme low, it loses resolution because the items that are used don't map onto those ranges very well. Now, clinically-speaking, the extreme high stuff doesn't matter because if the person's, you know, if they're up to their butts in alligator shit, you don't need a test to tell you, right? But, it's nice to have an instrument that gives you good consistency of measurement down in the lower severity ranges because that is often where the term of decisions is, you know, when do you terminate? And those kinds of measures aren't all that informative for you in that regard.

A few participants also reported concern regarding the measures' breadth or depth. In discussing the PCOMS, one participant stated that "the downside of those (PM measures) is because it's so high in face validity, the specificity is lacking… you don't get the details on some things".

Another typical category in this domain involved concern regarding the measures "fit". Participants pointed to a lack of fit in a number of areas; most commonly participants reported lack of fit with some clientele. For example, one participant stated the following:

> Dealing with people in a state of crisis, for example high-risk pregnancy and they just lost the baby, to swoop in with the measure and say "will you fill this out for me? I'm going to see you for two sessions." It just wasn't clinically appropriate.

Participants also pointed to lack of fit with the therapists' orientation or beliefs.

> I think that the biggest barrier us (the organization) was getting folks to switch from deficit based service planning, symptom focused and those kinds of things, into trusting clients' perception of their own progress. That really is a leap of faith. That, what is important is really the client's view of how well they're doing, as opposed to ours and getting folks (clinicians) to let go of that privileged position as a therapy model, I think was the hardest piece.

Another area of lack of fit was with the participants' organization or practice.

> In the community mental health center that I lived (worked) in, is, they were so preoccupied with the day-to-day stuff of financial survival that they wouldn't listen to anything that, on the surface, that do more work. They didn't understand that no-show rates would decrease. They didn't understand that people would be more effective. I don't think they were interested. In a way, it's not that they didn't want to help people. I don't mean that, but they weren't interested in changing things, because what they were

> interested in was that people saw their twenty-six hours of face-to-face a week, that they got the paperwork done on that day so that they could properly bill it ….So, they (management) were just unable, they remain unable, to focus on anything else.

One participant discussed lack of fit with the service provided when a practice was focused on assessments or consultation.

A variant category within the challenge domain involved *feeling uncomfortable or anxious about using a PM measure*. This category involved three subcategories, including feeling uncomfortable or anxious when initially using the measure. An example of such fears is illustrated in the following statement, "(I was) initially worried that clients may not like it (PM measure) and that it may ruin rapport because it takes up time at the beginning of sessions, at the beginning of therapy". Another subcategory included statements from two participants who were initially unsure about how to communicate with clients about the measures.

> It took a little bit of braveness at the beginning to start having those conversations but mostly because I didn't really know what to say or how to frame it or present it or just how you know to do the passing of the paper…that I would be awkward or not phrase it in terms of how would it benefit them , or what they might get from it or why they might want to do it. I didn't want it to seem like, that they were taking a test or like it was just for me or all about me and I think at first I had the belief that it would be really helpful to clients, but I think my primary motivation is that it would be helpful to me in being a good therapist and I didn't want to make that sound like my primary reason when I was talking to the clients.

The last subcategory involved statements indicating a fear of being evaluated. For example, "It's, you know, full accountability and it can be a little, maybe, a little scary".

The remaining variant categories in the "challenge" domain included concerns about a number of issues. The most common variant category was *concern regarding additional work and time*. An example of a statement in this category is: "(I) discovered that there were practical barriers to doing outcome monitoring, primarily time, particularly in settings where we have a lot of pressure to see a lot of patients". Another variant category involved *concern about the frequency that the measure was used*. One participant described the following issues when the measures were used frequently: "we initially started doing that every session but because some of the clients are here for a long time, that got to be cumbersome and we also found we were collecting more data than we were using". Participants also expressed *concern regarding the misuse of the measure or results*. For example, one participant reported, "that (data from measures) is usually used in decision-making about resource allocation. Like, will I continue to pay you?....This is an issue for organizational culture". *Concerns regarding the usefulness of the measure* and *lack of knowledge* of the measure were the other two types of concerns grouped into variant categories.

The two rare categories within the "challenges" domain involved statements from a few participants who identified lack of personal investment in PM measure as a challenge and statements expressing concerns about clients' truthfulness.

Aside from discussing challenges to the usage of PM measures, 18 participants explained how they *overcame the challenges* they faced. The most common way to overcome a challenge was to confront the anxiety; six of the eight participants who reported initially feeling uncomfortable or anxious when using a PM measure reported they overcame these feelings.

> Initially, it was very hard (experiencing fear of being evaluated)…because if you ask they tell you the truth, then sometimes it throws you, what they're saying. But then what

> happens is you get used to it, because you know it's not a criticism, it's just a feedback and then you begin to notice that the client really trusting you, really trusting you, and the feedback is that you really listen to them. So I think that you overcome that initial uneasiness about what they might say.

Gaining experience with the measure also seems to have been helpful for overcoming challenges.

> So I think initially you hesitate because you feel insecure about why am I doing this (using the measure) and then someone (client) comes along and questions, and you begin to shake in your own choice. But I think that that has to do with the practice, the more you do it the better you get at it and the more you see a coherence around it and the less you get worried about the questions.

Through experience, two participants found changing the way they interpreted aspects of the measure could help them overcome a challenge. One of these participants explained, "you still have to engage the client (to get) their meaning and what's really going on, cause sometimes the raw number doesn't actually portray the full depths of the experience."

Some participants also pointed to becoming more informed about the measure as a means to overcome a challenge. Another way to overcome a challenge involved communicating information to others.

> Those terms (used in items on measure) are not terms that a lot of 13 year old kids use. In fact those terms are not terms that your typical person on the street is going to use. So they do usually require some explanation…when I train people in these measures is just tell them you know "don't expect somebody to understand them," and I think, anything, if people use the first one or two times usually requires guidance or translation and that's the case here.

Some participants also found that adjusting the frequency of use could be useful.

> Some of my colleagues, one psychiatrist in particular, likes to give measures at every session. I used to do that when I was in private practice for a while but I found it more useful to give these follow up measures, repeat but periodically, not every session. Because I think you can easily get some kind of artifact built up where people give you what they think you want to hear, almost like a demand characteristic, and I really want to avoid that. If somebody comes in and they know they're going to get the outcome (PM) measure every time, I don't want it to be overly predictable so I do it periodically and I find that works better.

Gaining support from others – such as supervisors, colleagues, and the online community - was a solution that was also discussed by a number of participants. One participant described how group supervision was helpful to overcome an interns' resistance:

> Within the group supervision though, they (interns) all support each other very strongly and so they develop a camaraderie around this. Last year we had one person, one intern, who was really reluctant, afraid, that she would not look good and so there was a certain amount of resistance to doing this and so by the time we got to later part of her internship she had a complete reversal (due to support from other interns) and she was one of the strong supporters of that system.

Some participants also found that getting a measure with the right fit was helpful to overcoming challenges. For example, one participant whose clients were from an indigenous group that had not responded well to typical PM measures preferred a measure that he designed, stating, "they don't like the idea of individualism, that doesn't sit well with them, with indigenous people". A small number of participants reported they changed how the measure was

used to overcome a challenge. For example, one participant was worried that some questions on the PM measure were related to couple relationships, which did not apply to single clients, so the participant chose to ask single clients to rate their satisfaction with being single, rather than their satisfaction with their partner.

Another way to overcome a challenge reported by a small number of participants was to change the culture at the organization.

> When you try to change a health care system, a community behavioral health system from a medical or illness or a deficit based model, to a strength based recovery type model (necessary for using a PM measure), you're changing the culture and the biggest thing that really goes into changing a culture like that is allowing that process of empowering the voice and choice of clients in their own treatment process….We put our administrators through the training, we put our support staff through the training, because every time we turn around there is an avenue for it to fail, when you make a cultural change. So we incorporated it to our whole system.

Domain 2: Negative Response from Others

In regards to negative responses from others, participants typically discussed receiving a *negative response from some colleagues or some clients*. In particular, colleagues tended to have difficulty with PM measures when they felt the measures were mandated. In discussing this topic, one participant noted "no one over the age of two wants to be told what to do." Some colleagues also had difficulty adapting to a PM measure or the changes that were required for implementation. One participant described this reluctance, by stating "anything that requires you to change something…something you've been doing for a while…you're going to work on it really closely and maybe you're not going to be instantly engaged." Another issue for some

colleagues was related to fact that the measures challenged people in organizations who had traditionally held power. "Somebody who was in a very senior position finds out that he or she, his or her level of effectiveness, is slightly less than the majority, that's scary. So it really challenges all the hierarchies. I know that is really challenging, I know that for a fact." A number of issues that led to negative responses from colleagues were reported by only a small number of participants: not viewing the measures as useful, not liking the idea of numbers or measurement, not believing the measure fit with what was appropriate in therapy, and not considering the measures to fit with specific clients (e.g., the instability of a client with BPD**)** or in specific services (e.g., assessment oriented practices). One participant reported that colleagues had responded negatively due to their clients' negative response to the measure.

When participants discussed negative responses from clients, they reported that clients sometimes disengaged due to the measures' repetitiveness when it was used often.

> Whenever I use them (PM measure), very regularly, clients start to get, I might even use the word bored, with them. They seem to just get kind of tired of completing them and although I explain the purpose of them, I notice that if I use them frequently then the clients complete them faster and faster.

Participants also found that some clients did not see the purpose of the measures and some infrequent observations involved clients not feeling comfortable rating the therapist (e.g., "oh gosh, I'm really uncomfortable rating you in front of you' you know?"). Some clients were believed to have responded negatively due to their own mental health issues.

> People give different reasons (for refusing to complete measures). It doesn't happen often and its usually - we serve a population of medicated clients with severe persistent

> mental illness - and primarily its people who would be diagnosed with personality disorders, who might be a little suspicious or more on the paranoid side of the world.

A client issue voiced by two participants was clients fearing that the measures would be used to deny them services. Two participants also believed clients responded negatively when the measure is unfamiliar. For example, one of the participants noted, "a lot of times it seems that these folks (clients who refuse) are generally therapy veterans and no one's ever done that before. So they don't know why it would be necessary now."

Aside from negative response from colleagues and clients, some participants were confronted with a *negative response from the organization at which they worked* and a few clinicians noticed that some *trainees had difficulty with the measures*.

Although participants described negative responses from others, almost one third of the participants interviewed were able to *find an effective strategy to elicit a positive response*. By far the most commonly mentioned strategy was simply explaining the measure to others.

> They (clients) get used to filling out a lot of forms and sometimes they might think this (PM measure) is going to be like the other ones. But what's different about it I think it is how we can present it, this is a way for us to give them a voice to their own care and once they know that we're (clinicians) genuine about that and they see the form, I've never had anybody object to it.

Some of the other strategies involved presenting literature or research on the measure, getting others to try the measure with external support, and making changes at the organizational level.

> It (clinician response) really depends a lot on how the organization is implementing these measures…what their process is…what you're really doing with these measures in a

> more profound level, at a systems level, is you're really trying to create a culture of feedback

Domain 3: Advice

Participants were easily able to provide advice to others considering the use of a PM measure. However, the advice varied greatly and no general or typical category was identified in this domain. The most commonly provided piece of advice was *the way the measure is presented, either to clinicians or clients, is important.* In introducing the measure to the client, one participant explained, "the concept has to be presented to the person (client). You cannot ditch the form and leave it on the desk, it has to be interlaced into the process of therapy". An example of advice for how to present the measure to clinicians can be seen in the following statement:

> How much voice do they have in the process? And did they, have they heard why it's a good idea? Why it's necessary? Why it's really helpful for them? Why it's going to make them better clinicians? You know most people go into our field really genuinely wanting to help people and if you can show them how this particular instrument is going to make them better at their jobs, most people are very accepting of it.

Participants also suggested using research findings to increase support for implementation

> As a manger, I would advise someone to introduce the concept tentatively and circulate some of the research first so that people have the background and the understanding and the logic for it before you say "let's try this." I think it would be a good idea because a lot of people are going to have a very strong negative reaction.

Other common advice provided by participants involved *encouraging the use of support or supervision* in conjunction with the PM measure. Statements within this category were

grouped into three subcategories: supervision is necessary, connecting with experienced others or a community is necessary, and a support person is necessary. One participant illustrated the importance of a support person with the following statement:

> If I would give advice to another clinic, I would speak to how important it is to have someone whose job it is to make sure that this (PM measure administration) happens and that if you can dedicate even part of a position to making sure that this happens clinic-wide. All your clinicians become supported in that, but without having someone dedicated to that, even having a staff with the most well intentioned clinicians, it is not going to happen as routinely as you like because people are busy, clients come late, people get forgetful, holidays come into the mix. It's just, there are a number of things that can throw it off and to me that has been the hardest part.

Almost one third of participants encouraged others starting to *be open to the experience of using the measure*.

> Sometimes you might get feedback (from measure) that you don't particularly like or appreciate. It's important for you to take it seriously and not just minimize that feedback on the grounds that the person that gave it to you is mentally ill. This is technically what we usually do, I mean if our clients are… kind of give us negative feedback, then we give them borderline personality disorder and then we can discount anything that they say that's negative on the grounds that 'well they're borderline of course, why should I listen to them?'….The secret, if you will, to all of this using (PM measures) is that if you don't allow that feedback to happen, then…whatever it is, that you use for an outcome measurement is probably not going to be very effective.

Within this category, participants also advised others considering the measure to "just try it".

> I guess my advice is 'don't listen to my advice', don't listen to anyone's advice actually. I mean don't let anyone convince you. Let your experience convince you, find out for yourself. It may or may not fit…try something for a fixed period of time so that you can see what it is. It would be good to not try it alone because trying with somebody else (another clinicians) as well and use that to inform your practice, rather than relying on evidence base and create your own evidence base.

Almost one third of participants also advised clinicians to *become informed about the measures before implementing one*, especially by turning to research, manuals, or training.

> My advice to the clinicians is to maintain a balanced perspective on what you're doing and why. So for example, I mean I am a strong advocate of using outcome measurements. I do not believe that outcome measurement is a substitute for judgment. It's a decisional-support tool, not a decisional-replacement tool…So, that's the first thing. Know your instrument. Know what it can do and what it can't do.

Another category involved advising clinicians to *have a collaborative attitude with clients and with colleagues when using a PM measure*.

> You will see the benefit when the clients begin to see that you're really interested in what they have to say. You really want to know what their life is and also they will see that next session you will be aware of what they said before. So you're not going to repeat something that didn't work for them. And I think they notice that as well. So that definitely helps to build the relationship.

In describing how to collaborate with colleagues, one participant explained:

> We made it as open a process as possible, "anything that bothers use, come to my desk and talk about it and see what we can do." So often it was down to a case-by-case for that situation and we worked it out.

Within another category, participants advised that it was important to *get clinicians and clients to understand the reasons behind using a PM measure* "The clinicians need regular feedback, about why they are doing this". Another participant noted, "I think you have to help them (clients) understand what you're trying to accomplish and really frame it in terms of wanting to ensure you have shared understanding."

Some participants believed it was important to *be prepared for negative feedback or feeling uncomfortable when administering a PM measure*.

> I'd say just be patient with yourself…don't expect yourself to just be able to instantly feel comfortable on any level. This fear factor, if that's an issue, or just the smoothness in which you can get the discussions … just like doing anything new is... take it easy on yourself and give yourself a little bit of time to get comfortable with it. But the only way to do that is to do it. I don't mean like give it to two clients a week for two months. I mean use it, but realize that like anything, it's going to take a little time to feel more natural to you.

When using PM at an agency, participants believed it was important *that agencies avoid being coercive when using measures* and gain clinician buy-in instead of forcing implementation.

> We (management) try to just gently engage them (clinicians), we don't tell them, this is something you have to do or you're going to get fired. We try to introduce it the same way we want them to introduce it to their clients – "this is something that is for your benefit. It is going to make you a better therapist.

To avoid coercion, some participants believed it was also important to avoid using the data from the measures in a threatening manner.

> You see, the thing is, it (reception of measure) depends on how you go at that. If the message is, "be good (get high scores on PM measure) or I'll fire you," I'd be scared too. But the, your organization says, "look, we know this already, we want to help, study your experience, bring it back to us, look at your training, look at your supervision, we will move you on."

Another variant category in this domain involved *advising others that the measure should be implemented systematically*. There were also two rare categories within this domain, which included *advising clinicians to use a computer-scoring program with the PM measure* and to *make their own decisions when selecting a measure*. In explaining the latter, one participant said "I think we all need to kind of look ahead and be proactive and decide (for) ourselves (what PM measure to use)…rather than have it done to us."

Connecting Categories between Domains

In examining connections between typical categories across domains one connection was identified between lack of fit and negative response from colleagues. This suggests that participants who felt the measure did not fit with their clientele, orientation, organization/practice, or the service they provided also reported negative response from their colleagues. Based on the criteria established for graphing connections between non-typical categories, eleven other categories were graphed (the resulting model is presented in Figure 1). The resulting model suggests that the majority of participants who faced challenges related to additional work and time advised others to be open to the experience when starting to use measures. The majority of clinicians who expressed concerns regarding lack of fit also discussed

negative responses from colleagues, found ways to elicit positive responses from others, and advised clinicians to get informed about measures before implementing them. Clinicians who discussed feeling anxious or uncomfortable tend to report negative responses from colleagues and clients. The majority of those dissatisfied with characteristics of the measures and those who reported negative responses from their colleagues advised that the presentation of the measures influenced others' uptake of the measures. Clinicians who reported negative responses also tended to advise others to be open, to rely on support or supervision, and to help others understand the measures. Lastly, the majority of clinicians who reported negative responses from clients advised others that it was important to become informed about the measures.

Discussion

One of the main goals of this study was to identify the challenges involved in using PM measures. Interestingly, the challenges that were typically voiced by clinicians in our study were different than those reported by users of PM measures in a recent large-scale survey (Masked for Review). In that survey, clinicians chose additional work and time, concerns about burdening clients as the main barriers to beginning to use. Clinicians in the current study were asked about the challenges they experienced *while using* the measures. This suggests that efforts directed at dissemination and uptake of PM measures will need to target different stages of use. For those who are not aware, increasing awareness and knowledge is key (Ionita & Fitzpatrick, 2014). Efforts for clinicians at the implementation stage will require a variety of interventions related to support, supervision, training, and introducing electronic versions of measures with online scoring (Ionita, Fitzpatrick, & Drapeau, 2014). The results of the current study can be used to help formulate interventions for clinicians in the *usage* stage.

We found that none of the challenges identified by participants fell into a general category and only five of the challenges identified (including negative responses from others) fell within typical categories. Even within the more typically experienced concerns there was diversity in the specifics, with at least four subcategories for each category. These findings suggest that there may not be *universal* challenges and concerns. Rather, clinicians appear to experience a wide variety of issues at this stage of use. Considering the diversity in clinician approaches to practice (there are currently more than 400 theories of practice; Corsini & Wedding, 2008), it is not surprising clinicians approach the integration of PM into practice with different concerns. Interventions at the *usage* phase will need to be multifaceted and targeted to the variety of issues faced by clinicians. Below we discuss the seven most common challenges, their implications, including potential solutions, and advice shared by participants.

The most commonly discussed practical concern was how to incorporate a measure into practice. Participants advised that potential users need to be aware that starting a new system takes some effort, and that colleagues and administrators who help need to have an open and collaborative stance. Boswell and colleagues (2014) have suggested that identifying local "champions" to take "enthusiastic responsibility for assisting in the adoption, implementation, and sustainability" (p.10). However, in solo practice, clinicians may not have access to such champions. Here the idea of connecting with experienced colleagues or an online forum seems important.

Technical issues, the other most commonly discussed practical concern, may be resolved by selecting a PM measure that is simple to use and offers online scoring and feedback (see Overington & Ionita, 2012 for a review). The increasing numbers of clients with mobile devices augurs well for improvements in this area. If clinicians do run into technical issues, technical

support needs to be easily accessible (see Appendix A for information on accessing support for a number of PM systems).

Clinicians commonly discussed dissatisfaction with specific characteristics of a PM measure. Although there is no "perfect" assessment tool (Boswell et al., 2013) most participants who discussed problems with measures also gave the advice that how measures are presented has an important impact on reception (see Figure 1). If those introducing measures match their approach to their audience and provide research evidence, clinicians may be more willing to recognize that the benefits of the measures outweigh the limitations.

In regards to specific characteristics found to be problematic, almost one third of clinicians expressed concerns about length. Participants who discussed dissatisfaction with length were able to find and apply a shorter measure, usually the PCOMS. The PCOMS was in fact developed as a brief alternative to the longer OQ-45 (Miller et al., 2005). These participants advised that new users become informed about issues such as time and choose a system with the characteristics that best match the needs of their clientele and site. If time is a concern, clinicians can opt for shorter measures; if limited breadth or depth is a concern as it was for some participants, clinicians can opt for measures that are more comprehensive.

Fit - with the clientele, with the therapists' philosophy, with the organization/practice, or with the services provided - was another commonly identified challenge. Therapists in other studies have also reported challenges in regards to the fit between the measure and certain clientele (Callaly et al., 2006; Yamin et al., 2011) or with clinicians' philosophy (Johnston & Growers, 2005). According to our model, the majority of participants who had issues with fit also had colleagues who responded negatively to the PM measure (see Figure 1). If the measure did not fit the organizations' culture, philosophy, or clientele, it would follow that clinicians

would be unhappy with the measures. In addition, the idea expressed by one participant that therapists already "know what's going on" seems an important challenge to take seriously. Any method that is perceived as undermining clinicians' faith in their judgment (know what is going on) or their ability to practice as they know how (culture, philosophy etc.) is going to feel amotivated as it challenges two of the core foundations of motivation according to Self Determination Theory (SDT): autonomy and competence (Deci & Ryan, 1985; Ryan & Deci, 2000). The majority of participants experiencing challenges with fit were able to find a way to elicit a positive response from others (see Figure 1). According to SDT, relatedness is the third component of motivation. By eliciting a positive response from others, clinicians were finding ways to motivate themselves relationally in the face of challenges to autonomy or competence (Ryan & Deci, 2000). This suggests that using colleagues to help clinicians face their motivational challenges may be a good strategy for disseminating progress monitoring measures

Clinicians also advised that it was important to find the measure with the right fit and reported adjusting the frequency of administration, adjusting measures themselves, and focusing on the data that is most relevant to their practice. Most PM research is based on session-to-session administration of the measures, as they have been validated. From a scientific standpoint, adjusting frequency and content changes the measure. However, if this is happening it is important to begin to study the kinds of adaptations that clinicians make and to understand how those adaptations may change outcomes.

Participants who discussed negative responses from clients or colleagues also tended to give advice about the importance of providing information, accessing support, and being open (see Figure 1) perhaps to overcome the negative responses they received. Clinician's attitudes will influence whether or not the client will actually complete the measure (Callaly et al., 2006).

If clinicians have a negative attitude, clients are unlikely to be motivated to engage with measures. When the adoption is in an organization, its culture will influence willingness to adopt. But cultural change in organizations is difficult. The Heath brothers (2010) have proposed that organizational change can be understood as like riding an elephant: the rider needs to know the direction, the path needs to be cleared so that the elephant can see the destination, and the elephant needs to be motivated. Some of the advice given by participants about implementing the measures in organizations echoes these ideas. *Getting clinicians and clients to understand the reasons behind using a PM measure* is about informing the rider, *implementing systematically* is about clearing the path, *avoiding being coercive when using measures* and *gaining clinician buy-in* is about motivating the elephant. It may be useful for clinics and institutions implementing progress monitoring to consult the findings of organizational psychology to assist in this process.

Another challenge faced by some participants was: feelings of anxiety or discomfort when using PM measures. Unsworth and colleagues (2012) also found that therapists experienced fear of judgment and initial anxiety when using the CORE-NET. Although these feelings are unpleasant, most participants experienced them at early stages and were able to overcome them by confronting their anxiety. "Just try it" was the nature of the advice given by approximately one-fourth of participants and know that the feelings are temporary. The participants are alerting us to the emotional nature of the implementation process. Organizational psychologists tell us that metrics make poor destinations because they are not emotional; research with clinicians gives us the same message (Steward & Chambless, 2010). Changes need to pass the "champagne test" (i.e., will people know when to celebrate success?) in order to be emotionally compelling (Heath & Heath, 2010). Strategies that support the emotional

difficulties with peer support and supervision and that use the measures to celebrate the success of clients and not point to the failures of therapists stand the greatest chance of increasing the uptake of progress monitoring. Other ways of making the implementation of measures emotionally compelling may also need to be developed and tested.

One potential solution to overcome a large number of challenges is the incorporation of PM and PM measures into training programs. If clinicians are introduced to PM measures and gained experience during training, it would likely: 1) reduce their anxiety or discomfort in using measures, 2) allow clinicians to become familiar with the different characteristics of a number of measures so they could choose one with the best fit, 3) eliminate issues pertaining to limited knowledge, and 4) offer the support and supervision believed to be important for successful integration of PM measures. Further, if PM measures were a part of clinical routine from the outset, challenges related to routine would cease to be an issue.

Limitations

This is a qualitative study and the small number of participants may be unrepresentative of the population of clinicians in ways that are not predictable. Further, participants in this study used a number of different PM measures, most frequently the PCOMS. As different measures have different limitations and strengths, the data may not equally represent the issues for other measures. Finally these data were collected at one point in time. As progress monitoring grows, the ideas and perceptions of it can be expected to change.

Implications and Future Directions

Although clinicians experience challenges when implementing PM measures, the participants found strategies to overcome them. The great diversity in solutions and advice suggests that a multi-solution approach to helping others overcome challenges is needed. We

need to help practitioners to consider the issues most relevant to them and seek solutions tailored to those challenges. Among adopters the challenges reported were more of an inconvenience than a deterrent however, clinicians who have quit using PM measures may have quite different experiences. Examining the challenges faced by these clinicians will shed light on the adoption process. Integrating PM measures into training programs appears to be a solution that may resolve many of the issues faced by clinicians. Examining the impact of integrating PM measures into training programs will help shed light on whether this strategy proves effective. The results of this study highlight challenges that those considering PM measures may face and offer advice that can help them move toward developing a stronger evidence base for practice.

Table 1

Demographic Data for Participants

Variable		Frequency
Sex		
	Female	6
	Male	19
Age		
	20-30 years	1
	31-40 years	3
	41-50 years	6
	51-60 years	7
	60-70 years	8
Practice		
	Private practice	14
	Clinic	11
Years practicing		
	< 5 years	2
	5-10 years	2
	11-15 years	4
	16-20 years	3
	21-25 years	4
	26-30 years	3
	Over 30 years	5
Measures		
	ORS/SRS	19
	OQ	6
	Basis-32	1
	Problem specific measure	9
	Combination of measures	12
Clientele		
	Older adults	10
	Adults	20
	Younger Adults	20
	Adolescents	15
	Children	11
	Families	13
	Couples	12
	Groups	8
	Organizations	2

Registration		
	Counselor	2
	Mental Health Worker	2
	Psychologist	15
	Social Worker	4
	Marriage and Family Therapist	2

Table 2

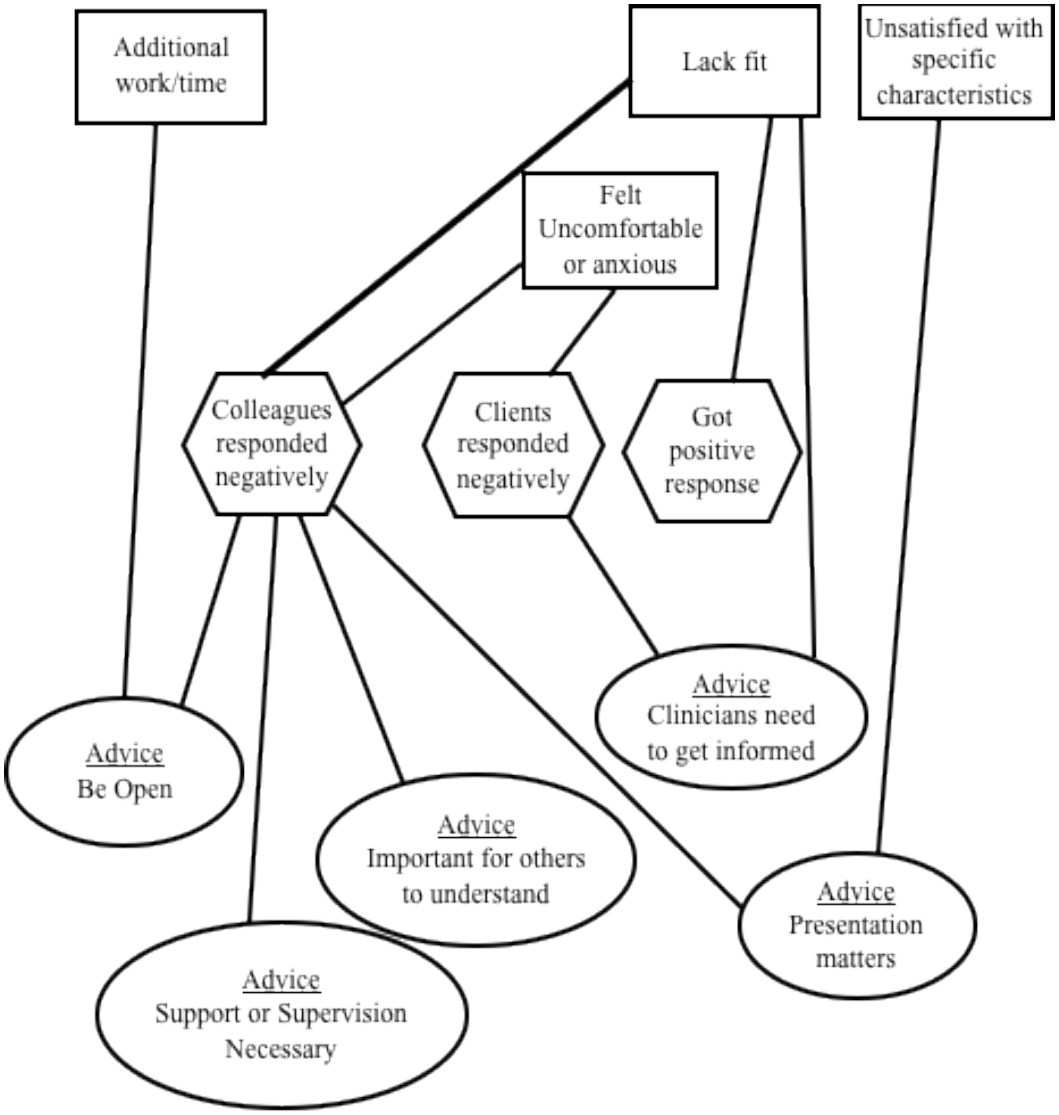
Domains, Categories, and Frequencies

Domains and categories (number of subcategories)	Rate
1. Challenges	
P overcame challenge (10 subcategories)	Typical
P had practical concerns (4 subcategories)	Typical
P was unsatisfied with specific characteristics of measure (4 subcategories)	Typical
P felt measure did not fit with: clientele, therapist orientation, organization/practice, or service provided (4 subcategories)	Typical
P felt uncomfortable or anxious about using measure (3 subcategories)	Variant
P identified added work or limited time as a challenge (no subcategories)	Variant
P identified the frequency of usage as a challenge (no subcategories)	Variant
P identified misuse of measures or results as a challenge (no subcategories)	Variant
P identified limited usefulness as a concern (no subcategories)	Variant
P identified lack of knowledge as a challenge (no subcategories)	Variant
P identified lack of personal investment in PM measures as a challenge (no subcategories)	Rare
P identified concerns about client truthfulness as a challenge (no subcategories)	Rare
2. Negative response from others	
Some colleagues responded negatively to measure (8 subcategories)	Typical
Some clients responded negatively to measure (6 subcategories)	Typical
P identified effective strategies to get a positive response from others (4 subcategories)	Variant
Organization responded negatively to measure (no subcategories)	Variant
Some trainees had difficulty with the measure (no subcategories)	Variant
3. Advice	
P advises that the presentation of measure will impact others' reception of measure (3 subcategories)	Variant
P advises that support or supervision is necessary (3 subcategories)	Variant
P advises clinicians starting to use measure to be open to the experience (1 subcategory)	Variant
P advises clinicians to become informed regarding measures before implementing them (1 subcategory)	Variant
P advises that it is important for others to understand reasons behind using PM (2 subcategories)	Variant
P advises having a collaborative attitude when using measure (2 subcategories)	Variant
P advises clinicians to be prepared for negative feedback or feeling uncomfortable when administering the measure (no subcategories)	Variant

P advises agencies against being coercive when using measure (2 subcategories)	Variant
P advises that measures be implemented systematically (no subcategories)	Variant
P advises using a scoring program with PM measure (no subcategories)	Rare
P advises clinicians to make their own decision when selecting a measure (no subcategories)	Rare

Note Typical = 12 – 22; Variant = 4-11 cases; Rare = 1-3 cases; listed in descending order in each domain.

Figure 1. Pathways between domains.



Note: Bold line represents connection between typical categories; rectangles = categories in the "challenges" domain; hexagons = categories in the "negative response from others" domain; ovals = categories in the "advice" domain.

Appendix A

Some of the PM systems do offer such support, including: the Outcome Questionnaire (weekday online and telephone support; OQ Measures, 2014), My Outcomes – the web-based version of the PCOMS (online support; Health Factors, 2014), Treatment Outcome Package (toll-free telephone and online support; Kraus, 2012), the CelestHealth System (free online and telephone support; Bryan, 2012), the Clinical Outcomes in Routine Evaluation (telephone support; CORE IMS, 2014), the Polaris-MH (technical support is available during business hours; Grissom, 2012), and the Behavior and Symptom Identification Scale (technical support is available for free after the measures are purchased; McLean Hospital, 2002).

Chapter 5

Conclusion

Implications and Contribution to Knowledge

The three studies included in this work make a contribution to understanding how to translate knowledge about progress monitoring into practice and provide a springboard for future research on outcome monitoring practices.

Knowledge translation. The profiles and other results from these studies can inform knowledge translation efforts. Since results suggest that psychologists have limited knowledge of PM measures, the first step to increasing usage will need to be aimed at increasing clinicians' awareness of these measures, especially among clinicians profiled as non-users. The results suggest that workshops and methods to promote the sharing of information from colleague-to-colleague are promising means to disseminate information. Host-companies and creators of measures could encourage successful users to initiate discussions among colleagues - in person and online. Workshops designed to include case data would seem to be the most useful as clinicians are more receptive to information presented as cases than to statistical data (Stewart & Chambless, 2010). Positive testimonials would also be useful as many participants in Study 2 pointed to this as an effective method to help overcome barriers. Results from the three studies also highlight the kinds of information clinicians want to know: 1) that measures can be used to help identify clinicians' strengths and weakness, 2) that measures are brief and can be combined with electronic scoring systems, 3) that a number of measures are available with different characteristics, and 4) that measures are an adjunct to, not a replacement for clinical judgment. It is also important to make potential users aware that they might experience anxiety or discomfort when starting to use the measures, but that these feelings are temporary.

Because clinicians may continue to struggle with limited knowledge, ongoing training and support from a "local champion", online community, or supervisor will assist users. Since many clinicians are involved in private practice, an intervention facilitating clinicians' connection with experienced users, whose opinions are valued could provide the assistance required at implementation and during usage. In particular, clinicians could rely on others for support integrating measures into the routine of their practice, as this was a commonly identified challenge. As one-fourth of clinicians reported they did not have any difficulties overcoming barriers at implementation, it may be useful to connect new users with this group of experienced users so that strategies to minimize barriers can be shared.

Making instructional manuals and online training accessible to clinicians is also necessary. Further, clinicians need to be informed that measures can be used flexibility (e.g., adjusting frequency of use and at what point during the session they are administered) so that they are made to fit with the clinician's practice and the needs of the clinician, organization and clients.

The results also suggest that clinicians who completed the survey in French need more access to training and those practicing with a master's degree have more difficulty overcoming knowledge barriers. Creating accessible continuing education resources seems warranted. Finally, clinicians who do not work with adults are a group that needs attention. While measures are available for children, adolescents, couples, and groups, that information needs to reach clinicians working with these populations.

At the organization level, making managers aware of effective ways of presenting the measures will impact clinicians' and clients' reception. Integrating these measures into an organization will be most effective when the measures are implemented systematically, when

coercion is avoided, and when the culture of the organization is focused on the clients' perspective and on involving the client in the therapy process. Interventions also need to be directed at overcoming technical issues in particular, encouraging clinicians to use electronic scoring and making technical support easily accessible should prove effective.

One potential solution to a number of the challenges and barriers identified by this research is better integration of PM measures into clinical training programs. This would provide an avenue through which information can be disseminated to clinicians, offer a supportive environment where clinicians can begin using these measures, and present the appropriate training on how to use measures in clinical practice.

Research. Identifying the barriers and facilitators to using PM measures opens the door to designing knowledge translation interventions. Future research should be aimed at examining the effectiveness of these strategies and at examining barriers and facilitators for clinicians who are not psychologists

These studies also point to the importance of learning more about clinicians who quit using PM measures and the reasons they were unable to overcome the challenges that some face and successfully manage. To further shed light on the strategies that support continued use, research should also focus on differences in the ways previous-users and users apply measures.

Finally, since integrating PM measures into clinical programs appears to be a promising strategy, future research should examine the current status of PM measures in training programs and the impact of early training on eventual use.

Summary

The long-term goal of the program of research in which these studies are nested is to improve the mental health outcomes of people requiring psychotherapy treatment - especially

those clients who have traditionally deteriorated or not responded to psychotherapy treatment – through the use of PM measures. The current project fits into the action cycle of the KTA model, elucidating the current situation, the barriers and facilitators that influence usage. By identifying potential interventions and understanding the barriers and facilitators to usage, researchers and clinicians can move on to the next step in the knowledge translation model and begin creating and implementing strategies that can be used to increase usage.

References

Alexander, L. B. & Luborsky, L. (1986). The Penn Helping Alliance Scales. (In L. S. Greenberg & W. M.Pinsoff (Eds.). *The psychotherapeutic process: A research handbook* (pp. 325—366). New York: Guilford Press.

American Psychological Association Presidential Task Force on Evidence-Based Practice (2005). Evidence-based practice in psychology. Retrieved from http//www.psycnet.apa.org/journals/amp/61/4/271.pdf.

Archer, R. P., Buffington-Vollum, J. K., Stredny, R. V., & Handel, R. W. (2006). A survey of psychological test use patterns among forensic psychologists. *Journal of personality assessment*, *87*(1), 84-94.

Barkham, M., Hardy, G. E., & Mellor Clark, J. (2010). Improving Practice and Enhancing Evidence. In M. Barkham, G.E. Hardy, & J. Mellor-Clark (Eds.), Developing and delivering practice-based evidence: A guide for the psychological therapies (pp. 3–20). Chichester, UK: John Wiley & Sons Ltd. doi:10.1002/9780470687994.ch1

Barkham, M., Mellor Clark, J., Connell, J., Evans, C., Evans, R., & Margison, F. (2001). Clinical Outcomes in Routine Evaluation (CORE) - The CORE Measures and System: Measuring, Monitoring and Managing Quality Evaluation in the Psychological Therapies. In M. Barkham, G.E. Hardy, & J. Mellor-Clark (Eds.), Developing and delivering practice-based evidence: A guide for the psychological therapies (pp. 3–20). Chichester, UK: John Wiley & Sons Ltd. doi:10.1002/9780470687994.ch1

Barkham, M., Rees, A., Stiles, W. B., Shapiro, D. A., Hardy, G. E., & Reynolds, S. (1996). Dose–effect relations in time-limited psychotherapy for depression. *Journal of Consulting and Clinical Psychology, 64*(5), 927.

Barlow, D. H. (1981). On the relation of clinical research to clinical practice: Current issues, new directions. *Journal of Consulting and Clinical Psychology, 49*(2), 147.

Baumbusch, J. L., Kirkham, S. R., Khan, K. B., McDonald, H., Semeniuk, P., Tan, E., & Anderson, J. M. (2008). Pursuing common agendas: a collaborative model for knowledge translation between research and practice in clinical settings. *Research in nursing & health, 31*(2), 130-140.

Beck, A. T., Ward, C. H., Mendelson, M., Mock, J. & Erbaugh, J. (1961). An inventory for measuring depression. Archives of General Psychiatry, 4, 561-571.

Behavioral Health Laboratories (1992). *Technology Methods*. Retrieved from http://www.bhealthlabs.com/downloads/FREE%20Payer%20Services.pdf.

Behavioral Health Laboratories (2003). *Improving Outcomes Through CQI.* Retrieved from http://www.bhealthlabs.com/presentation.html

Beutler, L. E., Williams, R. E., Wakefield, P. J., & Entwistle, S. R. (1995). Bridging scientist and practitioner perspectives in clinical psychology. *American Psychologist, 50*(12), 984.

Bickman, L., Rosof-Williams, J., Salzer, M. S., & Summerfelt, W. (2000). What information do clinicians value for monitoring adolescent client progress and outcomes? *Professional Psychology: Research and Practice, 31*(1), 70.

Bohanske, R. T., & Franczak, M. (2010). Transforming public behavioral health care: A case example of consumer-directed services, recovery, and the common factors. In B. L. Duncan, S. D. Miller, B. E. Wampold, & M. A. Hubble (Eds), The heart and soul of change: Delivering what works in therapy (2nd ed., pp. 299-322). Washington, DC: American Psychological Association. doi:10.1037/12075-010

Boswell, J. F., Kraus, D. R., Miller, S. D., & Lambert, M. J. (2013). Implementing routine outcome monitoring in clinical practice: Benefits, challenges, and solutions. *Psychotherapy Research*, 1-14.

Bowman, D. (2000). Australian rainforests: islands of green in a land of fire. *Ecology, 88*, 931-937.

Brown, G., Lambert, M. J., Jones, E. R., & Minami, T. (2005). Identifying highly effective psychotherapists in a managed care environment. *American Journal of Managed Care, 11*(8), 513–520.

Bryan, C (2012). The CelestHealth System. Science and Practice, 2(2), 7.

Callaly, T., Hyland, M., Coombs, T., & Trauer, T. (2006). Routine outcome measurement in public mental health: results of a clinician survey. *Australian Health Review*, *30*(2), 164-173.

Castonguay, L. G., Boswell, J. F., Zack, S. E., Baker, S., Boutselis, M. A., Chiswick, N. R., ... & Holtforth, M. G. (2010). Helpful and hindering events in psychotherapy: A practice research network study. *Psychotherapy: Theory, Research, Practice, Training*, *47*(3), 327.

Castonguay, L. G., Locke, B. D., & Hayes, J. A. (2011). The Center for Collegiate Mental Health: An Example of a Practice-Research Network in University Counseling Centers. *Journal of College Student Psychotherapy, 25*(2), 105-119.

Canadian Institute for Health Information. (2011). Health Personnel trends in Canada: Canada's Health Care Providers – 2011 Provincial Profiles: A Look at 27 Health Professions. Retrieved from

https://secure.cihi.ca/estore/productFamily.htm?locale=en&pf=PFC2160&lang=en&media=0

Canadian Institutes of Health Research (2004). *Knowledge translation strategy 2004–2009: Innovation in action*. Retrieved from http://www.cihr-irsc.gc.ca/e/26574.html

Canadian Institutes of Health Research (2005). *About knowledge translation.* Retrieved from http://www.cihr-irsc.gc.ca/e/29418.html

Canadian Psychological Association Task Force on Evidence-Based Practice of Psychological Treatments (2005). Evidence-based practice of psychological treatments: A Canadian perspective. Retrieved from http://www.cpa.ca/docs/file/Practice/Report_of_the_EBP_Task_Force_FINAL_Board_Approved_2012.pdf.

Cochrane, L. J., Olson, C. A., Murray, S., Dupuis, M., Tooman, T., & Hayes, S. (2007). Gaps between knowing and doing: Understanding and assessing the barriers to optimal health care. *Journal of Continuing Education in the Health Professions, 27*(2), 94-102.

Cohen, L. H., Sargent, M. M., & Sechrest, L. B. (1986). Use of psychotherapy research by professional psychologists. *American Psychologist*, *41*(2), 198.

CORE IMS (2014). CORE NET Support. http://www.coreims.co.uk/Support_CORE_Net_Support.html

Corsini, R. J., & Wedding, D. (2008). Current psychotherapies (8th ed.). Belmont, CA: Thomson Brooks/Cole.

Crawford, S. D., Couper, M. P., & Lamias, M. J. (2001). Web surveys perceptions of burden. *Social science computer review*, *19*(2), 146-162.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior.* New York: Plenum.

Derogatis, L. R. (1983). SCL-90-R. *Administration, scoring and procedures Manual-ll (2nd ed.). Baltimore: Clinical Psychometric Research*.

Dozois, D.J.A., Mikail, S., Alden, L.E., Bieling, P.J., Bourgon, G., Clark, D.A., Drapeau, M., Gallson, D., Greenberg, L., Hunsley, J., & Johnston, C. (2014). The CPA Presidential Task Force on Evidence-Based Practice of Psychological Treatments. Canadian Psychology.

Duncan, B. (2012). The Partners for Change Outcome Management System (PCOMS): The Heart and Soul of Change Project. Canadian Psychology, 53(2), 93-104.

Eisen, S. V., Dill, D. L., & Grob, M. C. (1994). Reliability and validity of a brief patient-report instrument for psychiatric outcome evaluation. *Hospital & Community Psychiatry, 45*(3), 242-247.

Eisen, S. V., Normand, S. T., Belanger, A. J., Gevorkian, S., & Irvin, E. A. (2004). BASIS-32 and the Revised Behavior and Symptom Identification Scale (BASIS-R). In M. E. Maruish (Ed), The use of psycholoigcal testing for treatment planning and outcomes assessment (pp. 79-114). Mahway, New Jersey: Lawrence Erlbaum Associates, Inc.

Enders, C. K. (2010). *Applied missing data analysis*. Guilford Press.

Evans, C. (2012) Cautionary notes on power steering for psychotherapy. *Canadian Psychology, 53*(2), 131-139

Finch, A. E., Lambert, M. J., & Schaalje, B. G. (2001). Psychotherapy quality control: The statistical generation of expected recovery curves for integration into an early warning system. *Clinical Psychology & Psychotherapy, 8*(4), 231-242.

Fitzpatrick, M. (2012). Blurring Practice–Research Boundaries Using Progress Monitoring: A Personal Introduction to this Issue of Canadian Psychology. *Canadian Psychology, 53*(2), 75-81

Franklin, M. E., DeRubeis, R. J., & Westen, D. I. (2006). Are Efficacious Laboratory-Validated Treatments Readily Transportable to Clinical Practice? In J. C. Norcross, L.E Beutler, & R. F. (Eds). Evidence-based practices in mental health: Debate and dialogue on the fundamental questions (pp. 375-402). Washington, DC, US: American Psychological Association. doi: 10.1037/11265-009

Gard, G. (2003). Building practice research networks: Overcoming barriers to practitioner participation (Doctoral Dissertation). *Dissertation Abstracts International: Section B: The Sciences and Engineering, 64*(6B), 2916.

Garland, A. F., Kruse, M., & Aarons, G. A. (2003). Clinicians and outcome measurement: What's the use?. *The journal of behavioral health services & research*, *30*(4), 393-405.

Goldfield, N. (1999). *Physician Profiling and Risk Adjustment*. Frederick, MD: Aspen Publishers.

Goldfried, M. R., Borkovec, T. D., Clarkin, J. F., Johnson, L. D., & Parry, G. (1999). Toward the development of a clinically useful approach to psychotherapy research. *Journal of clinical psychology, 55*(11), 1385-1405.

Graham, I. D., & Tetroe, J. (2007). Some theoretical underpinnings of knowledge translation. *Academic Emergency Medicine, 14*(11), 936-941.

Graham, I. D., Logan, J., Harrison, M. B., Straus, S. E., Tetroe, J., Caswell, W., & Robinson, N. (2006). Lost in knowledge translation: time for a map? *Journal of Continuing Education in the Health Professions, 26*(1), 13-24.

Grissom, G. (2012). The Polaris-MH. Science and Practice, 2(2), 32.

Grissom, G., & Lyons, J. S. (2006). Pragmatic case studies and evidence-based treatment: Research and clinical applications of a computerized outcomes management system. *Pragmatic Case Studies in Psychotherapy, 2*(3), 1-28.

Grissom, G. R., Lyons, J. S., & Lutz, W. (2002). Standing on the shoulders of a giant: Development of an outcome management system based on the dose model and phase model of psychotherapy. *Psychotherapy Research, 12*(4), 397-412.

Grol, R., & Grimshaw, J. (2003). From best evidence to best practice: effective implementation of change in patients' care. *The lancet*, *362*(9391), 1225-1230.

Halstead, J., Youn, S.J., & Armijo, I. (2013). Scientific and clinical considerations in progress monitoring: When is a brief measure too brief? Canadian Psychology, 54(1), 83-85.

Hannan, C., Lambert, M. J., Harmon, C., Nielsen, S. L., Smart, D. W., Shimokawa, K., & Sutton, S. W. (2005). A lab test and algorithms for identifying clients at risk for treatment failure. *Journal of Clinical Psychology, 61*(2), 155-163.

Hatfield, D., McCullough, L., Frantz, S. H. B., & Krieger, K. (2010). Do we know when our clients get worse? An investigation of therapists' ability to detect negative client change. *Clinical Psychology & Psychotherapy, 17*(1), 25-32.

Hatfield, D. R., & Ogles, B. M. (2004). The use of outcome measures by psychologists in clinical practice. *Professional Psychology-Research and Practice, 35*(5), 485-491. doi: Doi 10.1037/0735-7028.35.5.485

Hawkins, E. J., Lambert, M. J., Vermeersch, D. A., Slade, K. L., & Tuttle, K. C. (2004). The therapeutic effects of providing patient progress information to therapists and patients. *Psychotherapy Research, 14*(3), 308-327.

Health Factors (2014), Contact. http://www.myoutcomes.com/Contact.aspx#clients

Heath, C., & Heath, D. (2010). Switch: How to change things when change is hard. *New York: Crown Business*.

Hill, C. E., Knox, S., Thompson, B. J., Williams, E. N., Hess, S. A., & Ladany, N. (2005). Consensual Qualitative Research: An Update. *Journal of counseling psychology, 52*(2), 196.

Hill, C. E., Thompson, B. J., & Williams, E. N. (1997). A guide to conducting consensual qualitative research. *The Counseling Psychologist, 25*(4), 517.

Horvath, A. O., & Greenberg, L. S. (1989). Development and validation of the Working Alliance Inventory. *Journal of counseling psychology*, *36*(2), 223.

Howard, K. I., Kopta, S. M., Krause, M. S., & Orlinsky, D. E. (1986). The dose–effect relationship in psychotherapy. *American Psychologist, 41*(2), 159.

Howard, K. I., Moras, K., Brill, P. L., Martinovich, Z., & Lutz, W. (1996). Evaluation of psychotherapy: Efficacy, effectiveness, and patient progress. *American Psychologist, 51*(10), 1059-1064.

Hunsley, J., & Lefebvre, M. (1990). A survey of the practices and activities of Canadian clinical psychologists. *Canadian Psychology/Psychologie canadienne*, *31*(4), 350.

Hunsley, J., Ronson, A., & Cohen, K. R. (2013). Professional psychology in Canada: A survey of demographic and practice characteristics. *Professional Psychology: Research and Practice*, *44*(2), 118.

Idiculla, T. (2012). The BASIS-24: Behavior and Symptom Identification Scale. Science and Practice, 2(2), 16.

Jacobson, N. S., & Truax, P. (1991). Clinical significance: A statistical approach to defining meaningful change in psychotherapy research. *Journal of Consulting and Clinical Psychology, 59*(1), 12.

Johnston, C., & Gowers, S. (2005). Routine outcome measurement: a survey of UK child and adolescent mental health services. *Child and Adolescent Mental Health*, *10*(3), 133-139.

Kane, R. L. (1987). Commentary: Functional assessment questionnaire for geriatric patients--or the clinical Swiss army knife. *Journal of Chronic Diseases, 40*, 95S-98S.

Kordy, H., Hannover, W., & Richard, M. (2001). Computer-Assisted Feedback-Driven Quality Management for Psychotherapy: The Stuttgart-Heidelberg Model. *Journal of Consulting and Clinical Psychology, 69*(2), 173-183.

Kraus, D. (2012). The Treatment Outcome Package. Science and Practice, 2(2), 43.

Kraus, D., & Castonguay, L. G. (2010). Treatment Outcome Package (TOP) Development and use in Naturalistic Settings. In M. Barkham, G.E. Hardy, & J. Mellor-Clark (Eds.), Developing and delivering practice-based evidence: A guide for the psychological therapies (pp. 3–20). Chichester, UK: John Wiley & Sons Ltd. doi:10.1002/9780470687994.ch1

Kraus, D. R., Seligman, D. A., & Jordan, J. R. & Behavioral Health Laboratories Inc. (2005). Validation of a behavioral health treatment outcome and assessment tool designed for naturalistic settings: The Treatment Outcome Package. *Journal of Clinical Psychology, 61*(3), 285-314.

Lambert, M. (2012). The Outcome Questionnaire-45. Science and Practice, 2(2), 24.

Lambert, M. J. (2013). *Bergin and Garfield's handbook of psychotherapy and behavior change*. John Wiley & Sons.

Lambert, M. J., Hansen, N. B., & Finch, A. E. (2001). Patient-focused research: using patient outcome data to enhance treatment effects. *J Consult Clin Psychol, 69*(2), 159-172.

Lambert, M. J., Hansen, N. B., Umphress, V., Lunnen, K., Okiishi, J. C., & Bulingame. G.,…Reisinger, C. W. (1996). *Administration and scoring manual for the Outcome Questionnaire (OQ-45.2)*. Wilmington, DE: American Professional Credentialing Services.

Lambert, M. J., & Hawkins, E. J. (2004). Measuring Outcome in Professional Practice: Considerations in Selecting and Using Brief Outcome Instruments. *Professional Psychology: Research and Practice, 35*(5), 492.

Lambert, M. J., & Ogles, B. M., (2004). The efficacy and effectiveness of psychotherapy. In M. J. Lambert (Ed.), *Bergin and Garfield's handbook of psychotherapy and behavior change* (5th ed., pp. 139-193). New York: Wiley.

Lambert, M. J., & Shimokawa, K. (2011). Collecting client feedback. *Psychotherapy, 48*(1), 72.

Lambert, M. J., & Vermeersch, D. A. (2008). Measuring and improving psychotherapy outcome in routine practice. In S. D. Brown, & R. W. Lent (Eds), *Handbook of counselling psychology* (pp. 233-248). Hoboken, New Jersey: John Wiley & Sons, Inc.

Lambert, M. J., Whipple, J. L., Hawkins, E. J., Vermeersch, D. A., Nielsen, S. L., & Smart, D. W. (2003). Is it time for clinicians to routinely track patient outcome? A meta-analysis. *Clinical Psychology: Science and Practice, 10*(3), 288-301.

Lau, M. A., Ogrodniczuk, J., Joyce, A. S., & Sochting, I. (2010). Bridging the Practitioner-Scientist Gap in Group Psychotherapy Research. *International Journal of Group Psychotherapy, 60*(2), 177-196.

Lovibond, S. H. & Lovibond, P. F. (1993). Manual for the Depression Anxiety Stress Scales (DASS). Psychology Foundation Monograph. (Available from The Psychology Foundation, Room 1005 Mathews Building, University of New South Wales, NSW 2052, Australia).

Lueger, R. J., & Barkham, M. (2010). Using Benchmarks and Benchmarking to Improve Quality of Practice and Services. In M. Barkham, G.E. Hardy, & J. Mellor-Clark (Eds.), *Developing and delivering practice-based evidence: A guide for the psychological therapies* (pp. 3–20). Chichester, UK: John Wiley & Sons Ltd. doi:10.1002/9780470687994.ch1

Lunnen, K. M., & Ogles, B. M. (1998). A multiperspective, multivariable evaluation of reliable change. *Journal of Consulting and Clinical Psychology*,*66*(2), 400.

McAleavey, A., Nordberg, S., Kraus, D., & Castongay, L.G. (2012). Errors in treatment outcome monitoring: Implications for real-world psychotherapy. Canadian Psychology, 53(2), 105-114.

McLean Hospital (2002). *Basis 32*. Retrieved from www.basissurvey.org/basis32/

Miller, S. (2012). The Outcome Rating Scale (ORS) and the Session Rating Scale (SRS). Science and Practice, 2(2), 28.

Miller (2014). *Performance Metrics*. Retrieved from http://scottdmiller.com/performance-metrics/.

Miller, S. D., Duncan, B. L., Brown, J., Sorrell, R., & Chalk, M. B. (2006). Using formal client feedback to improve retention and outcome: Making ongoing, real-time assessment feasible. *Journal of Brief Therapy*, *5*(1), 5-22.

Miller, S. D., Duncan, B., Brown, J., Sparks, J., & Claud, D. (2003). The outcome rating scale: A preliminary study of the reliability, validity, and feasibility of a brief visual analog measure. *Journal of Brief Therapy, 2*(2), 91-100.

Miller, S. D., Duncan, B. L., Sorrell, R., & Brown, G. S. (2005). The partners for change outcome management system. *Journal of Clinical Psychology, 61*(2), 199-208.

Minami, T., Wampold, B. E., Serlin, R. C., Hamiltom, E. G., Brown, G. S. J., & Kircher, J. C. (2008). Benchmarking the effectiveness of psychotherapy treatment for adult depression in a managed care environment: a preliminary study. *Journal of Consulting and Clinical Psychology, 76*(1), 116-123.

Mohr, D. C. (1995). Negative outcome in psychotherapy: A critical review. *Clinical Psychology: Science and Practice, 2*(1), 1-27.

Norcross, J. C., Karpiak, C. P., & Lister, K. M. (2005). What's an integrationist? A study of self identified integrative and (occasionally) eclectic psychologists. *Journal of Clinical Psychology, 61*(12), 1587-1594.

Norcross, J. C., Prochaska, J. O., & Gallagher, K. M. (1989). Clinical psychologists in the 1980s: II. *Theory, research, and practice. The Clinical Psychologist*, *42*(3), 45-53.

Newnham, E. A. & Page, A.C. (2010). Bridging the gap between best evidence and best practice in mental health. *Clinical Psychology Review, 30*, 127-142.

Okiishi, J. C., Lambert, M. J., Eggett, D., Nielsen, L., Dayton, D. D., & Vermeersch, D. A. (2006). An analysis of therapist treatment effects: Toward providing feedback to individual therapists on their clients' psychotherapy outcome. *Journal of Clinical Psychology, 62*(9), 1157-1172.

Olfson, M. & Marcus, S. (2010). National trends in outpatient psychotherapy. *American Journal of Psychiatry, 167*, 1456-1463.

OQ Measures (2014). *The measure of mental health vital signs: OQ Analyst*. Retrieved from http://www.oqmeasures.com/page.asp?PageId=62

Ordre des psychologues du Québec (2014). Admission of graduates in psychology in Quebec. Retrieved from https://www.ordrepsy.qc.ca/en/obtenir-un-permis/permis-de psychologue/admission-of-graduates-in-psychology-in-quebec.sn

Overington, L., & Ionita, G. (2012). Progress monitoring measures: A brief guide. *Canadian Psychology/Psychologie canadienne*, *53*(2), 82.

Owen, J. (2013). Early career perspectives on psychotherapy research and practice: Psychotherapist effects, multicultural orientation, and couple interventions. *Psychotherapy*, *50*(4), 496.

Phelps, R., Eisman, E. J., & Kohout, J. (1998). Psychological practice and managed care: Results of the CAPP practitioner survey. *Professional Psychology: Research and Practice, 29*(1), 31.

Polaris Health Directions (2013). Sample Update Report. Retrieved from http://www.polarishealth.com/storage/MH_Update_Report.pdf

Prochaska, J. O., & Norcross, J. C. (1983). Psychotherapists' perspectives on treating themselves and their clients for psychic distress. *Professional Psychology: Research and Practice*, *14*(5), 642.

Qualtrics (2012). Qualtrics research suite. Retrieved from http://qualtrics.com/research-suite/

Reese, R. J., Toland, M. D., Slone, N. C., & Norsworthy, L. A. (2010). Effect of client feedback on couple psychotherapy outcomes. *Psychotherapy: Theory, Research & Practice, 47*(4), 616.

Ronson, A., Cohen, K.R., & Hunsely, J. (2011). Implementation, evaluation, and application of an electronic practice network for mental health surveillance in Canada: Report submitted to the Public Health Agency of Canada on behalf of the Canadian Psychological Association. Retrieved from http://www.cpa.ca/docs/file/MHSP/Survey_Procedures_Manual_report.pdf

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, *55* (1), 68.

Sales, C.M., & Alves, P. C.G. (2012). Individualized patient-progress systems: Why we need to move towards a personalized evaluation of psychological treatments. Canadian Psychology, 53(2), 115-121.

Sauer, E. M., & Huber, D. M. (2007). Implementing the Boulder Model of training in a psychology training clinic. *Journal of Contemporary Psychotherapy, 37*(4), 221-228.

Sheehan, K. B. (2001). E‐mail survey response rates: A review. *Journal of Computer‐Mediated Communication*, *6*(2), 0-0. Doi: 10.1111/j.1083-6101.2001.tb00117.x

Shimokawa, K., Lambert, M. J., & Smart, D. W. (2010). Enhancing treatment outcome of patients at risk of treatment failure: Meta-analytic and mega-analytic review of a psychotherapy quality assurance system. *Journal of Consulting and Clinical Psychology, 78*(3), 298.

Smith, D. (1982). Trends in counseling and psychotherapy. *American Psychologist*, *37*(7), 802.

Smith, M. L., Glass, G. V., & Miller, T. I. (1980). *The benefits of psychotherapy*: Johns Hopkins University Press Baltimore.

Stewart, R. E., & Chambless, D. L. (2010). Interesting Practitioners in Training in Empirically Supported Treatments: Research Reviews Versus Case Studies. *Journal of Clinical Psychology, 66*(1), 73-95. doi: Doi 10.1002/Jclp.20630

Straus, S. E., Tetroe, J., & Graham, I. D. (2009). *Knowledge translation in health care: moving from evidence to practice*: UK: Wiley-Blackwell.

Strupp, H. H., Fox, R. & Lessler, K. (1969). *Patients view their own psychotherapy.* Baltimore, MD: Johns Hopkins University Press.

Substance Abuse and Mental Health Services Administration - U.S. Department of Health and Human Services (2013). The national registry of evidence-based programs and practices (NREPP). Retrieved from http://nrepp.samhsa.gov/Search.aspx.

Sundet, R. (2012). Therapist perspectives on the use of feedback on process and outcome: Patient-focused research in practice. Canadian Psychology, 53(2), 122-130.

Tasca, G., Grenon, R., Fortin-Langelier, B., & Chyurlia, L. (in press). Barriers to Translating Psychotherapy Research Into Clinical Practice: The Development of a Psychotherapy Practice Research Network in Canada. Canadian Psychology.

Unsworth, G., Cowie, H., & Green, A. (2012). Therapists' and clients' perceptions of routine outcome measurement in the NHS: A qualitative study. *Counselling and Psychotherapy Research*, *12*(1), 71-80.

Vasiliadis, H. M., Lesage, A., Adair, C., Wang, P., & Kessler, R. (2007). Do Canada and the United States differ in prevalence of depression and utilization of services?. *Psychiatric Services*, *58*(1), 63-71.

Vespia, K. M., & Sauer, E. M. (2006). Defining characteristic or unrealistic ideal: Historical and contemporary perspectives on scientist-practitioner training in counselling psychology. *Counselling Psychology Quarterly, 19*(3), 229-251.

Ward, V., Smith, S., Carruthers, S., House, A., & Hamer, S. (2010). Knowledge Brokering. *Exploring the process of transferring knowledge into action Leeds: University of Leeds*.

Warner, R. E. (1991). A survey of theoretical orientations of Canadian clinical psychologists. *Canadian Psychology/Psychologie canadienne*, *32*(3), 525.

Westmacott, R. (2011). Reasons for terminating psychotherapy: Client and therapist perspectives (Doctoral Dissertation). University of Ottawa, Canada. Retrieved Oct 16, 2011 from www.ruor.uottawa.ca/fr/.../Westmacott_Robin_2011_thesis.pdf?...3.

Whipple, J. L., Lambert, M. J., Vermeersch, D. A., Smart, D. W., Nielsen, S. L., & Hawkins, E.J. (2003). Improving the effects of psychotherapy: The use of early identification of treatment and problem-solving strategies in routine practice. *Journal of counseling psychology, 50*(1), 59.

Yamin, S., Rosval, L., Byrne, A., & Burr, A., & Aubry, T. (2011). Evaluation of the Use of the Outcome Questionnaire at the Centre for Psychological Services, Ottawa, Canada: University of Ottawa, Centre for Research on Educational and Community Services.

Youn, S. J., Kraus, D. R., & Castonguay, L. G. (2012). The treatment outcome package: Facilitating practice and clinically relevant research. *Psychotherapy*,*49*(2), 115.