A comparison of nomothetic and idiographic approaches to routine measurement and feedback: clinician perceptions and decision making

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A COMPARISON OF NOMOTHETIC AND IDIOGRAPHIC APPROACHES TO ROUTINE MEASUREMENT AND FEEDBACK: CLINICIAN PERCEPTIONS AND DECISION MAKING

by

Matteo Bugatti

A Dissertation Submitted to the University at Albany, State University of New York in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy

College of Arts & Sciences Department of Psychology 2020
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Abstract

Rates of treatment failures in psychotherapy are unsatisfactorily high. Patient-focused research addresses this issue by promoting the implementation of routine outcome monitoring (ROM) and measurement feedback systems (MFS) that support treatment personalization and clinical responsiveness. Nevertheless, ROM and MFS utilization rates in routine practice remain low and many clinicians report reservations regarding their integration, which may be a function of reliance on nomothetic measures. Research suggests that idiographic (i.e., individualized) measures may have the potential to overcome these obstacles. However, little is known regarding clinicians’ perceptions of idiographic ROM and MFS. The present study examined clinicians’ reasons for use and nonuse of outcome measures, while also exploring clinicians’ perceptions of the clinical utility, relevance to treatment planning, and practicality of nomothetic and idiographic clinical feedback. Three hundred and twenty-nine therapists were randomized to one of three conditions that presented them with a clinical vignette comprising: (a) nomothetic, (b) idiographic, or (c) combined clinical feedback. Clinicians’ perceptions of the simulated clinical feedback were not affected by the type of clinical feedback. However, cognitive behavioral therapists reported more positive perceptions of all aspects associated with the simulated clinical feedback. In addition, clinicians’ professional characteristics, including theoretical orientation, work setting, and clients’ age group, were found to affect clinicians’ reasons for using outcome measures in their practice. These results suggest that clinicians’ professional characteristics may have a significant impact on their perceptions of ROM and MFS and should be considered when designing and implementing these strategies.
A Comparison of Nomothetic and Idiographic Approaches to Routine Measurement and Feedback: Clinician Perceptions and Decision Making

Introduction

The Efficacy of Psychotherapy

Research demonstrates that psychotherapy is generally effective (Lambert, 2013). Previous quantitative reviews have identified a significant difference between treated and untreated individuals suffering from psychological disorders, characterized by a general success rate of 67% for individuals receiving treatment, as compared to a rate of 33% for untreated individuals, with effect sizes estimated to be around $d = .75$ (Lambert, 2013). Previous meta-analytic syntheses have also indicated that psychotherapy may provide an equally efficacious alternative to pharmacotherapy for the treatment of psychiatric disorders (e.g., Cuijpers et al., 2013). Furthermore, additional systematic reviews of meta-analyses have also pointed to the superior efficacy of psychotherapy, with acute-phase psychotherapy studies displaying larger effect sizes than pharmacotherapy characterizing participants’ pre- to post-treatment improvement on clinical symptom measures (Huhn et al., 2014). Heterogeneity among study quality and design calls for the cautious interpretation of these findings. The recent call for studies that assess treatment efficacy through quality of life outcomes has offered a novel and complementary perspective on determining comparative effectiveness. For example, a recent meta-analysis synthesizing findings from studies examining the efficacy of psychotherapy and pharmacotherapy on functioning and quality of life in depression identified psychotherapy as a more efficacious approach, although the combination of psychotherapy and pharmacotherapy was found to be superior to either treatment (Kamenov et al., 2017).
Comparisons of psychotherapy and pharmacotherapy efficacy have so far yielded encouraging findings that support the relevance and usefulness of psychotherapy as a first-line treatment for psychiatric disorders (e.g., Cuijpers et al., 2013; Huhn et al., 2014; Kamenov et al., 2017). Nonetheless, the vast array of theoretical schools, treatment approaches, as well as treatment protocols and manuals characterizing the field of psychotherapy points to the lack of consensus on treatment guidelines that can be found in psychiatry (e.g., Goodwin et al., 2016; Howes et al., 2018).

Arguably, the attempt carried out by the American Psychological Association Division 12 to create a Task Force on Promotion and Dissemination of Psychological Procedures in 1995 did not resolve this lack of consensus among scholars and practitioners who embrace distinct approaches to psychotherapy, with some scholars disputing the validity of the guidelines provided by the task force (e.g., Sakaluk et al., 2019). Notwithstanding the lack of agreement on evidence-based treatment guidelines, most psychotherapies have been found to be similarly efficacious, a phenomenon that—within psychotherapy research—has been historically referred to as the Dodo bird effect (Wampold et al., 1997). This lack of difference in efficacy among psychotherapies was first noted by Rosenzweig (1936), who explained it by emphasizing the importance of common factors shared by all approaches. Rosenzweig’s verdict was later corroborated by Luborsky, Singer, and Luborsky (1975), who, after conducting a thorough review of the extant psychotherapy outcome literature, similarly failed to identify significant differences in efficacy across psychotherapies. Likewise, more recent reviews of meta-analyses derived similar conclusions (e.g., Luborsky et al., 2002).

Treatment Failures in Psychotherapy
Although psychotherapy is an overall efficacious treatment approach for psychiatric conditions, rates of treatment failure, including, but not limited to, deterioration, non-response, and attrition, among clients remain unsatisfactorily high (e.g., Lambert, 2010; Warren et al., 2010). The origin of the study of treatment failures in psychotherapy is often thought to coincide with Eysenck’s seminal article “The Effects of Psychotherapy: An Evaluation” published in *Journal of Consulting Psychology* (1952). Based on crude actuarial comparisons, Eysenck reached the conclusion that psychotherapy did not facilitate the recovery of neurotic patients, pointing to the similarity in rates of improvement between patients receiving psychotherapeutic interventions and individuals displaying spontaneous recovery. Despite the lack of contrary evidence in the extant literature at that time, this assertion was received by the community with much outrage (e.g., Strupp, 1963), perhaps providing additional evidence in support of Eysenck’s argument, who stated “*In the absence of agreement between fact and belief, there is urgent need for a decrease in the strength of belief, and for an increase in the number of facts available*” (Eysenck, 1952 p. 323).

The ultimate effect of Eysenck’s (1952) controversial thesis was to foster the study of psychotherapy process and outcome. An exemplary product of this line of research was Bergin’s seminal paper “Some Implications of Psychotherapy Research for Therapeutic Practice” (1966), which offered a survey of psychotherapy research findings. Besides calling for greater sophistication in psychotherapy research design, Bergin (1966) also coined the term “*Deterioration Effect*” (Bergin, 1966, p. 235), which, arguably, pioneered the area of research concentrating on detrimental effects in psychotherapy. He succinctly summarized the workings described by this effect stating: “Psychotherapy may cause people to become better or worse adjusted than comparable people who do not receive such treatment.” In support of this thesis,
Bergin presented findings from the extant literature, indicating that, although no difference in the average change between experimental and control groups could be identified, there was a significant difference in variability, with several participants in psychotherapy experimental groups reporting marked improvement, as well as marked deterioration, when compared to participants in no-treatment control groups (Bergin, 1966, p. 235). These findings appeared to undermine Eysenck’s argument (1952), demonstrating that psychotherapy had the potential to produce significantly better outcomes than spontaneous recovery. Nonetheless, it also began to draw attention to its potential harmful effects that appeared to greatly exceed those observed in untreated individuals. In response to the observation of the detrimental effects, Bergin argued that psychotherapists should carefully identify and remove harmful and ineffective techniques from their practice (Bergin, 1966, p. 238).

The identification of harmful and ineffective psychotherapeutic techniques argued by Bergin (1966) proved to be a daunting task that remained a source of heated debate within the field of clinical psychology throughout the subsequent decades. Scholars began to advocate for a shift toward idiographic research, arguing that traditional statistical models were not valid tools for the study of harmful effects (e.g., Bergin and Strupp, 1972). Furthermore, the use of heterogeneous diagnostic labels, such as neurosis, as well as the clustering of all interventions under the term “psychotherapy”, were identified as additional factors that had historically interfered with the ability to identify specific harmful or ineffective strategies for individuals with specific diagnoses (Bergin and Strupp, 1972). Many scholars in the field heeded this call, leading to the resurgence of the idiographic research approach (e.g., Hersen and Barlow, 1976) which has slowly, and yet steadily gained traction in the past few decades (e.g., Piccirillo, Beck, & Rodebaugh, 2019).
Over the course of the past decades, the field of clinical psychology has progressively embraced the complementary role played by nomothetic and idiographic research designs (Barlow & Nock, 2009). Furthermore, evidence-based movements emphasized or—as some scholars have argued—even overemphasized the study of diagnosis-specific treatments (e.g., Wampold & Bhati, 2004). The origin of these trends in contemporary research priorities observed in the field of clinical psychology could perhaps be traced back to Eysenck’s seminal paper (1952). Eysenck’s argument sparked substantial change and improvement within the field of psychotherapy research and—more specifically—the study of harmful effects in psychotherapy. Nevertheless, despite the accumulation of decades of research concentrating on this aspect of psychotherapy, the field has yet to reach consensus on the operationalization of the construct of “harmful effects” that are also often referred to in the literature as “treatment failures.”

Lambert (2011) attempted to provide a useful overview of unsatisfactory processes and outcomes that would fall under the scope of the umbrella term, treatment failure. Among these categories, Lambert (2011) described the occurrence of unusual difficulties impeding the expected progress of treatment, irrespective of the achievement of positive outcomes at termination (Newman, 2011; Eisendrath, Chartier, & McLane, 2011), the occurrence of relapse following the achievement of positive treatment outcomes at termination (Arch & Craske, 2011), suboptimal outcomes (George, Taylor, Goldstein, & Miklowitz, 2011), the absence of significant improvement or deterioration, which is often referred to as “treatment refractory” (Brozovich & Heimberg, 2011), and premature unilateral termination of a course of treatment (Boswell et al., 2011; Swift & Greenberg, 2012). Lambert’s summary of negative outcomes in psychotherapy
(2011) provided a valuable contribution to this area of research, which was further examined by Linden (2013).

Although Lambert (2011) focused on the identification and labeling of specific categories of psychotherapy treatment failures, Linden (2013) reflected on the possible factors that may have contributed to the lack of clarity affecting this area of research. Linden (2013) argued that the perception of harmful effects in psychotherapy differs significantly from that of side effects of drugs. Although medication side effects are attributed to the properties of the substance that is administered, harmful effects in psychotherapy tend to be tied to psychotherapists’ behavior, thus shifting responsibility from the method to the provider. This fundamental difference, Linden argued, may have promoted a tendency in the field of psychotherapy to ignore harmful effects, or to redirect the blame unto patients. Furthermore, Linden (2013) contended that, given the direct causal relationship that is assumed between psychotherapists’ behavior and the development of subsequent harmful effects, questions regarding malpractice may also arise, and ultimately further contribute to the defensive stance that often characterizes therapists’ response to negative outcomes. Perhaps the most interesting observation made by Linden (2013) refers to the lack of differentiation between harmful effects and unavoidable negative experiences developed in response to treatment, which is compounded by the limited resources defining procedural standards in psychotherapy, as well as by the lack of mandatory monitoring of outcomes.

In light of the need for a broader framework for conceptualizing side effects in psychotherapy, Linden (2013) introduced several categories aiming to elucidate the relationship between side effects, treatment failures, deteriorations, and malpractice. Among these categories, Linden (2013) described: unwanted events, encompassing all negative events occurring simultaneously to treatment, treatment-emergent reactions, encompassing all unwanted events
caused directly by treatment, adverse treatment reactions, encompassing all unwanted events caused by the correct delivery of treatment, malpractice reactions, encompassing all unwanted events caused by the incorrect delivery of treatment, treatment non-response, and deterioration of illness due to the natural course of pathology.

The push toward theoretical elucidation of processes defining negative outcomes in psychotherapy has been accompanied by a parallel movement demanding a more precise operationalization of the achievement—or lack thereof—of treatment success. Jacobson and Truax (1991) developed an approach to define meaningful change in psychotherapy, known as reliable and clinically significant change. The main purposes for developing this statistical procedure were outlined by Jacobson and Truax (1991) as: to provide a transdiagnostic metric for clinically significant change, to provide an operationalized definition of clinical significant that would bridge lay and professional expectations, and to develop a reliable method for differentiating between “changed” and “unchanged” clients. Reliable change is determined by demonstrating that the magnitude of change is statistically reliable when accounting for measurement error (reliable change index; RCI). Clinically meaningful change qualifies outcomes based on three concurrent criteria at the determined follow-up: (a) the patient’s level of functioning should fall at least two standard deviations from the clinical population’s mean, (b) the patient’s functioning should fall within two standard deviation of the non-clinical population mean, and (c) the patient’s level of functioning is closer to the non-clinical than the clinical population’s mean. These criteria provided an objective approach for assessing the presence or absence of meaningful change in a single case or samples of cases, thus contributing to the reduction of the science-practice gap by offering a strategy for applying nomothetic knowledge to idiographic treatment outcome monitoring.
As a result of the computation of RCI and the operationalization of clinically meaningful change, a significant body of literature examining treatment response exists, offering sobering estimates of treatment failures in clinical practice. Clients’ return to “normal” functioning levels varies significantly across different conditions, with estimates ranging from 50% to 70% among clients with a primary diagnosis of panic disorder (e.g., Arch & Craske, 2011; Barlow et al., 1989; Clark et al., 1994), to less than 50% among clients diagnosed with an eating disorder (Cooper & Fairburn, 2011). Furthermore, there appears to be a significant difference between rates of improvement reported by the clinical trial literature, and those produced by the examination of naturalistic clinical data (Hansen, Lambert, & Forman, 2002).

Findings from clinical trials report that between 57.6% and 67.2% of clients display improvement, receiving—on average—12.7 sessions of treatment (Hansen, Lambert, & Forman, 2002). Naturalistic clinical data, however, presents an incompatible picture. One large meta-analysis conducted by Hansen, Lambert, and Forman (2002) found that fewer than 15% of patients in community settings achieved clinically meaningful improvement, defined as a reliable change on the Outcome Questionnaire-45 (OQ-45; Lambert et al., 2013) that places individuals within the “functional” distribution. Even when relaxing the criteria to include patients demonstrating meaningful improvement (i.e. a positive reliable change on the OQ-45 that fails to place them within the range of the functional distribution), the rate of meaningful improvement was estimated at just below 21%. Furthermore, 57% of adult clients were identified as “non-respondents” (i.e., not demonstrating reliable change in either direction on the OQ-45). In addition, half of the patients in these routine clinical settings were found to receive about a quarter of the duration of treatment that had been previously identified as necessary for achieving a 50% response rate. Finally, rates of deterioration were estimated at a little below 10%. Overall,
these findings were interpreted as indicative of an insufficient average duration of treatment. Given the dose-response effect observed in the literature, it appeared that the premature termination of treatment precluded patients from achieving the best outcomes.

Estimates of negative treatment outcomes in pediatric samples are equally worrisome. Warren et al. (2010) conducted a study comparing symptom change trajectories and treatment outcome categories in a youth sample receiving routine outpatient mental health services. Forty-six percent of clients in managed care setting and 56% of clients in community settings were found to display either no significant change or a significant increase in symptoms as reported by parents on the parent-version of the Youth Outcome Questionnaire 2.01 (Y-OQ; Burlingame et al., 2005).

Among other obstacles, these findings point to the difficulty, and potential flaws, associated with the sole reliance on clinical judgment, unaided by objective treatment progress tools, for making crucial clinical decisions, which has already been emphasized by the American Psychological Association Presidential Task force on Evidence-Based Practice (2006), as well as by the Institute of Medicine (2006). Alternative explanations for the above findings—perhaps pointing to the role of unilateral terminations—further emphasize the need for objective routine assessment tools for preventing treatment failures. Swift, Greenberg, Whipple, and Komiak (2012) provided strategies for preventing unilateral terminations based on the findings from a meta-analytic review (Swift & Greenberg, 2012). Among these strategies, Swift et al. (2012) identified routine outcome monitoring as a successful preventive tool. This recommendation was based on the observation that clients whose treatment progress deviate from a normative trajectory of change that lead to satisfactory outcomes have been found to be at increased risk for unilateral termination (e.g., Lambert, Hansen, & Finch, 2011). Similarly, the good enough level
(GEL) model proposed by Barkham et al. (1996) emphasizes how, given the significant inter-individual variability in response to treatment, clinicians need to rely on objective routine outcome measurement to recognize when an individual has demonstrated a sufficiently positive response to treatment to consider termination. Altogether, these models appear to indicate that, unless provided with objective measures of treatment outcomes, clinical judgment alone is an unreliable tool for determining whether patients have received a sufficient dose of treatment or more treatment is needed to ensure positive outcomes.

**Patient-Focused Psychotherapy Research**

Sparked by recent changes in policy as well as organizational priorities (e.g., Patient Protection and Affordable Care Act, 2010), the field of health-related services is devoting increasing attention to individual patient characteristics that impact the effectiveness of specific strategies and techniques. The establishment of the Patient-Centered Outcomes Research Institute (PCORI), which resulted from the US Patient Protection and Affordable Care Act (2010), embodies this recent expansion of the emphasis on patient-centeredness from health care delivery to health care research (Frank et al., 2014). Within psychotherapy research, patient-focused psychotherapy research originated from the seminal work of Howard, Moras, Brill, Martinovich, and Lutz (1996), who advocated for the integration of routinely administered standardized measures to objectively evaluate treatment progress. Such measures have the potential to provide clinicians with valuable patient-focused, data-driven feedback. Despite accumulating a significant body of research throughout the past three decades, increasing top-down calls for accountability, value, quality improvement, and person-centered care have cast a brighter spotlight in this area. The reinvigorated patient-focused psychotherapy approach to practice and research ultimately aims to understand *how* and *for whom* psychotherapy works (or
does not work), in order to enhance the effectiveness of psychological treatments for individual clients (Norcross & Wampold, 2011).

Although treatment may be effective, on average, patient-focused research has clearly demonstrated that similar patients exhibit heterogenous trajectories of change (Castonguay, Barkham, Lutz, & McAleavey, 2013). A study conducted by Owen et al. (2015), relied on multilevel growth mixture modeling to identify categories of change in psychological functioning among a large sample of psychotherapy clients. Findings indicated that variations in trajectory of change over the course of short-term psychotherapy may be more complex than those described by dose-effect (Howard et al., 1986) and good-enough level (Barkham et al., 2006) models. The analyses identified a 3-class solution as the best fit for the data. Class 1 exhibited early initial change, plateauing during the middle portion of treatment, and resuming toward the last portion of treatment. Class 2 displayed an initial worsening in functioning, followed by a steep improvement, and ending with a plateau. Finally, class 3 demonstrated a linear and continuous trajectory of improvement observable throughout the course of treatment (Owen et al., 2015). These findings call for additional research to further elucidate variability in response to evidence-based psychotherapies. However, most between-subjects research designs used in efficacy research, such as randomized controlled trials (RCTs), are prone to mask inter-individual variability (Laurenceau, Hayes, & Feldman, 2007).

Furthermore, while significant variability appears to characterize changes in overall psychological functioning unfolding over the course of treatment (e.g., Owens et al., 2015), inter-individual differences can also be observed at a much more minute level, such as the effects of specific interventions on key psychological change variables. Even when delivered by the same therapist using the same manualized treatment, significant between-patient variability can
be observed among clients achieving clinically significant symptom remission (Boswell & Bugatti, 2016). For instance, idiographic case studies indicate that changes on specific psychological change variables (e.g., mindfulness, anxiety sensitivity, distress tolerance) in response to the delivery of cognitive-behavioral therapy (CBT) interventions varied significantly among clients who had all been assigned a principal diagnosis of major depressive disorder (Boswell, Anderson, & Barlow, 2014; Boswell & Bugatti, 2016). In addition, relying on symptom network visualization, Fisher and Boswell (2016) identified significant differences in the contribution of key problem areas to the maintenance of specific disorders, providing additional evidence in support of selectively addressing primary sources of harmful dysfunction with idiographic prioritization of targeted interventions. Such results undergird the movement toward personalized treatment and the belief that tailoring interventions to individual clients is a crucial component of evidence-based practice (Norcross & Wampold, 2011).

**Treatment Personalization and Clinical Responsiveness**

Scholars have focused on the personalization of a wide array of distinct processes characterizing a course of psychotherapy. Rooted in the personalized medicine movement, Cuijpers et al. (2016) advocated for the identification of individuals’ characteristics functioning as reliable predictors of differences in positive and negative effects associated with distinct treatments for depression, thus emphasizing the personalization of the treatment selection process. Alternatively, Fisher et al. (2019) tested a framework for systematically arranging the sequence of interventions delivered over the course of treatment, which yielded promising results. After collecting intensive repeated measures data prior to the initiation of treatment, person-specific factor analysis and dynamic factor modeling were employed to generate a personalized modular treatment plan, suggesting the most effective arrangement of treatment...
modules comprised by an evidence-based cognitive-behavioral psychotherapy. These exciting developments in the field prelude the advent of sophisticated treatment personalization techniques in the near future.

However, treatment personalization does not require time-intensive or overly sophisticated statistical methods. And even if those methods were to be implemented, research demonstrates that effective therapy relationships would still be required to provide the necessary, solid foundations upon which positive outcomes could be achieved (Norcross & Lambert, 2018). As such, treatment personalization should be interpreted as a process relying on responsiveness—therapists adapting their behavior to the unfolding context of treatment, including specific client characteristics and behaviors (Stiles, 2009; Stiles, Honos-Webb, & Surko, 1998). Clinical responsiveness in psychotherapy is thus a broad construct encompassing a vast array of therapist behaviors. It can refer to the selection of specific treatments and treatment planning based on clients’ problems and unique characteristics, but it can also involve changes in the delivery of interventions, including changes in timing and phrasing, in response to clients’ emotional state and level of understanding (Stiles, Honos-Webb, & Surko, 1998). This process is a direct product of the interpersonal format of psychotherapy, which can subsequently be tied to the systematically responsive nature of all human interactions (Stiles, Honos-Webb, & Surko, 1998). But responsiveness in psychotherapy moves beyond the process that is intrinsic to all human interactions, and scholars have narrowed their focus on the process of appropriate responsiveness (Stiles, Honos-Webb, & Surko, 1998).

What differentiates appropriate responsiveness from the broad process of interpersonal responsiveness is that it functions as a means for achieving desired outcomes within the context of psychotherapy (Stiles, Honos-Webb, & Surko, 1998). These outcomes can range from the
achievement of symptom reduction and recovery, to therapists’ drive to engage in therapeutic behavior that is consistent with the specific model of psychotherapy that they are intending to implement (Stiles, Honos-Webb, & Surko, 1998). Clinical responsiveness can also be described as a process that occurs simultaneously on a variety of time scales that range from the overarching course of treatment, to the observation of minor verbal and non-verbal responses lasting a fraction of a second (Stiles, Honos-Webb, & Surko, 1998). What makes the construct of clinical responsiveness even more fascinating, is that the parallel nature of these time scales allows—and often requires—therapists to shape their behavior by simultaneously and responsively responding to the context characterizing multiple time scales (Stiles, Honos-Webb, & Surko, 1998).

For instance, Stiles, Honos-Webb, & Surko (1998) described a not-unusual clinical vignette, where a therapist would have to simultaneously respond to the client’s original presenting problem, a rupture in the alliance that had occurred during a previous session, and the client’s facial expression displayed in response to the intervention that was just delivered. Additionally, clinical responsiveness comprises the gathering and prognostic interpretation of treatment progress and outcome information, as well as clinicians’ willingness and ability to react accordingly by modifying treatment in order to optimize an individual client’s outcome (Constantino et al., 2013). Access to information that is perceived as valid, relevant, and accurate, stands as the sine qua non of appropriate prognostic predictions and responsiveness (Constantino et al., 2013; Tracey et al., 2014). Within routine clinical practice, responsiveness has historically been a function of clinical judgment alone. Nonetheless, mental health professionals are not immune from many of the biases that affect professionals, as well as the general population.
Self-assessment bias, a positively skewed assessment of personal performance, has been consistently detected across the most disparate categories of professionals (Dunning et al., 2004). In an attempt to verify the presence of a similar bias among mental health professionals, Walfish et al. (2012) examined practicing clinicians’ self-ratings of their ability to help clients, as compared to other clinicians, as well as clinicians’ estimates and predictions of their clients’ positive outcomes, non-response, and deterioration. On average, practitioners rated their skill at the 80th percentile, with none of the participants rating their skill below the 50th percentile. Additionally, only 8.4% of clinicians rated their skill below the 75th percentile, while 25% of practitioners rated their skill at the 90th percentile or above. Regarding treatment outcomes, clinicians reported that, on average, 77% of their clients improved because of the psychological treatment that they had delivered. On the other hand, clinicians reported that, on average, less than only 4% of their clients deteriorated. Finally, over 21% of clinicians reported that 90% or more of their clients improved as a result of the treatment that they had delivered.

When compared to actual estimates of patient deterioration, nonresponse, and unsatisfactory outcome (e.g., Hannan et al., 2002; Lambert et al., 2010), these results emphasize the presence of a vast discrepancy between clinicians’ self-ratings and actual treatment efficacy, which could be linked to underlying processes such as self-assessment bias (Dunning et al., 2004). This bias conceivably impedes appropriate clinical responsiveness because clinicians are not attending to important markers of negative treatment process and outcome (“Things seem to be going well enough, and this fits my general expectation”).

Interpretative biases can also interfere with the ability to develop expertise in psychotherapy. The work of Shanteau (e.g., Shanteau, 1988, 1989, 1992) presents a concise theoretical framework for understanding this interaction. Shanteau argues that expertise
encompasses specific *psychological traits*, such as the ability to adapt to new situations, *cognitive skills*, including the ability to selectively direct attention to what is relevant, as well as the ability to identify exceptions to rules, *decision strategies*, which support decision making by helping experts overcome cognitive limitations, and *task characteristics*, which are independent of the expertise displayed by individual, but significantly limit performance (Shanteau, 1992). Shanteau (1992) identified clinical psychology as an area in which experts do not appear to significantly outperform novices. Although Shanteau (1992) concentrated on the role played by task characteristic in clinical psychology, noting the negative effect of ever-changing and unpredictable context of human behavior on the ability to develop expertise, his argument could also be expanded to address the role of decision strategies in psychotherapy. Experts in disciplines where good expert performance is observed, such as mathematicians, astronomers, and chess masters, routinely rely on a variety of formal and informal decision strategies, such as dynamic feedback, decision aids, the decomposition of complex decision problems, and the preventive analysis of potentially difficult situations, that support expertise by systematizing decision making and providing experts with the necessary tools to overcome cognitive limitations (Shanteau, 1989, 1992). However, psychotherapists have historically disregarded the use of any of the aforementioned decision strategies, opting instead for the sole reliance on cognitive-bias-prone clinical judgment.

**Routine Outcome Monitoring**

The patient-focused psychotherapy research movement, sparked by Howard et al. (1996), advocated for the implementation of systematic strategies to support the individualized delivery of evidence-based interventions. Howard et al. (1996) describe a set of three fundamental questions that—similar to a funnel analysis—guide the process of determining the value of an
intervention. At the highest level we can ask questions regarding the efficacy of a specific treatment, such as “does this intervention work under highly-controlled experimental conditions?” This question is best answered by standard experimental methods, such as randomized controlled clinical trials, prioritizing internal validity (Howard et al., 1996). At the intermediate level, clinical psychologists may want to examine whether an efficacious intervention is also effective in naturalistic clinical settings, a question that is often addressed with quasi-experimental designs (Howard et al., 1996). However, the only question that is directly examined by practicing psychotherapist mirrors Gordon Paul’s words from his seminal paper published in 1967 (Paul, 1967, p. 111): “What treatment, by whom, is most effective for this individual with that specific problem, and under which set of circumstances?”

This idiographic question requires an answer that only idiographic methods can afford. Howard et al. (1996) proposed patient profiling, characterized by the “periodic assessment of a patient’s status on the selected outcome variables during treatment” (Howard et al., 1996, p. 1061), which could be compared to the expected trajectories of change modeled after the client’s initial clinical characteristics and based on the dosage and phase models of psychotherapy (Howard et al., 1986, 1996). This pioneering approach introduced the concept of routine outcome monitoring (ROM), characterized by the integration of routine outcomes assessment offering therapists with data-driven feedback supporting the delivery of treatment. ROM is also consistent with the local clinical scientist model proposed by Stricker and Trierweiler (1995), who argued in favor of the implementation by therapists of the scientific method within the context of treatment, gathering data in order to test clinical hypotheses. This approach can also contribute to the discontinuation of the unidirectional relationship that has historically
characterized the relationship between clinical science and practice, empowering clinicians by supporting their active role in the implementation and development of evidence-based practices.

A significant number of studies validates the clinical utility of routine outcome monitoring (ROM). A recent meta-analytic review conducted by Lambert, Whipple, & Kleinstaüber (2018), synthesized the results of twenty-four studies examining the use of two common ROM systems: the Outcome Questionnaire System (OQ-System; Lambert et al., 2013), and the Partners for Change Outcome Management System (PCOMS; Duncan & Miller, 2008; Prescott et al., 2017). The OQ-System relies on the OQ-45 (OQ-45; Lambert et al., 2013), a 45-item self-report measure assessing three domains of client functioning: symptoms of psychological distress, interpersonal problems, and social role functioning. Scores on these measures are used by the OQ-System to generate predictions regarding the trajectory of treatment based on the unique characteristics of each client. The primary goal of the OQ-System is to predict treatment failures, based on the discrepancy between expected and observed trajectories of change over the course of treatment.

PCOMS relies on the Outcome Rating Scale (ORS; Miller et al., 2003), a brief self-report measure assessing mental health functioning, and the Session Rating Scale (SRS; Duncan & Miller, 2008), which assesses the therapeutic alliance as conceptualized by Bordin (1979). Scores produced on the ORS and the SRS are then used to generate predictions of expected treatment progress, which are later compared with the routine measurements collected at each session in order to identify significant departures from expected change. The synthesized results indicated that, in the general sample, the integration of ROM outperformed treatment-as-usual (TAU) at post-treatment, a difference that was characterized by a small, albeit statistically significant effect that was consistent across studies (Lambert, Whipple, & Kleinstaüber, 2018).
Furthermore, an even larger effect size was identified when comparing the use of ROM and TAU among not-on-track (NOT) clients exhibiting significant departures from the projected treatment trajectory. In this at-risk portion of the sample, the use of ROM was associated with a significant reduction in clients who ultimately displayed deterioration, as well as an increase in the number of clients demonstrating significant improvement (Lambert, Whipple, & Kleinstaüüber, 2018). Thus, the use of ROM was found to significantly improve outcomes, while reducing the frequency of negative outcomes (Lambert, 2007).

ROM facilitates clinical responsiveness by providing greater predictive accuracy than clinical judgment alone. Hannan et al. (2005) investigated the accuracy of ROM by following 492 clients throughout the course of their treatment. Clients were administered the Outcome Questionnaire-45 (OQ-45; Lambert et al., 2013) for the entire duration of treatment. Based on the RCI, ROM data were then modeled to compute the probability that future OQ-45 scores would fall outside tolerance intervals identifying 10% of patients at each level of severity who deviated significantly from the projected trajectory of change. These deviations predicted deterioration based on expected trajectories of change produced by aggregating large datasets containing ROM of cases that had achieved positive outcomes. This ROM-based empirical method was able to correctly predict 100% of the cases that had deteriorated at termination. Eighteen percent of the cases were misidentified as likely to deteriorate, although 74%, while not deteriorating, were found to be non-respondents.

Unlike in the medical field, the cost of misidentifying cases as potentially deteriorating in psychotherapy has little to no-cost, consistent with the old adage “better safe than sorry.” Although ROM’s accuracy was strongly supported by these findings, perhaps the most astonishing results can be found in the comparison to the accuracy of practitioners’ predictions
based on their sole clinical judgment. Therapists participating in the study predicted that only 0.01% of the clients would deteriorate, while ROM data showed that over 7% had actually deteriorated by the end of therapy. Ultimately, these findings emphasize the need for clinicians to rely on actuarial predictions instead of clinical judgement alone to avoid harmful treatment effects (Hannan et al., 2005).

**Measurement Feedback Systems**

In addition to access to objective treatment progress data, appropriate clinical responsiveness requires clinicians to correctly interpret this information. Research has increasingly focused on the development and implementation of measurement feedback systems (MFS), which are ROM-based computerized systems that assist clinicians with the interpretation of ROM data (e.g., flagging patients at risk of deterioration, offering clinical suggestions). The ultimate goal of MFS is to enhance clinical decision-making, providing objective and systematic feedback that has the potential to overcome the inaccuracy and limitations that are intrinsic to clinicians’ judgment (e.g., Walfish et al., 2012).

The relevance of MFS to the implementation of evidence-based practice can be appreciated by reviewing the core competencies that were identified by the APA Presidential Task Force on Evidence-Based Practice (2006) to define clinical expertise, and ultimately to promote positive therapeutic outcomes: (a) assessment, diagnostic judgment, systematic case formulation, and treatment planning; (b) clinical decision making, treatment implementation, and monitoring of patient progress; (c) interpersonal expertise; (d) continual self-reflection and acquisition of skills; (e) appropriate evaluation and use of research evidence in both basic and applied psychological science; (f) understanding the influence of individual and cultural differences on treatment; (g) seeking available resources (e.g., consultation, adjunctive or
alternative services) as needed; and (h) having a cogent rationale for clinical strategies. The development and sharpening of these competencies relies on objective feedback, which undergirds clinicians’ corrective action.

As argued by Tracey et al. (2014), the sole reliance on subjective clinical judgment for the development of these competencies, that has historically characterized psychotherapy, explains the little development of expertise—defined as a progressive increase in quality of performance—in this field identified by Shanteau (1992). It is worth noting that, despite the widely reported difficulty identifying a positive relationship between clinical experience and performance (e.g., Bickman, 1999; Spengler & Pilips, 2015; Stein & Lambert, 1984), clinicians have been found to display a progressive growth pattern of confidence in their own expertise over the course of their career (e.g., Rock et al., 1987).

In order to appreciate MFS’s potential to overcome these biases, it is necessary to reflect upon the construct of feedback. Hattie and Timperely (2007) posited that feedback can enhance performance by reducing the discrepancy between current understanding/performance and a desired goal. Additionally, effective feedback should address the following questions: (1) Where am I going? (What are the goals?); (2) How am I going? (What progress is being made toward the goal?); and (3) Where to next? (What activities need to be undertaken to make better progress?; addressing, respectively, the necessary processes of feed up, feed back, and feed forward (Hattie & Tiemperely, 2007). MFS affords a significant advantage over the sole reliance of ROM, which is captured by the process of feed forward described by Hattie & Tiemperley (2007). MFS expands on ROM, by actively supporting therapists’ clinical decision-making process, comparing clients’ progress to normative outcome data, alerting clinicians when clients display a significant departure from expected progress, providing clinicians with
recommendation regarding clinical strategies, directing clinicians to outside sources or materials for useful information, and assessing clients’ fit with treatment (Lyon et al., 2016).

The clinical utility of MFS is also supported by the extant literature. When compared to treatment as usual, treatments involving MFS have demonstrated the potential to facilitate better outcomes, although the extant literature lacks the consistency in methodological quality that would allow for more reliable inferences (Kendrick et al., 2016). Lambert et al. (2001) have conducted multiple studies relying on patient data drawn from nontraining settings with licensed professionals and a diverse patient population. Patients found to be at-risk for deterioration achieved significantly better outcomes when clinicians had access to feedback based on the routine administration of the OQ-45, as compared to those who received TAU, a difference that was characterized by a medium effect size.

Shimokawa et al. (2010) conducted a meta- and mega-analytic study comparing treatment as usual (TAU) to various form of MFS. MFS included in the study comprised feedback-to-clinician only, feedback-to-clinician-and-patient, and feedback-to-clinician with the additional provision of clinical support tools (CST), a MFS providing clinicians with suggestions regarding evidence-based strategies for resolving unsatisfactory treatment progress and preventing deterioration or nonresponse. Based on ROM data tracking changes in therapeutic alliance, patient motivation, and social support, CST provided clinicians with recommendations for the delivery of targeted interventions aimed at preventing treatment failures. The results indicated that all forms of MFS successfully enhanced outcomes while also reducing rates of treatment failures for patients who had been found to deviate from ideal trajectories of treatment progress. Furthermore, the use of MFS led to more distress reduction and enhanced the odds of
experiencing clinically significant improvement in patients whose treatment progress already matched ideal trajectories of change.

Reese et al. (2010), contributed to the investigation of the effectiveness of MFS by examining the effect of providing clinicians delivering couples therapy with ROM-based feedback. Couples whose providers received feedback displayed twice as much improvement as couples who had been delivered TAU, a difference characterized by a large effect size. Couples in the feedback condition were also found to be more likely to display clinically significant change when compared to couples in the TAU condition. Specifically, there were four times more couples in the feedback condition that achieved clinically significant change.

Bickman et al. (2011) further tested the utility of MFS by examining the effects of feedback to clinicians on youths’ clinical improvement. Regardless of the class of respondents, which included youths, clinicians, or caregivers, youths whose clinicians relied on clinical feedback displayed faster clinical improvement than youths who received TAU. Moreover, a dose-response relationship was also identified, indicating that the more frequently clinicians viewed feedback, the better the youths’ treatment outcome was found to be. Although previous meta-analytics reviews demonstrated the overall effectiveness of providing feedback to clinicians in enhancing treatment outcomes, Bickman et al. (2011) presented the first results indicating that the effectiveness of MFS can be further enhanced by increasing the frequency and immediacy of feedback.

A subsequent study (Bickman et al., 2016) explored the implementation of a second-generation MFS, which had been previously introduced by Bickman et al. (2011), now re-named Contextualized Feedback Systems (CFS; Bickman et al, 2011, 2012). This hybrid design study examined both the CFS implementation process, as well as the impact of CFS on treatment
outcomes at two separate sites. CFS is a web-based MFS that relies on the ROM data collected by administering the Peabody Treatment Progress Battery (PTBB; Bickman et al., 2010), which comprises eleven measures completed by youth, caregivers, and clinicians assessing a wide range of clinically significant domains, such as symptoms severity, therapeutic alliance, life satisfaction, motivation for treatment, hope, treatment expectations, caregiver strain, and service satisfaction, as well as the Symptoms and Functioning Severity Scale (SFSS; Bickman et al., 2010), a measure of symptom severity completed by youth, caregivers, and clinicians. The results of this study indicated that the feedback intervention was associated with enhanced outcomes at one of the two sites. This positive effect of treatment outcomes was also characterized by a dose-response effect exhibiting a positive association between the use of the CFS intervention and youth symptom severity. It is worth taking note of the importance of the implementation process emphasized by this study. The clinicians’ completion rate and feedback viewing at the site reporting the positive effect of the MFS on youth symptom reduction, were 50% higher than those of clinicians at the site that had not benefitted from the intervention. In addition to providing additional evidence in support of the clinical usefulness of MFS, this study emphasized the importance of successful implementation models undergirding the effective rollout of MFS.

Slade (2011) expanded this line of research by investigating whether immediate feedback+CST would produce significantly better outcomes than 1-week-delayed and 2-week-delayed feedback+CST. Results indicated that, regardless of the delay in feedback, patients at risk of deterioration achieved similar outcomes. Nonetheless, immediate feedback+CST led to the same amount of change in 3 sessions less when compared to 1-week-delayed feedback+CST. Furthermore, 1-week-delayed feedback+CST led to the same amount of change in 3 sessions less
when compared to 2-week-delayed feedback+CST. In addition, recovery rates increased by approximately 20% by the immediacy of feedback. Specifically, among patients at risk for deterioration or non-response, 20% improved/recovered in the TAU condition, approximately 40% of patients in the 1-week-delayed and 2-week-delayed feedback+CST condition were found to have improved/recovered, and 60% of those in the immediate feedback+CST condition were found to have improved/recovered. Thus, the extant literature seems to indicate that the effectiveness of clinical feedback provided by MFS is affected by several factors that may be related to underlying mechanisms that define the feedback-behavior regulation relationship.

Clinical Feedback and Clinicians’ Behavior

The mechanisms underlying the effectiveness of performance feedback have received significant attention in the fields of social and industrial/organizational psychology. Following a comprehensive review of the literature on feedback interventions (FI), Kluger and DeNisi (1996) proposed a hybrid theory—feedback intervention theory (FIT)—combining existing feedback theories, while addressing limitations and inconsistencies that had been noted. FIT was constructed upon five central arguments: (a) behavior is regulated by comparisons of feedback to goals or standards, (b) goals or standards are organized hierarchically, (c) attention is limited and only feedback-standard gaps that receive attention affect behavior regulation, (d) attention is normally directed to a moderate level of the hierarchy, and (e) FIs change the locus of attention and therefore affect behavior.

FIT assimilates processes that were previously delineated by Locke and Latham (1990) who first introduced goal-setting theory (GST). Upon revising GST, Locke and Latham (2006) provided the following succinct summary of the four mechanisms or mediators characterizing the relationship between goals and performance: “High goals lead to greater effort and/or persistence
than do moderately difficult, easy, or vague goals. Goals direct attention, effort, and action toward goal-relevant actions at the expense of nonrelevant actions. Because performance is a function of both ability and motivation, goal effects also depend upon having the requisite task knowledge and skills. Goals may simply motivate one to use one's existing ability, may automatically “pull” stored task-relevant knowledge into awareness, and/or may motivate people to search for new knowledge” (Locke & Latham, 2006, p. 265).

Recent revisions of GST have integrated findings regarding the differential influence of the distinct levels found within an individual’s goal hierarchy (e.g., Locke & Latham, 2002). Kluger and DeNisi (1996) argued that moderate levels within a goal hierarchy tend to draw the most attention, ultimately having the greatest impact on behavior regulation. Similarly, Locke and Latham (2002), observed that when presented with complex goals, goal effects (i.e., behavior regulation, intrinsic motivation, self-efficacy) are dependent on an individual’s ability to identify specific, relevant, and appropriate goal-related task strategies. Furthermore, the use of proximal goals has been found to most effectively facilitate performance on complex tasks, as compared to the use of distal goals (e.g., Frese & Zapf, 1994; Kanfer & Ackerman, 1989; Latham & Seijts, 1999). Especially in dynamic situations, proximal goals allow individuals to more quickly react to feedback in order to attain the goal (Frese & Zapf, 1994). Proximal goals provide the necessary information that individuals can use to identify any discrepancies between their current picture of reality and what is required for goal attainment, a process that Frese and Zapf (1994) named error management. Dorner (1991) supported this analysis, noting that performance errors in dynamic tasks are often the product of insufficient distal goals decomposition into proximal goals.
These accounts help elucidate findings from recent clinical studies investigating factors that, despite promising results supporting MFS effectiveness, may have potentially hindered the dissemination of MFS in routine practice. For instance, little is known about the mechanisms of adoption and the impact of clinical feedback on therapist behavior. Hatfield and Ogles (2007) attempted to identify some of these barriers by conducting a survey study of clinicians’ reasons, beliefs, and opinions underlying their current use or reluctance to integrate MFS and ROM in their practice. A subset of clinicians who were not using MFS indicated practical concerns as the primary cause leading to their inability to integrate this strategy into their practice. Practical concerns included: the addition of paperwork, time burden, lack of financial and human resources, and burden on clients. Arguably, many of these concerns have been addressed by recent technological developments, which have made the implementation of IT-based MFS in routine practice much less burdensome and time consuming (Bickman, Kelley, & Athay, 2012). A significant portion of clinicians who were not using MFS also indicated that they had not implemented this strategy in their practice due to concerns regarding the utility of the measures. Utility concerns comprised: the perception that MFS feedback is not useful, the perception that the measures are too simple and would distort the effects of treatment, the perception that feedback would interfere with their clinical autonomy, the concern that the data would be misused by others, and concerns about confidentiality.

Subsequent analyses indicated that insight oriented and eclectic clinicians rated utility concerns higher than CBT therapists. This discrepancy could perhaps be accounted for by different views regarding the process of psychotherapy. Insight oriented psychotherapies tend to emphasize psychotherapy process factors that are often insufficiently captured by standard ROM batteries of assessment measures. Aside from this noteworthy observation, a significant set of
clinicians, regardless of theoretical orientation, reported that issues related to the utility of the MFS hindered their ability and willingness to integrate MFS as part of their clinical practice.

In a recently published study, Jensen-Doss et al. (2018a) administered two novel measures, the monitoring and feedback attitudes scale (MFA), assessing clinicians’ attitudes toward standardized progress tools, and the attitudes toward standardized assessment scales-monitoring and feedback (ASA-MF), assessing clinicians’ attitudes toward standardized progress tools, to a sample of 504 mental health professionals that was predominantly composed of masters-level clinicians (85%). Overall, clinicians reported positive attitudes toward gathering progress data and providing feedback to clients, while also disagreeing with the idea that feedback could have iatrogenic effects or negatively affect the therapeutic alliance. Although clinicians reported that standardized progress measures can help gather information that might not otherwise come up in session, clinician’s attitudes toward standardized progress tools appeared to be more neutral. Clinicians’ responses on items from the “Benefit for Treatment Planning” scale exhibited small-to-medium effect sizes when compared to neutral values. Likewise, clinicians’ responses on items from the “Practicality” scale exhibited small effect sizes when compared to neutral values. Nevertheless, while only 0.4 to 6.8% of participants reported negative attitudes on MFA scales, 11.4 to 20.7% of participants reported negative attitudes on ASA-MF scales. Jensen-Doss et al. (2018a) also examined several predictors of provider attitudes.

Results indicated that CBT-oriented clinicians reported more positive attitude than those with other theoretical orientations on the MFA Harm Scale, although no differences were observed on the MFA Benefit scale. On the other hand, clinicians working in private practice reported more negative attitudes on the MFA Benefit scale than those working in other settings.
Moreover, CBT-oriented clinicians reported significantly more positive attitudes on all ASA-MF scales than those identifying with other theoretical orientations. Similarly, psychodynamically-oriented clinicians reported more negative attitudes on ASA-MF Clinical Utility and Treatment Planning Scales, while clinicians in private practice reported more negative attitudes on the ASA-MF Treatment Planning and Practicality scales (Jensen-Doss et al., 2018a).

**Nomothetic and Idiographic Approaches**

Given that concerns related to the utility of MFS have been found to significantly hinder clinicians’ ability and willingness to implement this evidence-based strategy, the field has recently begun to examine the utility of different types of routine measurement and feedback (e.g., Ashworth et al. 2009; Lindhiem et al., 2016; Sales & Alves, 2012). ROM and MFS have so far predominantly relied on the use of nomothetic self-report measures. A recent comprehensive review of existing MFS conducted by Lyon et al. (2016) indicated that while most (93.9%) MFS tracked nomothetic measures, only 28.6% allowed the tracking of individualized/idiographic symptom-related measures (e.g., compulsions, tantrums, self-injury incidents), and even fewer MFS (24.5%) offered the capability of tracking other individualized/idiographic measures (e.g., interventions delivered by providers, individual treatment goals, critical events for the service recipient).

Nomothetic assessment procedures are characterized by several benefits. The standardized nature of nomothetic measures promotes consistency within each course of treatment. Furthermore, validated nomothetic measures allow clinicians to compare patients’ scores to averages drawn from the general population. In addition, nomothetic measures enable organizations to compare treatment outcomes across clients as well as across organizations (Scott & Lewis, 2015). On the other hand, nomothetic assessment procedures are also characterized by
several disadvantages. First, these measures do not fully and directly support the personalization of services. Nomothetic measures may assist with tracking progress toward the achievement of distal treatment goals, such as the clinically significant reduction of number and severity of symptoms endorsed by a patient. However, as emphasized by Dorner (1991), feedback can best inform behavior regulation in dynamic tasks, such as psychotherapy, by providing information relevant to proximal task goals.

Within the context of psychotherapy, idiographic treatment goals that have been collaboratively set by the clinician and the patient function as proximal goals located at an intermediate hierarchical level, which, based on FIT (Kluger & DeNisi, 1996), garner the most attention and ultimately have the most significant influence on behavior regulation. Second, nomothetic measures might not provide optimally clinically useful information. This latter disadvantage is closely related to the underlying focus of nomothetic measures, which often concentrate on benchmarking individual patients as compared to the population of interest. Although highly valuable, this information on distal therapeutic goals may not provide clinicians with information relevant to the selection and delivery of specific therapeutic strategies in treatment.

As a complement to the use of nomothetic assessment procedure, idiographic measures address many of the shortcomings associated with the administration of standardized measures alone. Idiographic measures can be created on a case-by-case basis, enabling clinicians to monitor specific treatment factors that are relevant to each specific case. Idiographic assessment procedures allow clinicians to track specific client goals, needs, values, and skills based on assessment targets, questions, and ratings (Scott & Lewis, 2015). Furthermore, while enabling clinicians to fully embrace the patient-centered approach by tailoring, not only treatment
interventions, but also ROM to clients’ specific needs, idiographic measures also allow clinicians to employ psychometrically valid assessment techniques (Weisz et al., 2011).

Research on the use of idiographic measures for ROM and MFS is still sparse. Nonetheless, pioneering research efforts have yielded promising results. Weisz et al. (2011), examined whether the addition of idiographic measures would provide valuable information to ROM relying on the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983) and the Youth Self-Report (YSR; Achenbach & Rescorla, 2001), two validated nomothetic measures that include broadband scales, as well as narrowband scales that are considered to provide high problem specificity. Specifically, youths and caregivers were asked to rate their top three problems (TP) at assessment, which were then converted to idiographic measures that were then rated on a 0-10 Likert-type scale as part of an ongoing ROM procedure. TP assessment was found to complement nomothetic assessment by identifying treatment targets that would have been missed by nomothetic measures. Forty-one percent of caregivers, and 79% of youths produced TPs that did not correspond to any clinical range provided by either nomothetic measure. Furthermore, 38% of caregivers and 80% of youths, identified TPs that did not match any clinical range DSM scales. Finally, TPs were found to yield psychometrically valid data. The results indicated that TPs had sufficient: (1) test-retest reliability, (2) convergent validity with dimensions of psychopathology as assessed by standardized measures, (3) discriminant validity in relation to distinct dimensions of psychopathology assessed by standardized measures, (4) sensitivity to change over time, (5) slope reliability, and (6) significant associations between slopes for TPs and slopes generated by a psychometrically sound criterion measure of clinical change.
Given the promising nature of the findings regarding idiographic measures’ psychometric validity, Lindhiem et al. (2016) conducted a meta-analytic review to assess whether idiographic measures would also provide better estimate of psychotherapy effectiveness than symptom checklists. The synthesis gathered data from several studies comparing ROM tracking progress on personalized treatment goals and symptom checklists. Consistent with the authors’ hypothesis, personalized treatment goals yielded substantially larger effect sizes than symptom checklists. Furthermore, the effect sizes for symptom checklists matched those reported in the literature, while effect sizes for personalized treatment goals were larger than those reported in the psychotherapy effectiveness literature. These results were interpreted as indicating that personalized treatment goals provide much better estimates of psychotherapy effectiveness. However, “better” is likely context dependent and depends on perceived importance/relevance to the individual patient. Research has demonstrated that more targeted, intervention-specific measures (e.g., depression symptoms in a depression trial) demonstrate larger effect sizes relative to more general measures in the same study (e.g., quality of life or global distress) (Ogles, 2013). Observed differences may not indicate that one measure or estimate is necessarily “better” although it might be perceived as more important or valid. Varying levels of specificity might ultimately be ideal when it comes to feedback.

Psychological interventions typically address hypothesized underlying psychological processes that might differ in importance and relevance among different patients. As such, nomothetic measures will likely miss the mark when it comes to personalizing treatment. In addition, change on most diagnostic criteria, symptoms, and symptom-clusters that are often the focus of nomothetic measures is affected by the interaction and combination of several psychological processes that are individually targeted by specific therapeutic interventions.
Idiographic measures may provide a more valid estimate of psychotherapy effectiveness by capturing change at more discrete levels of these individual psychological processes.

Edbrooke-Childs et al. (2015) investigated the potential advantages of relying on idiographic measures for capturing relevant change in psychotherapy. Their study compared treatment progress and outcomes on standardized psychosocial difficulties self-report questionnaires to an idiographic measure of progress toward goals, a 3-item Goal Based Outcome tool (GBO; Law & Jacob, 2013) focused on three self-determined goals collaboratively formulated by patients and clinicians at intake, which was then routinely completed by patients throughout the course of treatment. The results indicated that, during the course of treatment, psychosocial difficulties scores decreased with a medium effect size, while progress toward goals scores increased with a large effect size. Change in psychosocial difficulties also showed significantly fewer significant associations with change in clinician-reported functioning and parent-reported satisfaction with care than change in progress toward goals. The association of change in progress toward goals with change in functioning and satisfaction with care were consistently stronger than the association of change in psychosocial difficulties and impact on daily life, as reported by parents. Finally, clinicians reported higher levels of improvement in functioning for youths who made more progress toward idiographic goals. These findings further support the utility of idiographic measures in ROM, which may be more capable of capturing clinically relevant change in psychotherapy.

Although the abovementioned studies have begun to gather information supporting the objective usefulness and validity of the use of idiographic measures for ROM and MFS, little is known regarding clinicians’ attitudes toward this alternative type of progress measurement. A study conducted by Jensen-Doss et al. (2018b) spearheaded research in this area, comparing
clinicians’ attitudes toward nomothetic and idiographic assessment. This project expanded on the previously discussed work by Jensen-Doss et al. (2018a), by administering, in addition to the ASA-MF, the Attitudes Toward Individualized Assessment Scales-Monitoring and Feedback (AIA-MF), a modification of the ASA-MF that, while maintaining a parallel structure, referenced “individualized assessment”, instead of “standardized assessment” on all relevant items. The results indicated that clinicians held neutral to positive attitudes toward both types of assessments. Nonetheless, attitudes toward idiographic (i.e., individualized) assessment was found to be significantly more positive than those toward nomothetic (i.e., standardized) assessment on almost every scale, although these differences were characterized by small or less than small effect sizes. Head-to-head comparative items identified a notable pattern of preference for idiographic measures, with 74.4% of clinicians reporting that idiographic assessment was more relevant to clients’ problems than nomothetic assessment (Jensen-Doss et al., 2018b).

Present Study, Aims, and Significance

Idiographic measures have the potential to overcome some of the major obstacles that have so far impeded the implementation and dissemination of ROM and MFS. A growing portion of available MFS already allows for routine assessment with idiographic measures, with recent estimates indicating that roughly 25% to 29% of current MFSs provide this feature (Lyon et al., 2016), indicating that the integration of idiographic measurement as part of MFS is not only feasible, but a readily available possibility. However, the extant literature features a critical knowledge gap regarding clinicians’ perceptions of idiographic measurement approaches. Previous studies (e.g., Jensen-Doss et al., 2018b) have only begun to investigate clinicians’ attitudes regarding the use of idiographic and nomothetic measures for ROM and MFS purposes. There are no studies to date that have relied on experimental designs to compare how the clinical
feedback provided by MFS based on different types of measures (i.e., nomothetic or idiographic) can affect the perceived clinical utility, relevance to treatment planning, and practicality of clinical feedback provided by MFS.

The first aim of the present study was to examine whether clinicians’ perceptions of the clinical feedback presented by MFS would dependent upon the nature (nomothetic or idiographic) of the routine outcome measures that support it. In light of previous research pointing to differences between cognitive behavioral and insight oriented therapists in perceptions of outcome measures (e.g., Hatfield & Ogles, 2007), the second aim of the present study was to examine whether any observed differences in perceptions of different types of clinical feedback would remain observable after adjusting for variability in clinician theoretical orientation. Lastly, the third aim of the present study was to investigate clinicians’ reasons for use and nonuse of outcome measures in their clinical practice.

**Research Questions and Hypotheses**

**Research Question 1.** Does the approach to routine measurement and clinical feedback (idiographic and/or nomothetic) affect clinicians’ perception of the clinical utility, treatment relevance, and practicality of the clinical feedback provided by MFS?

**Hypothesis 1.1** Participants presented with idiographic and combined (i.e., nomothetic and idiographic) feedback will rate the clinical feedback as more clinically useful, even after adjusting for theoretical orientation.

**Hypothesis 1.2** Participants presented with idiographic and combined (i.e., nomothetic and idiographic) clinical feedback will rate the clinical feedback as more relevant to treatment planning than participants presented with nomothetic feedback, even after adjusting for theoretical orientation.
Research Question 2. Does outcome measure users’ theoretical orientation affect their reasons for integrating outcome measures?

Hypothesis 2. Participants who identify as cognitive behavioral therapist will report higher ratings of the importance of Treatment Factors and Business Factors on the Practitioner Outcome Survey than those who identify with another theoretical orientation.

Research Question 3. Does outcome measure users’ work setting affect their reasons for integrating outcome measures?

Hypothesis 3. Participants who report working in medical settings and community mental health centers/university counseling centers will report higher ratings of the importance of Business Factors on the Practitioner Outcome Survey than those who are in private practice.

Research Question 4. Does the age group served by outcome measures users affect their reasons for integrating outcome measures?

Hypothesis 4. Participants who report working with children/adolescents or children/adolescent and adults will report higher ratings of the importance of Treatment Factors, Business Factors, and Payer-requirement Factors on the Practitioner Outcome Survey than those who work exclusively with adults.

Research Question 5. Does outcome measure nonusers’ theoretical orientation affect their reasons for not integrating outcome measures?

Hypothesis 5. Participants who identify with a theoretical orientation other than cognitive behavioral will report higher ratings of the importance of Utility Factors and Practical Factors on the Practitioner Outcome Survey than those who identify as cognitive behavioral therapists.
Research Question 6. Does outcome measure nonusers’ work setting affect their reasons for not integrating outcome measures?

Hypothesis 6. Participants who report working in private practice will report higher ratings of the importance of Utility Factors, and Practical Factors on the Practitioner Outcome Survey than those who work in medical settings or community mental health centers/university counseling centers.

Method

Participants and Recruitment

The sample of clinicians for the present study was recruited via professional listservs, including the American Psychological Association (APA) Division 29, Society for the Advancement of Psychotherapy, the APA Division 12, Society for Clinical Psychology, the Society for Psychotherapy Research (SPR), the Society for the Exploration of Psychotherapy Integration (SEPI), the Association for Behavioral and Cognitive Therapies (ABCT), and the Association for Contextual Behavioral Science (ACBS). In addition, the directors of clinical training of APA-accredited doctoral programs in clinical and counseling psychology, including both Ph.D. and Psy.D. terminal degree programs, were contacted and asked to share the recruitment materials with their programs’ faculty and students. Participants were required to satisfy the following inclusion criteria: (a) doctoral-/masters-level clinician or trainee currently enrolled in a full-time graduate program in the field of mental health, and (b) currently providing psychological services to a minimum of 1 client. There were no exclusion criteria related to sex, gender, theoretical orientation, or other individual or professional characteristics. In addition, participants were compensated for their participation with entries into a raffle with a 1 in 30 chance of receiving a $50 electronic Amazon.com gift card.
A total of 372 clinicians responded to the recruitment email. However, 11.6% of responders did not provide usable data. Thus, the final sample included 329 participants. Table 1 summarizes the demographics characterizing the final sample. Seventy-two percent of participants identified as female, while 27.7% identified as male. A majority of participants identified as White (82.7%). Most participants were either younger than thirty years of age (44.7%), or in their thirties (36.2%).

Several professional characteristics were also assessed. Over half of the sample (53.2%) was composed of graduate students, of which 95.4% identified as psychology doctoral students. The second largest professional group in the sample was composed of psychologists (39.8%). A majority of participants identified their predominant theoretical orientation as cognitive behavioral (64.7%), while the second most commonly reported predominant theoretical orientation was psychodynamic (10.6%). A little more than a quarter of participants (28.6%) stated that they practiced at a hospital or other medical setting. Moreover, 21.6% of participants stated that they were in private practice, 20.1% reported practicing at a community mental health clinic, and 18.8% reported practicing at a university counseling center.

Half of the participants reported having less than ten patients on their caseload (51.4%). Most clinicians reported that their clientele was composed by adults (58.4%), while 29.2% of participants reported having a mixed caseload comprising both adult and pediatric patients. Participants were also asked to identify the group of disorders that they most frequently encountered in their clinical practice. Over forty percent of participants (41.3%) identified anxiety disorders, almost a fifth of the sample (18.8%) identified stressor- and trauma-related disorder, and 16.4% of participants identified depressive disorders.

Design
Power Analysis. Power analyses were performed using G*Power (Faul, Erdfelder, Lang, & Buchner, 2007) in order to identify a sample size that would ensure adequate statistical power to detect small-to-medium effect sizes. These analyses indicated that, with power set at .80 and \( \alpha \) set at .05, a total sample of \( N = 281 \) would be required. Therefore, a more conservative \( N = 300 \) was set as the target sample size.

Study Design. The present study implemented a between-groups comparative design. Participants were randomized to one of three conditions: nomothetic feedback (NOM; \( n = 112 \)), idiographic feedback (ID; \( n = 112 \)), and combined (NOM + ID; \( n = 105 \)).

Measures

Clinician Demographics and Professional Characteristics. Participants’ demographic and professional characteristics were assessed by an initial set of questions requesting participants to report their: age, gender, race/ethnicity, profession, work setting, patients’ age group, number of patients on current caseload, theoretical orientation, and most frequently treated group of disorders.

Attitudes Toward Standardized Assessment Scales-Monitoring and Feedback (Modified). The ASA-MF (Jensen-Doss et al., 2018a) is an 18-item adaptation of the Attitudes toward standardized assessment scales (ASA; Jensen-Doss & Hawley, 2010), a measure that was developed to assess clinicians’ attitudes toward standardized assessment. The ASA-MF was created to assess clinicians’ attitudes toward the administration of standardized progress measures and their use for clinical decision making. This measure was previously validated by Jensen-Doss et al., (2018b), who also conducted factor analyses that led to the identification of three subscales: Clinical Utility, Treatment Planning, and Practicality. These subscales were
found to demonstrate sufficient internal consistency (Clinical Utility $\alpha = 0.85$; Treatment Planning $\alpha = 0.85$; Practicality $\alpha = 0.81$).

The original ASA-MF presented respondents with definitions of standardized progress measures and routine progress monitoring. The modified version of the ASA-MF administered in the present study did not contain these definitions, since participants were asked to rate their perceptions of the specific clinical feedback presented by the simulated MFS. Furthermore, the original items from the ASA-MF were re-worded in order to be relevant to the clinical vignette that was presented in the current study (e.g., the original item “Standardized progress measures don’t tell me anything I can’t learn from just talking to clients” was re-worded as “This feedback didn’t tell me anything I couldn’t have learned from just talking to my patient”). In addition, an item from the original ASA-MF scale “Clinical problems are too complex to be captured by a standardized measure” was removed due to the extensive re-wording that would have been required in order to ensure its relevance to the present study’s procedure. Lastly, while the original items from the ASA-MF were rated on a 5-point Likert scale, the items in the modified version of the measure administered in the present study relied on a 7-point Likert scale. This decision was based on a review of the extant literature, which pointed to the many advantages offered by 7-point scales (e.g., Krosnick & Presser, 2010). The modified ASA-MF scale and subscales demonstrated adequate internal consistency (ASA-MF $\alpha = .90$; Clinical Utility $\alpha = .80$; Treatment Planning $\alpha = .79$; Practicality $\alpha = .84$).

**Practitioner Outcome Survey (Modified).** The Practitioner Outcome Survey (Hatfield & Ogles, 2004, 2007) assesses clinicians’ reasons for use and nonuse of outcome measures. The survey features two separate versions. Clinicians who report using outcome measures are administered a set of 7 items divided into three groups of reasons: Treatment Factor, Payer-
Requirement Factor, and Business Factor. Clinicians who report not using outcome measures are administered a set of 11 items divided into three groups of reasons: Utility Factor, Practical Factor, and Know-how Factor. Participants are asked to: “Please rate how important was each of the following reasons in your decision (not) to integrate treatment outcome measures as part of your practice.” The main departure from the original Practitioner Outcome Survey (Hatfield & Ogles, 2004, 2007) was the use of a 5-point Likert scale, instead of a 6-point scale, ranging from 0 “Not at all important” to 5 “Extremely important”. This decision was based on previous research indicating that the absence of a neutral option requires respondents who do not have knowledge or who have not yet formed an opinion on the subject to choose a side, ultimately increasing error in survey data (e.g., Converse, 1970).

Procedure

Recruitment and Random Assignment. A recruitment email was posted on several professional listservs (see “Participants and Recruitment”). The recruitment email contained a hyperlink that redirected participants to the study survey located on the online research platform Qualtrics. Following completion of an online informed consent form, participants were randomly assigned to one of the three study conditions differentiated by the type clinical feedback that was provided: (1) feedback limited to nomothetic, symptom-based measures (NOM), (2) feedback limited to idiographic, client-specific measures (ID), or (3) the combination of nomothetic and idiographic measures and feedback (NOM + ID).

Participants were then presented with a set of items assessing: demographics and professional characteristics, as well as current use of outcome measures in their clinical practice.

Clinical Vignette and MFS
**Intake and First Session.** Participants were presented with a clinical vignette (hypothetical case) describing the initial phase (i.e., intake assessment, and first session) of an ongoing course of psychotherapy delineating: (a) a patient’s characteristics (e.g., background, presenting problem, diagnostic assessment); (b) two trans-theoretically relevant treatment goals based on the Goal Based Outcomes approach (Law & Jacob, 2013), “Improving self-esteem”, and “Improving client’s communication with his wife”, that had been mutually agreed upon by the hypothetical therapist and the patient; and (c) the measures that were selected to be routinely administered prior to all sessions and would be presented to the therapist as clinical feedback at the beginning of each session. The specific measures presented to participants varied across conditions.

**Nomothetic (NOM) condition.** Participants assigned to the nomothetic condition were presented with clinical feedback based on nomothetic, norm-based outcome measures, which included the Beck Depression Inventory-II (BDI-II; Beck, Brown, & Steer, 1996), and the Brief Symptom Inventory-18, Global Severity Index (BSI-18, GSI; Derogatis, 2000).

**Idiographic (ID) condition.** Participants assigned to the idiographic condition were presented with clinical feedback based on the abovementioned idiographic goals that had been converted into 10-point visual analog scales measuring progress towards goal attainment, ranging from 0 “Extremely negative” to 10 “Extremely positive”, following the procedure described by the Goal Based Outcomes approach (Law & Jacob, 2013).

**Combined (NOM + ID) condition.** Participants assigned to the combined condition were presented with the combination of the clinical feedback provided in conditions NOM and ID.

**Course of Treatment and Clinical Feedback.** Participants were then be provided with a follow-up clinical vignette describing how the course of treatment described in the initial clinical
vignette had progressed over the course of 7 sessions. This follow-up vignette comprised a narrative description as well as tables and graphical depictions of the longitudinal progress reported on the routinely collected measures, resembling the information that is provided by MFS that are currently available on the market. The course of treatment reported by the MFS featured a clinically significant deterioration on one of the routinely collected measures, based on the RCI (Jacobson & Truax, 1991), at the last time point of collection. Specifically, (a) NOM featured a clinically significant deterioration on the BSI-18, GSI, (b) ID displayed a clinically significant deterioration on the “How effective are you at communicating with your wife?” goal attainment scale, while (c) NOM+ID featured the combination of the clinically significant deteriorations reported in NOM and ID.

**Administration of Measures.** Participants were then administered the modified version of the ASA-MF (Jensen-Doss et al., 2018b) assessing their perception of the clinical vignette’s feedback’s (a) clinical utility, (b) relevance to treatment planning, and (c) practicality. Lastly, participants were administered the modified version of the Practitioner Outcome Survey (Hatfield & Ogles, 2004, 2007) assessing their reasons for use or nonuse of outcome measures in their practice.

**Analytic Plan**

**Data Preparation.** Data were screened to assess missing values and fit between the assumptions supporting multivariate analyses and the distribution of all variables included in the present study. The percentage of cases with missing values was below 5%, and the pattern of missingness was found to be completely at random. Therefore, listwise deletion, the most conservative approach for handling missingness, was employed. Cases-to-DVs ratio was also evaluated and proved to suffice multivariate requirements. Multivariate normality was then
assessed by evaluating the normality of the distribution of the means of DVs in each cell. Furthermore, cases were screened for univariate and multivariate outliers. This latter screening relied on the calculation of Mahalanobis distance. Homogeneity of variance-covariance matrices were also screened in order to confirm the assumption that variance-covariance matrices within each cell of the design were sampled from the same population variance-covariance matrix, thus supporting the creation of a pooled estimate of error. Finally, DVs were also evaluated for multicollinearity and singularity.

Clinicians’ Perceptions of Nomothetic and Idiographic Clinical Feedback. To evaluate clinicians’ perceptions of nomothetic and idiographic clinical feedback provided by the simulated MFS, addressing hypotheses 1.1, and 1.2, a multivariate analysis of variance (MANOVA) was performed on three dependent variables: Clinical Utility, Treatment Planning, and Practicality. The type of clinical feedback received (nomothetic, idiographic, combined) and participants’ theoretical orientation (cognitive behavioral and other) were included as fixed factors. This analysis comprised the examination of main effects and interaction effects. Significant multivariate findings were examined with follow-up univariate $F$-statistics implementing a Bonferroni correction. Lastly, significant univariate effects were further examined with estimated marginal means pairwise comparison implementing a Bonferroni correction.

Clinicians’ Reasons for Use of Outcome Measures. To evaluate outcome measure users’ ratings of reasons for using outcome measures in their practice reported on the Practitioner Outcome Survey, a series of three between-subjects multivariate analyses of variance (MANOVA) were performed on three dependent variables: Treatment Factor, Payer-requirement Factor, and Business Factor. The first MANOVA, addressing hypothesis 2, included theoretical
orientation (cognitive behavioral and other) as independent variable. The second MANOVA, addressing hypothesis 3, included work setting (medical, community mental health center/university counseling center, and private practice) as the independent variable. The third MANOVA, addressing hypothesis 4, included patients’ age group (adults, children/adolescents, adults and children/adolescents) as the independent variable. Significant multivariate findings for each MANOVA were examined with follow-up univariate F-statistics implementing a Bonferroni adjustment. Lastly, significant univariate findings were followed by post hoc analyses consisting of pairwise comparisons implementing a Bonferroni adjustment and computing effect size estimates.

**Clinicians’ Reasons for Nonuse of Outcome Measures.** To evaluate outcome measure nonusers’ ratings of reasons for not using outcome measures in their practice reported on the Practitioner Outcome Survey, a series of three between-subjects multivariate analyses of variance (MANOVA) were performed on three dependent variables: Utility Factor, Practical Factor, and Know-how factor. The first MANOVA, addressing hypothesis 5, included theoretical orientation (cognitive behavioral and other) as independent variable. The second MANOVA, addressing hypothesis 6, included work setting (medical, community mental health center/university counseling center, and private practice) as independent variable. The third MANOVA included patients’ age group (adults, children/adolescents, adults and children/adolescents) as independent variable. Significant multivariate findings were examined with follow-up univariate F-statistics implementing a Bonferroni adjustment. Lastly, significant univariate findings were followed by post hoc analyses consisting of pairwise comparisons implementing a Bonferroni correction and computing effect size estimates.

**Results**
Clinicians’ Perceptions of Nomothetic and Idiographic Clinical Feedback

A 3 x 2 between-subjects MANOVA was performed on the three subscales from the modified version of the ASA-MF, which were included as dependent variables: Clinical Utility, Treatment Planning, and Practicality. The type of clinical feedback provided by the simulated MFS (nomothetic, idiographic, and combined) and participants’ theoretical orientation (cognitive behavioral and other) were included as independent variables.

The combined DVs were significantly affected by the main effect of theoretical orientation, Pillai’s Trace = .05, $F(3, 312) = 5.76, p = .001$, which reflected a medium association between participants’ theoretical background and the combined DVs, partial $\eta^2 = .05$. However, contrary to the hypothesis, the combined DVs were not significantly affected by the type of clinical feedback provided by the simulated MFS, Pillai’s Trace = .015, $F(6, 626) = .79, p = .58$, nor by the interaction of the IVs, Pillai’s Trace = .02, $F(6, 626) = .96, p = .45$. The mean ratings of modified ASA-MF subscales for each clinical feedback condition are summarized in Table 2, while the mean ratings for each theoretical orientation are summarized in Table 3.

The impact of participants’ theoretical orientation on the individual DVs was further investigated with univariate $F$-tests corrected with a Bonferroni adjustment. Each univariate test included one of the modified ASA-MF subscales as DV, and participants’ theoretical orientation as IV. The Clinical Utility modified ASA-MF subscale was significantly affected by participants’ theoretical orientation, $F(1, 314) = 16.48, p < .001$, which reflected a medium association between participants’ theoretical background and the Clinical Utility subscale, partial $\eta^2 = .05$. In addition, the Treatment Planning modified ASA-MF subscale was significantly affected by participants’ theoretical orientation, $F(1, 314) = 8.24, p = .004$, which reflected a small-to-medium association between participants’ theoretical background and the Treatment
Planning subscale, partial $\eta^2 = .03$. Likewise, the Practicality modified ASA-MF subscale was significantly affected by participants’ theoretical orientation, $F(1, 314) = 11.42, p = .001$, which reflected a small-to-medium association between participants’ theoretical background and the Practicality subscale, partial $\eta^2 = .04$.

These significant univariate findings were further examined by performing pairwise comparisons of estimated marginal means with a Bonferroni correction, in order to adjust for the additional variables in the model. Participants who identified cognitive behavioral as their predominant theoretical orientation reported higher ratings on the Clinical Utility modified ASA-MF subscale ($M = 4.93, SE = .06$) than participants who identified with other theoretical orientations ($M = 4.49, SE = .09$), $p < .001$. In addition, participants who identified cognitive behavioral as their predominant theoretical orientation reported higher ratings on the Treatment Planning modified ASA-MF subscale ($M = 4.62, SE = .07$) than participants who identified with other theoretical orientations ($M = 4.28, SE = .10$), $p = .004$. Finally, participants who identified cognitive behavioral as their predominant theoretical orientation reported higher ratings on the Practicality modified ASA-MF subscale ($M = 5.59, SE = .07$) than participants who identified with other theoretical orientations ($M = 5.18, SE = .10$), $p = .001$.

**Exploratory Univariate Tests**

Based on existing research, the absence of a significant feedback type effect was somewhat surprising. Although purely exploratory, in the context of this dissertation research, we elected to conduct a series of one-way ANOVAs with Tukey corrections to further explore the data. Specifically, univariate tests were performed to further investigate participants’ perceptions of the different types of clinical feedback provided by the simulated MFS. Furthermore, these allowed for a direct comparison to the head-to-head comparative items
described by Jensen-Doss et al. (2018b), which required clinicians to indicate their preference for idiographic or nomothetic measures and feedback on a number of relevant domains. Each analysis was performed with a single item from the modified ASA-MF scale as the dependent variable, and type of clinical feedback received (nomothetic, idiographic, combined) included as the fixed factor.

Mean ratings and standard deviations for each group, as well as the results of the abovementioned ANOVAs, are summarized in Table 4. Among all of the ASA-MF items, only one significant between-groups difference was observed. Participants who received nomothetic feedback alone reported significantly more negative ratings ($M = 4.54$, $SD = 1.29$) than those who had received idiographic ($M = 5.57$, $SD = 1.16$) or combined ($M = 5.62$, $SD = 1.16$) feedback of the “These measures did not measure the outcome domains most important to the patient” item. The difference in mean ratings on this item between the nomothetic and idiographic groups was characterized by a large effect size, $d = .84$. Likewise, the difference in mean ratings on this item between the nomothetic and combined groups was characterized by a large effect size, $d = .88$.

**Descriptives for Clinicians’ Use of Outcome Measures**

Clinicians’ use of outcome measures was assessed with a set of questions that preceded the administration of the modified version of the Practitioner Outcome Survey (Hatfield & Ogles, 2004). A summary of these descriptives can be found in Table 5. In response to the question “Do you use any form of treatment outcome measure in your practice?” 89.4% of participants reported that they did collect some form of treatment outcome measure, while 10.3% of participants reported that they did not. Among those who reported administering some form of treatment outcome measure in their practice, 51.7% of participants reported administering
treatment outcome measure weekly, 16.3% reported administering treatment outcome measures monthly, 19.4% reported administering treatment outcome measures periodically (e.g., every three or six months), 8.2% reported some other frequency of administration, and 4.1% reported administering treatment outcome measure at pre- and post-treatment. Participants were also asked to describe the type of treatment outcome measures that they administered in their practice. The majority of participants (57.8%) reported administering standardized measures (e.g., Beck Depression Inventory), while only a small fraction of participants (2.7%) reported administering individualized/unstandardized measures (e.g., individual patients’ goals). However, over a third of participants reporting the routine administration of treatment outcome measures (38.8%) indicated that they used both standardized and unstandardized measures.

Participants who reported using treatment outcome measures in their practice were then asked about administrative factors that could potentially influence their behavior. First, participants were asked whether they received any form of incentive for administering treatment outcome measures. The vast majority of participants (97.3%) stated that they did not receive any incentives tied to the administration of outcome measures. Furthermore, participants were asked whether they were mandated to administer treatment outcome measure (e.g., by insurance companies, their institution). Over half of the participants (55.8%) who had reported using outcome measures stated that they were not mandated to administer these measures.

Participants were then asked to rate the importance of a list of reasons for their use or nonuse of treatment outcome measures. These rating were completed on a 5-point Likert scale (0 = not at all important, 4 = extremely important). Table 6 presents a summary of the ratings provided by users, while Table 7 presents a summary of the ratings provided by nonusers.

Comparisons of Treatment Outcome Measures Users and Nonusers
Subsequent analyses of the information provided by participants on the modified version of the Practitioner Outcome Survey were conducted separately for users and nonusers of treatment outcome measures, since, following the original procedure described by Hatfield and Ogles (2004, 2007), each group was administered a separate version of the survey. In order to conduct a close replication of the analyses reported by Hatfield and Ogles (2004, 2007), all comparisons relied on the grouped factors of reasons for use or nonuse of outcome measures identified by Hatfield & Ogles (2007).

Users’ Reasons for Integrating Outcome Measures in Their Practice

A multivariate analysis of variance (MANOVA) was performed to examine the effect of users’ theoretical orientation on their rating of each of the three factors of reasons for use of outcome measures (i.e., treatment, business, payer requirement). Table 8 presents a summary of this analysis. In order to replicate Hatfield and Ogle’s (2007) findings, while also acknowledging the professional composition of this sample, we elected to separate participants into two groups: those who reported cognitive behavioral as their predominant theoretical orientation, and those who reported any other theoretical orientation. This MANOVA yielded a significant result for the overall test, Pillai’s Trace = .03, $F(3, 285) = 3.0$, $p = .032$. Therefore, a series of analyses of variance (ANOVA) were conducted on each factor as follow-up tests. Since multiple ANOVAs were conducted, the alpha level for each ANOVA was set at .016 by following the Bonferroni-type adjustment. The ANOVA examining the effect of clinicians’ theoretical orientation on business factors was the only post-hoc test that was found to be significant, $F(1, 287) = 8.52$, $p = .004$. On average, participants identifying as predominantly cognitive behavioral rated business factors as less important ($M = 1.97$, $SE = .07$), than participants identifying with other theoretical
orientations ($M = 2.32$, $SE = .10$). This statistically significant difference was characterized by an effect of $d = 0.37$.

A second MANOVA was then conducted to examine the effect of users’ clientele on their rating of each of the three factors of reasons for use of outcome measures. This analysis, which is summarized in Table 9, yielded a significant effect, Pillai’s Trace = .06, $F(6, 564) = 2.69$, $p = .014$, partial $\eta^2 = .03$. Follow-up ANOVAs relying on a Bonferroni-type adjustment identified a significant effect for clinicians’ clientele on the payer requirements factor, $F(2, 283) = 4.58$, $p = .01$. This significant effect was further examined with pairwise comparisons, elucidating how clientele was related to payer requirements factor. On average, participants working with an adult clientele rated payer requirements factors as less important ($M = 1.55$, $SD = 1.05$), than participants working with a pediatric clientele ($M = 2.21$, $SD = 1.41$). This difference was characterized by an effect of $d = 0.52$.

A third MANOVA was then conducted to examine the effect of users’ work setting on their rating of each of the three factors of reasons for use of outcome measures. This analysis, which is summarized in Table 10, found a significant effect, Pillai’s Trace = .10, $F(6, 506) = 4.48$, $p < .001$, partial $\eta^2 = .05$. Follow-up ANOVAs identified a significant effect for clinicians’ work setting on business factors, $F(2, 254) = 7.98$, $p < .001$. This significant effect was further examined with pairwise comparisons, elucidating how clientele was related to business factors. On average, participants working at a community mental health center or at a university counseling center rated business factors as more important ($M = 2.27$, $SD = .93$), than participants working in private practice ($M = 1.67$, $SD = .90$). This significant difference was characterized by an effect of $d = 0.66$.

Nonusers’ Reasons for Not Integrating Outcome Measures in Their Practice
A MANOVA was conducted to examine the effect of nonusers’ theoretical orientation on their rating of each of the three factors of reasons for nonuse of outcome measures (i.e., utility, practical, know how). This MANOVA did not identify a significant effect, Pillai’s Trace = .05, $F(3, 29) = .55, p = .653$. Another MANOVA was conducted to examine the effect of nonusers’ clientele on their rating of each of the three factors of reasons for nonuse of outcome measures. This analysis did not yield a significant effect, Pillai’s Trace = .10, $F(6, 58) = .49, p = .817$. Finally, a MANOVA examining the effect of nonusers’ work setting on their ratings did not yield a statistically significant result, Pillai’s Trace = .19, $F(6, 50) = .87, p = .53$.

**Discussion**

The present study was, to our knowledge, the first project relying on an experimental design to investigate clinicians’ perceptions of different type of routine outcome measurement and clinical feedback. The expanding relevance of routine outcome measurement and clinical feedback is attested by its widespread availability in novel MFS, by the growing literature investigating the use of routine outcome measurement for treatment personalization (e.g., Sauer-Zavala et al., 2019), and by the progressive inclusion of mental health services in measurement-based care models implemented around the world (Kilbourne et al., 2018). Despite the growing body of literature emphasizing the relevance and efficacy of ROM and MFS, “additional research is sorely needed to better understand the barriers and facilitators to provider ROM adoption and compliance” (Boswell et al., 2016, p. 488). Thus, the present study was designed to fill this gap in the extant literature by addressing three specific aims. The first aim was to examine clinicians’ perceptions of clinical feedback presented by MFS relying on nomothetic, idiographic, or combined routine outcome measures. The second aim of the present study was to investigate the relationship between clinician’s theoretical background and their perceptions of
different types of clinical feedback. Lastly, the third aim of the present study was to investigate clinicians’ reasons for use and nonuse of outcome measures in their clinical practice.

**Clinicians’ Perceptions of Nomothetic and Idiographic Clinical Feedback**

The comparison of post-manipulation mean ratings on the modified ASA-MF subscales of Clinical Utility, Treatment Planning, and Practicality subscales failed to yield significant differences between feedback groups. The nature of the clinical feedback presented by the MFS did not significantly affect clinicians’ perceptions of the broader constructs captured by the ASA-MF subscales, as applied to the simulated clinical feedback. This finding was inconsistent with previous research, which indicated that clinicians reported a clear preference for idiographic progress measures (Jensen-Doss et al., 2018a). Several considerations can help elucidate the incongruency of these findings.

First, 85% Jensen-Doss et al.’s (2018a) clinician sample was constituted by master’s-level clinicians. The current study featured significant efforts to include a more heterogenous sample, comprising clinicians representing a wider variety of professions within the field of mental health (e.g., recruiting participants from professionally diverse associations, such as the ACBS and ABCT). However, over 90% of the final sample in the present study comprised participants from the field of psychology, including psychologists and psychology doctoral students. Although the small portion of participants stemming from fields other than psychology did not allow for additional comparisons, it is plausible that differences in training and professional background may lead to the formation of distinct attitudes toward different forms of clinical feedback. Second, it is possible that there may be a discrepancy between clinicians’ expectations and their perceptions of different types of outcome measures and clinical feedback. Clinicians may have very specific expectations regarding what nomothetic and idiographic ROM
and MFS should look like, and it is possible that the simulated MFS featured by the present study differed significantly from those expectations, ultimately leading to the attitude-perception gap observed.

We also elected to perform exploratory analyses comparing item-level ratings on the modified ASA-MF across conditions. These additional univariate analyses resembled the head-to-head comparison items described by Jensen-Doss et al. (2018b), and, given the absence of expected between-group effects, were thought to potentially yield information for future research in this area (as well as differences of interest that could be masked by subscale scores). Participants presented with idiographic or combined (idiographic and nomothetic) measures and feedback, relative to nomothetic alone, less strongly endorsed the item “These measures did not measure the outcome domains most important to the patient.” Therefore, clinicians found idiographic and combined measures and feedback to better represent the outcome domains most important to patients. Although post hoc and exploratory, this single item finding is more consistent with previous findings by Jensen-Doss. Specifically, Jensen-Doss et al. (2018a) conducted head-to-head comparisons of individualized and standardized assessment, where the majority of clinicians (74.4%) indicated that idiographic measures were more relevant to clients’ problems. A number of studies seem to indirectly support this clinician attitude.

For instance, Weisz et al. (2011) found that 79% of youths receiving psychological treatment at an outpatient mental health center and 41% of their caregivers, reported idiographic top problems to be addressed in therapy that did not correspond to any their specific items captured by nomothetic measures. Likewise, a meta-analysis performed by Lindhiem et al. (2016) found that estimates of psychotherapy effectiveness based on individualized goals displayed much larger effect sizes than those based on symptom checklists. Nevertheless, we are
unaware of studies to date that have directly explored clients’ perceptions of the relevance and importance of individualized and standardized treatment outcome measures.

The effect of feedback type on attitudes was not a function of theoretical orientation. That is, clinicians’ theoretical background did not have an effect on their perceptions of different types of clinical feedback provided by the simulated MFS. Nevertheless, clinicians’ theoretical background had a significant impact on clinicians’ overall perceptions of different aspects associated with clinical feedback. Clinicians who identified as predominantly cognitive behavioral reported significantly more positive perceptions of feedback’s clinical utility, relevance to treatment planning, and practicality than clinicians who identified with other theoretical orientations. These findings were consistent with those reported by Jensen-Doss et al. (2018b). In their study of the ASA-MF, clinicians who identified with a cognitive behavioral background reported significantly more positive attitudes toward clinical feedback on all three subscales of the ASA-MF (Clinical Utility, Treatment Planning, Practicality). In addition, clinicians who identified as psychodynamically-oriented reported significantly more negative attitudes on the Clinical Utility and Treatment Planning scales. Thus, while Jensen-Doss et al. (2018) identified a significant difference in attitudes toward standardized outcome measurement and clinical feedback based on theoretical orientation, the present study provides evidence suggesting that this difference in attitudes may also impact clinicians’ perceptions of idiographic treatment.

There are many factors distinguishing the cognitive behavioral tradition from other theoretical systems that may help explain this repeatedly observed difference. First, cognitive behavioral therapy could be considered an intrinsically data-driven approach. Behavior therapy traditionally embraced an experimental approach to treatment, emphasizing the identification,
modification, and tracking of specific behaviors. This stance is exemplified by exposure therapy, where targeted behaviors and situations are ranked in hierarchical order in order to provide a framework to observe, measure, and track treatment progress. Similarly, despite the progressive distancing of recent CBT protocols from a primary focus on habituation (e.g., Unified Protocol for Transdiagnostic Treatment of Emotional Disorders, UP; Barlow et al., 2011), it is common practice within the CBT tradition to track and rely on changes in self-reported Subjective Units of Distress (SUDS; Wolpe, 1958) as a metric for guiding and establishing the success of exposure interventions. Moreover, hallmark strategies implemented by cognitive therapists, such as the identification, challenging, and tracking of core beliefs, attitudes, and automatic thoughts, are driven by a comparable data-driven approach, emphasizing the use of informal data collection and interpretation.

**Clinicians’ Use and Nonuse of Outcome Measure in Their Clinical Practice**

The present study also contributed to the understanding of changes in clinicians’ use of routine outcome measures, by administering a modified version of the Practitioner Outcome Survey designed by Hatfield and Ogles (2004, 2007). The overwhelming majority (89.4%) of clinicians participating in the present study endorsed using routine outcome measures. This represents a staggering change from the rates reported by Hatfield and Ogles (2004), who found that only 37.1% of the clinicians sampled in their study reported using some form of outcome measures in their practice. Several changes that affected the landscape of mental health services in the past fifteen years are plausible factors that may have contributed to this reported change in routine clinical practices. Among them, there has been a progressive embrace of the measurement-based care model in the field of mental health (Scott & Lewis, 2015), which has likely functioned as a catalyst promoting this shift. The evidence-based practice guidelines
delineated by the American Psychological Association Presidential Task Force on Evidence-Based Practice (APA, 2005) emphasized the need for clinicians to monitor patient progress. However, while plausible, gauging the impact of the broader push for measurement-based care characterizing the field of health services (e.g., Institute of Medicine, 2001) on clinicians’ practices in mental health services is a daunting task. It is also worth noting that the sample of clinicians featured in the present study comprised a significant portion of psychology doctoral students. A recent study by Peterson and Fagan (2017) assessing the implementation of ROM in psychology training clinics found that two thirds (67%) of training clinic directors required psychology trainees to routinely assess outcomes. Thus, the large number of doctoral students sampled in this study, in conjunction with the widespread implementation of ROM practice in psychology training clinics, may have also contributed to the large percentage of outcome measure users observed.

Additional findings regarding professional characteristics and use/nonuse of measures may provide some more insight into temporal shifts. Although Hatfield & Ogles (2007) did not find any differences among clinicians identifying with distinct theoretical orientations in their reasons for use of outcome measures, results from the present study indicated that clinicians who identified with a theoretical orientation other than CBT reported that business factors had a significantly greater impact on their decision to use outcome measures than CBT therapists. It would seem that, in light of the greater proportion of therapists who reported routine use of outcome measures, the aforementioned changes at the administrative and policy level may be responsible for the integration of outcome measures by non-CBT clinicians. This was also supported by findings from the present study, which further emphasized the impact of extrinsic factors on clinicians’ use of outcome measures.
Since the subfield of child clinical psychology has been at the forefront of the integration of routine outcome measures and clinical feedback (e.g., Chorpita et al., 2013; Jensen-Doss et al., 2018c), we examined whether the age group served by clinicians would impact their reasons for use or nonuse of outcome measures. Results partially supported our hypotheses. Although no differences were observed on treatment and business factors, clinicians working exclusively with children and adolescents rated payer requirement factors (i.e., required by managed care/insurance) as significantly more important than clinicians working exclusively with adult clients. This finding may point to the growing influence exerted by the implementation of programs promoting evidence-based practice in pediatric mental health services that require routine monitoring of treatment outcomes (e.g., Brookman-Frazee et al., 2016; Hoagwood et al., 2014).

Finally, partially supporting our hypothesis, clinicians practicing in community mental health center and university counseling centers rated business factors as significantly more important reasons for using outcome measures than clinicians in private practice. This difference was, in part, consistent with the results reported by Hatfield and Ogles (2007), who found that clinicians working in group practice or at an institution more highly rated business factors than clinicians in private practice. However, the present study could not replicate the finding indicating that clinicians working at an institution (e.g., hospital) reported higher ratings of the importance of business factors than clinicians in group practice (Hatfield & Ogles, 2007).

**Limitations**

The present study was characterized by several limitations that may restrict the generalizability of its findings. First, the sample was predominantly composed by clinicians who identified as psychologists or graduate students from a psychology program. Since a significant
portion of the clinical population receives services from master’s-level and non-psychology specialty clinicians, it was part of our original objective to recruit a professionally heterogenous sample. Although we attempted to recruit participants from professional listservs that are known to comprise clinicians from a wide variety of professional backgrounds, the final sample is likely less representative the general clinician population. Unfortunately, some of the strategies implemented by similar studies (Jensen-Doss et al., 2018)—such as recruiting participants from professional organizations requiring payments to recruit through their listserv—were not feasible options for this project.

Second, the simulated nature of the experimental procedure, which included the presentation of a hypothetical clinical vignette and associated clinical feedback, may have not been sufficiently engaging to allow clinicians to fully appreciate the impact of different types of clinical feedback on their clinical decision-making process. It is plausible that non-simulated designs, comparing the use of nomothetic and idiographic measures for clinical decision-making in an actual clinical setting, may differently impact clinicians’ perceptions of the clinical feedback.

Third, the specific nature of the idiographic goals described in the experimental procedure may have had an effect on clinicians’ perceptions of the clinical feedback. Since this project was designed to include clinicians identifying with a variety of theoretical orientations, every effort was made to create transtheoretical idiographic treatment goals. Nonetheless, it is possible that clinicians may have found other treatment goals to be more relevant to the framework and tasks characterizing the process of psychotherapy envisioned by their school of psychotherapy.
Fourth, although displaying adequate internal consistency, the version of the ASA-MF administered in the present study featured significant modifications, which included the re-phrasing of all items, as well as the removal of one item. Furthermore, the use of the ASA-MF had been previously limited to the assessment of clinicians’ attitudes toward outcome measures, while the present study relied on this measure to assess clinicians’ perceptions of simulated ROM and MFS.

Lastly, the sample lacked ethnic and racial diversity, with the vast majority of participants identifying as white.

**Conclusion**

ROM and the use of MFS that provide data-driven clinical feedback are efficacious, evidence-based practices that support clinical responsiveness and positive treatment outcomes, while also preventing treatment failures in psychotherapy. Yet, research has shown that clinicians hold reservations against these practices that may be hindering their widespread implementation and use. A small body of exploratory research has identified the integration of idiographic measures as a potential strategy for overcoming the unsatisfactory implementation of ROM and MFS. The present study was, to our knowledge, the first project to rely on an experimental design to compare clinicians’ perceptions of nomothetic and idiographic ROM and clinical feedback presented by a simulated MFS. Results suggested that idiographic feedback approaches fare no better or worse than nomothetic approaches. In addition, clinicians’ theoretical orientation was found to impact clinicians’ overall perceptions of ROM and MFS, with CBT therapists reporting more positive perceptions of all types of clinical feedback. These findings suggest that clinicians’ professional characteristics may have a considerable effect on
their perceptions of ROM and MFS and should therefore be considered when designing and implementing these strategies.

The present study identified several domains that could be further explored by future research endeavors. First, future studies should strive to elucidate the relationship between clinicians’ theoretical orientation, attitudes toward ROM and MFS, and perceptions of different types of nomothetic and idiographic outcome measures. Given the importance of clinicians’ theoretical framework in formulating case conceptualizations and subsequently delineating treatment goals, it is possible that clinicians’ may perceive outcome measures that are specific to their own theoretical framework to be uniquely useful. Second, while the present study was the first to expand the scope of the literature beyond the examination clinicians’ attitudes by measuring actual perceptions of simulated ROM and MFS, future studies should investigate clinicians’ perceptions of ROM and MFS in a real clinical setting in order to determine whether an intention-behavior gap (Sheeran & Webb, 2016) may be affecting the actual implementation and use of outcome measures.

The perceptions and rates of utilization of ROM and MFS revealed by clinicians in the present study also have significant clinical implications. Overall, ROM and MFS appear to have become widely implemented evidence-based practices, which further confirms the need for additional research to be conducted in this area. In addition, clinicians’ ratings emphasized that ROM and MFS are generally perceived as clinically useful practices. The absence of between-group effects may also suggest that clinicians perceive nomothetic and idiographic ROM and MFS to be equally clinically useful, thus providing evidence in support of the integration of both types of outcome measurement in clinical practice.
References


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Boswell, J. F., Constantino, M. J., Kraus, D. R., Bugatti, M., & Oswald, J. M. (2016). The expanding relevance of routinely collected outcome data for mental health care decision


Luborsky, L., Singer, B., & Luborsky, L. (1975). Comparative studies of psychotherapies: Is it true that "everyone has won and all must have prizes"? Archives of General Psychiatry, 32, 995-1008.


doi:10.2466/02.07.17.


Table 1. Sample Demographics and Professional Characteristics

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Percentage of sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>72</td>
</tr>
<tr>
<td>Male</td>
<td>27.7</td>
</tr>
<tr>
<td>Other</td>
<td>0.3</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>18-29</td>
<td>44.7</td>
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<tr>
<td>30-39</td>
<td>36.2</td>
</tr>
<tr>
<td>40-49</td>
<td>9.7</td>
</tr>
<tr>
<td>50-59</td>
<td>4.6</td>
</tr>
<tr>
<td>60+</td>
<td>4.9</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
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</tr>
<tr>
<td>White</td>
<td>82.7</td>
</tr>
<tr>
<td>Black or African American</td>
<td>3.3</td>
</tr>
<tr>
<td>Asian</td>
<td>5.8</td>
</tr>
<tr>
<td>Hispanic or Latino/a</td>
<td>4.9</td>
</tr>
<tr>
<td>Native Hawaiian or Pacific Islander</td>
<td>0.6</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>0.3</td>
</tr>
<tr>
<td>Other</td>
<td>2.1</td>
</tr>
<tr>
<td>Profession</td>
<td></td>
</tr>
<tr>
<td>Psychologist</td>
<td>39.8</td>
</tr>
<tr>
<td>Psychiatrist</td>
<td>0.3</td>
</tr>
<tr>
<td>Social worker</td>
<td>3</td>
</tr>
<tr>
<td>Counselor</td>
<td>2.1</td>
</tr>
<tr>
<td>Marriage and family therapist</td>
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</tr>
<tr>
<td>Graduate student</td>
<td>53.2</td>
</tr>
<tr>
<td>Psychology doctoral student</td>
<td>95.4</td>
</tr>
<tr>
<td>Mental health counseling student</td>
<td>3.4</td>
</tr>
<tr>
<td>Other</td>
<td>1.1</td>
</tr>
<tr>
<td>Other</td>
<td>1.2</td>
</tr>
<tr>
<td>Work setting</td>
<td></td>
</tr>
<tr>
<td>Hospital/Medical setting</td>
<td>28.6</td>
</tr>
<tr>
<td>Community mental health clinic</td>
<td>20.1</td>
</tr>
<tr>
<td>University counseling center</td>
<td>18.8</td>
</tr>
<tr>
<td>Private practice</td>
<td>21.6</td>
</tr>
<tr>
<td>Elementary, middle, or high school</td>
<td>0.6</td>
</tr>
<tr>
<td>Residential facility</td>
<td>0.9</td>
</tr>
<tr>
<td>Other</td>
<td>8.8</td>
</tr>
<tr>
<td>Caseload</td>
<td></td>
</tr>
<tr>
<td>0-9</td>
<td>51.4</td>
</tr>
<tr>
<td>10-19</td>
<td>26.9</td>
</tr>
<tr>
<td>20-29</td>
<td>8.6</td>
</tr>
<tr>
<td>30+</td>
<td>12.8</td>
</tr>
<tr>
<td>Clientele</td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>Percentage</td>
</tr>
<tr>
<td>--------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Adults</td>
<td>58.4</td>
</tr>
<tr>
<td>Children/Adolescents</td>
<td>11.6</td>
</tr>
<tr>
<td>Both</td>
<td>29.2</td>
</tr>
</tbody>
</table>

**Theoretical orientation**
- Cognitive behavioral: 64.7
- Psychodynamic: 10.6
- Psychoanalytic: 0.6
- Emotion-focused: 3.3
- Systems: 2.7
- Person-centered: 6.1
- Other: 11.9

**Most frequently treated conditions**
- Anxiety disorders: 41.3
- Depressive disorders: 16.4
- Obsessive-compulsive disorders: 0.9
- Bipolar disorders: 0.9
- Personality disorders: 5.2
- Psychotic disorders: 1.2
- Neurodevelopmental disorders: 5.5
- Eating disorders: 3.6
- Other: 6.1
Table 2. Mean Ratings of Modified ASA-MF Subscales for Each MFS Group

<table>
<thead>
<tr>
<th>Modified ASA-MF Subscale</th>
<th>Nomothetic Mean</th>
<th>Nomothetic SD</th>
<th>Idiographic Mean</th>
<th>Idiographic SD</th>
<th>Combined Mean</th>
<th>Combined SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Utility</td>
<td>4.71</td>
<td>.91</td>
<td>4.77</td>
<td>.94</td>
<td>4.84</td>
<td>.99</td>
</tr>
<tr>
<td>Treatment Planning</td>
<td>4.48</td>
<td>.99</td>
<td>4.40</td>
<td>1.07</td>
<td>4.60</td>
<td>1.05</td>
</tr>
<tr>
<td>Practicality</td>
<td>5.40</td>
<td>1.0</td>
<td>5.54</td>
<td>.98</td>
<td>5.41</td>
<td>1.15</td>
</tr>
</tbody>
</table>
Table 3. Mean Ratings of Modified ASA-MF Subscales for Each Theoretical Orientation

<table>
<thead>
<tr>
<th>Modified ASA-MF Subscale</th>
<th>CBT</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Clinical Utility</td>
<td>4.92&lt;sub&gt;a&lt;/sub&gt;</td>
<td>.90</td>
</tr>
<tr>
<td>Treatment Planning</td>
<td>4.61&lt;sub&gt;b&lt;/sub&gt;</td>
<td>1.03</td>
</tr>
<tr>
<td>Practicality</td>
<td>5.59&lt;sub&gt;c&lt;/sub&gt;</td>
<td>.98</td>
</tr>
</tbody>
</table>

*Note. a = p < .001 (η² = .05); b = p < .01 (η² = .03); c = p = .001 (η² = .04)*
<table>
<thead>
<tr>
<th>Item</th>
<th>Nomothetic</th>
<th>Idiographic</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>This feedback didn't tell me anything I couldn't have learned from just talking to my patient.</td>
<td>4.85 (1.47)</td>
<td>4.33 (1.56)</td>
<td>4.59 (1.67)</td>
</tr>
<tr>
<td>Using my clinical judgment to monitor progress would have been superior to using this feedback.</td>
<td>4.78 (1.40)</td>
<td>4.74 (1.47)</td>
<td>4.89 (1.60)</td>
</tr>
<tr>
<td>This feedback provided me with more useful information than other assessments like informal interviews or observations.</td>
<td>4.40 (1.25)</td>
<td>4.21 (1.26)</td>
<td>4.17 (1.32)</td>
</tr>
<tr>
<td>These measures/feedback did not capture what had been really going on with the patient.</td>
<td>4.15 (1.37)</td>
<td>4.21 (1.40)</td>
<td>4.21 (1.50)</td>
</tr>
<tr>
<td>This feedback was useful because it may not have otherwise come up in session.</td>
<td>5.29 (1.28)</td>
<td>5.07 (1.52)</td>
<td>5.22 (1.44)</td>
</tr>
<tr>
<td>These measures/feedback were not able to detect meaningful changes as they had occurred.</td>
<td>4.99 (1.28)</td>
<td>5.09 (1.29)</td>
<td>5.12 (1.35)</td>
</tr>
<tr>
<td>These measures did not measure the outcome domains most important to the patient.</td>
<td>4.54_{ab} (1.29)</td>
<td>5.57_{a} (1.16)</td>
<td>5.62_{b} (1.16)</td>
</tr>
<tr>
<td>This feedback provided objective information about whether treatment was working.</td>
<td>4.38 (1.53)</td>
<td>4.20 (1.54)</td>
<td>4.63 (1.58)</td>
</tr>
<tr>
<td>This feedback helped identify when treatment was not going well.</td>
<td>4.58 (1.41)</td>
<td>4.56 (1.48)</td>
<td>4.51 (1.39)</td>
</tr>
<tr>
<td>This feedback provided useful information about whether it was time to terminate treatment.</td>
<td>2.97 (1.77)</td>
<td>2.98 (1.69)</td>
<td>2.92 (1.69)</td>
</tr>
<tr>
<td>This feedback can help me plan for sessions.</td>
<td>5.46 (1.12)</td>
<td>5.39 (1.24)</td>
<td>5.69 (1.01)</td>
</tr>
<tr>
<td>This feedback can help me identify when to change the overall treatment plan.</td>
<td>4.93 (1.21)</td>
<td>4.88 (1.26)</td>
<td>5.19 (1.24)</td>
</tr>
<tr>
<td>These measures can efficiently gather information.</td>
<td>5.39 (1.05)</td>
<td>5.32 (1.18)</td>
<td>5.44 (1.18)</td>
</tr>
</tbody>
</table>
This feedback isn't worth the time I would spend administering, scoring, and interpreting the results.

These measures interfere with establishing rapport during a session.

Completing these measures was too much of a burden for the patient.

I do not have time to administer these measures on a frequent basis.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean (SD) 1</th>
<th>Mean (SD) 2</th>
<th>Mean (SD) 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>This feedback isn't worth the time</td>
<td>5.35 (1.46)</td>
<td>5.12 (1.54)</td>
<td>5.39 (1.46)</td>
</tr>
<tr>
<td>These measures interfere with establishing rapport</td>
<td>5.44 (1.45)</td>
<td>5.79 (1.23)</td>
<td>5.72 (1.35)</td>
</tr>
<tr>
<td>Completing these measures was too much of a burden</td>
<td>5.46 (1.32)</td>
<td>5.71 (1.16)</td>
<td>5.42 (1.35)</td>
</tr>
<tr>
<td>I do not have time to administer these measures</td>
<td>5.30 (1.49)</td>
<td>5.63 (1.30)</td>
<td>5.04 (1.73)</td>
</tr>
</tbody>
</table>

Note. \( a = p < .001, d = .84; b = p < .001, d = .88. \)
Table 5. Clinicians’ Use of Treatment Outcome Measures

<table>
<thead>
<tr>
<th></th>
<th>Percentage of sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Use of treatment outcome measure in practice</strong></td>
<td></td>
</tr>
<tr>
<td>Users</td>
<td>89.4</td>
</tr>
<tr>
<td>Nonusers</td>
<td>10.4</td>
</tr>
<tr>
<td><strong>Frequency of administration</strong></td>
<td></td>
</tr>
<tr>
<td>Weekly</td>
<td>51.7</td>
</tr>
<tr>
<td>Monthly</td>
<td>16.3</td>
</tr>
<tr>
<td>Periodical</td>
<td>19.4</td>
</tr>
<tr>
<td>Pre- and post-treatment</td>
<td>4.1</td>
</tr>
<tr>
<td>Other</td>
<td>8.2</td>
</tr>
<tr>
<td><strong>Treatment outcome measures administered</strong></td>
<td></td>
</tr>
<tr>
<td>Standardized</td>
<td>57.8</td>
</tr>
<tr>
<td>Individualized/unstandardized</td>
<td>2.7</td>
</tr>
<tr>
<td>Both</td>
<td>38.8</td>
</tr>
<tr>
<td><strong>Incentivized administration</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>2.4</td>
</tr>
<tr>
<td>No</td>
<td>97.3</td>
</tr>
<tr>
<td><strong>Mandated administration</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>43.9</td>
</tr>
<tr>
<td>No</td>
<td>55.8</td>
</tr>
</tbody>
</table>
Table 6. Reasons Clinicians Use Treatment Outcome Measures

<table>
<thead>
<tr>
<th>Reason</th>
<th>$M$</th>
<th>$SD$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Track client progress</td>
<td>4.45</td>
<td>.80</td>
</tr>
<tr>
<td>Determine if there is a need to alter treatment</td>
<td>4.06</td>
<td>1.01</td>
</tr>
<tr>
<td>Ethical practice</td>
<td>3.68</td>
<td>1.12</td>
</tr>
<tr>
<td>Determine strengths and weaknesses</td>
<td>3.36</td>
<td>1.15</td>
</tr>
<tr>
<td>Required by MCO/insurance</td>
<td>1.67</td>
<td>1.15</td>
</tr>
<tr>
<td>Required by work setting</td>
<td>2.74</td>
<td>1.67</td>
</tr>
<tr>
<td>Research publication</td>
<td>2.16</td>
<td>1.40</td>
</tr>
<tr>
<td>Business marketing</td>
<td>1.42</td>
<td>.90</td>
</tr>
<tr>
<td>Other</td>
<td>2.00</td>
<td>1.23</td>
</tr>
</tbody>
</table>

Note. The scale ranged from 1 = “Not at all important” to 5 = “Extremely important”.
Table 7. Reasons Clinicians Do Not Use Treatment Outcome Measures

<table>
<thead>
<tr>
<th>Reason</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adds too much paperwork</td>
<td>2.82</td>
<td>1.42</td>
</tr>
<tr>
<td>Takes too much time</td>
<td>2.82</td>
<td>1.38</td>
</tr>
<tr>
<td>Extra burden on clients</td>
<td>2.97</td>
<td>1.29</td>
</tr>
<tr>
<td>Feel it is not helpful</td>
<td>2.53</td>
<td>1.44</td>
</tr>
<tr>
<td>Do not have enough resources</td>
<td>3.24</td>
<td>1.28</td>
</tr>
<tr>
<td>A simple measure distorts the effects of treatment</td>
<td>2.29</td>
<td>1.38</td>
</tr>
<tr>
<td>Do not know how to implement a strategy</td>
<td>2.09</td>
<td>1.26</td>
</tr>
<tr>
<td>Concerns about confidentiality</td>
<td>1.65</td>
<td>0.98</td>
</tr>
<tr>
<td>Feel that it will be misused by others</td>
<td>1.85</td>
<td>0.96</td>
</tr>
<tr>
<td>It interferes with my autonomy as a provider</td>
<td>1.91</td>
<td>0.97</td>
</tr>
<tr>
<td>Do not know how to interpret the scores</td>
<td>1.62</td>
<td>0.89</td>
</tr>
<tr>
<td>Client refusal</td>
<td>2.03</td>
<td>1.09</td>
</tr>
<tr>
<td>Other</td>
<td>2.61</td>
<td>1.62</td>
</tr>
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</table>

Note. The scale ranged from 1 = “Not at all important” to 5 = “Extremely important”.
Table 8. Mean Ratings for Use and Nonuse by Theoretical Orientation

<table>
<thead>
<tr>
<th></th>
<th>CBT</th>
<th></th>
<th>Other</th>
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</tr>
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<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>User</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>3.91</td>
<td>.74</td>
<td>3.85</td>
<td>.87</td>
</tr>
<tr>
<td>Business</td>
<td>1.96&lt;sub&gt;a&lt;/sub&gt;</td>
<td>.98</td>
<td>2.31&lt;sub&gt;a&lt;/sub&gt;</td>
<td>.93</td>
</tr>
<tr>
<td>Payer req.</td>
<td>1.62</td>
<td>1.07</td>
<td>1.77</td>
<td>1.30</td>
</tr>
<tr>
<td>Nonuser</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Utility</td>
<td>1.96</td>
<td>.95</td>
<td>2.15</td>
<td>.86</td>
</tr>
<tr>
<td>Practicality</td>
<td>3.03</td>
<td>1.02</td>
<td>2.90</td>
<td>1.03</td>
</tr>
<tr>
<td>Know how</td>
<td>1.89</td>
<td>1.04</td>
<td>1.81</td>
<td>.83</td>
</tr>
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</table>

*Note. a = p < .01 (d = .37)*
Table 9. Mean Ratings for Use and Nonuse by Clientele

<table>
<thead>
<tr>
<th></th>
<th>Adults</th>
<th></th>
<th>Pediatric</th>
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<th>Both</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>User</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>3.86</td>
<td>.79</td>
<td>4.00</td>
<td>.65</td>
<td>3.89</td>
<td>.81</td>
</tr>
<tr>
<td>Business</td>
<td>2.10</td>
<td>.98</td>
<td>2.40</td>
<td>1.11</td>
<td>1.89</td>
<td>.89</td>
</tr>
<tr>
<td>Payer req.</td>
<td>1.55a</td>
<td>1.05</td>
<td>2.18a</td>
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<td>.91</td>
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*Note.* $a = p < .01 (d = .51)$
Table 10. Mean Ratings for Use and Nonuse by Work Setting

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<td>1.30</td>
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</table>

Note. a = p < .01 (d = .69)
Figure 1. Nomothetic Clinical Feedback Presented by the Simulated MFS

There has been a clinically significant change on the BSI 18, Global Severity Index. Patient is no longer on track for positive outcome and may be at risk for treatment failure.
There has been a clinically significant change on the Patient Goal: "How effective are you at communicating with your wife?". Patient is no longer on track for positive outcome and may be at risk for treatment failure.