Therapy Process Research: A Content Analysis of Four Leading Journals

by

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Abstract

In 1994, Hill, Nutt, and Jackson conducted a systematic, 15-year review of the Journal of Counseling Psychology (JCP) and Journal of Consulting and Clinical Psychology (JCCP). Their review focused on study characteristics of published process research. They defined process as the "within-session interaction in face-to-face treatment with therapists and clients" (p. 365) and concluded that, generally speaking JCP published proportionately more process-oriented research than JCCP. Further, that research was most likely to involve brief, individual therapy, and the evaluation was most likely to involve pre-existing measures focused primarily on evaluating therapists and their techniques and facilitative conditions using pre-existing measures. In an effort to update an extend Hill et al.'s findings, the present review sampled articles from four leading therapy journals: JCP, JCCP, Psychotherapy, and Psychotherapy Research (PR). In total, 1,375 articles between 2000-2016 were studied. Just over fourteen percent (14.55%) of these randomly sampled studies (n = 200) were process-oriented. PR published the greatest proportion of therapy *process* research (13.92%) as well as *process-outcome* research (15.75%). In five-year time blocks, process studies increased from 2.96% to 8.45%; and process-outcome studies increased from 5.66% to 11.27%. The profile of a typical study in the last 15 years appears to involve process *and* outcome of individual therapy in a real setting, between an experienced therapist and an adult client who as been asked/recruited to participate. Further, the prototypical study likely involves asking clients to complete a single, previously-used process measure of their impression of the working alliance, which will be report reliability estimates for "data in hand."

Keywords: therapy, process research, content analysis, alliance.

Preface

This thesis is an original work by Angela Allan. No part of this thesis has been previously published. Because it did not involve human subjects or research participants, REB approval was not necessary.

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Glossary of Terms

Analogue Study - Studies that examined therapy process without actual face-to-face interaction between a therapist and client (e.g. by means of a transcript or audio- or videotaped excerpt of a real or simulated session). Included descriptions of the simulated/hypothetical therapy interaction.

Non-empirical Process Study - Studies that examined therapy process but do not include original data.

Outcome Study - Studies that examined the global effects of treatment or changes that occurred as a result of treatment. As with process studies, therapy had to have been conducted in a face-to-face setting. Accordingly, studies in which interventions were delivered by means of audiotape or videotape or in which self-help interventions were studied were not included. Group therapy is included.

Process Study - Studies that examined within-session face-to-face interactions with therapists and clients. Treatment of any length (10 min to many years) included. Included retrospective accounts of process only if they were specific cases rather than general thinking about therapy process. Also included studies that measured satisfaction or evaluation of treatment, because researchers were evaluating what occurred in therapy or group process.

Process-Outcome Study - Studies that examined at least one aspect of both process and outcome. Outcome studies in which a manipulation check was used to determine whether therapist interventions were implemented accurately were included as process-outcome studies because they studied some aspect of the therapy process even though it may not have been a major focus.

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Chapter 1

Introduction and Literature Review

Almost a quarter century ago, Hill, Nutt, and Jackson (1994) assessed the state of therapy process research, defined as "within-session interaction in face-to-face treatment with therapists and clients" (p. 365). They referenced Keisler's (1973) and Strupp's (1973) reflections that, in the early 70's, process research was in disarray, with various researchers developing on-the-fly measures and very little effort towards harmonizing the field. Hill et al. formally studied 15 years of research articles published in two top-tier journals, the Journal of Counseling Psychology (JCP) and Journal of Consulting and Clinical Psychology (JCCP). They systematically identified and reviewed process studies and examined various study characteristics, including samples and measures. Despite Keisler and Strupp's early concerns, Hill et al. (1994) reported that therapy process research was alive and well, and that there appeared to be more consistency in approach and measurement than initially thought. Now, more than two decades later, it is worth revisiting this important issue, that is, the current state of therapy process research. I begin with a definition and overview of process research, including general objectives. I then discuss its history, the significance of the current study, the existing literature, and the present study.

What is the therapy process?

In a seminal paper establishing a strategy for researching therapy outcomes, Paul (1967) posed the question "*What* treatment, by *whom*, is most effective for this individual with that specific problem, and under which set of circumstances" (p.111). While he focused on studying client outcomes, his words underscored the relationship between outcomes and the process of therapy. In terms of learning how clients improved, Paul reinforced the concept that different

clients respond differently to diverse treatments. When it comes to change, it is important to understand not just whether change happens, but also to learn about under what conditions change occurs.

At its core, therapy involves a client and therapist engaging in an interactive experience with the intention of bringing about change for the client (Frank & Frank, 1991). Process researchers are interested in the change-oriented ingredients within that interaction (Gelo, Pritz, & Rieken, 2015). Other definitions have highlighted specific change processes, such as therapist or client behaviours or expectations, and considered the dosing and timing of sessions (cf. Gelo et al., 2015). Here, process research is defined as: "examine[ing] the within session interaction of face-to-face treatment with therapists and clients" including "… measured satisfaction or evaluation of treatment" (p.365; Hill, Nutt, & Jackson, 1994).

Whereas process research focuses on the act and actors within treatment, outcome research focuses on the result of treatment (Goodyear et al., 2015). When considering the process of therapy, attention is paid to what is happening within or between sessions, and/or what the client and therapist is experiencing, thinking and doing. Process research focuses on *how* change takes place. Goodyear et al. (2015) argue that in the therapy process, the emphasis is not on the resulting effect the intervention has on a client, but rather on the intervention. The process of therapy, for example focuses on the therapist's consideration, justification and quality of the intervention she selects for her given client.

In contrast, Goodyear et al. argue that outcome research, where client change is the focus, how change takes place is less important than *what or whether* change takes place. Process-outcome research is a hybrid of the two, where attention is paid to the connection between the act of therapy *and* the effect it has on client change. By linking *how* the process of therapy occurs

with *what* the outcome is, process-outcome research seeks to address *why* change did or did not occur (Knobloch-Fedders, Elkin, & Kiesler, 2014).

Process-outcome research has gained in popularity in recent years for three key reasons. First, the therapy process is not limited to one theoretical perspective; moreover, it is an ingredient in every approach or intervention, albeit to different extents. This is one of the cornerstones of the Common Factor model (Wampold & Imel, 2015), which posits that regardless of the theoretical model, change takes place when therapists carefully attend to the process of therapy. Second, there has been ample evidence that measuring process –particularly with the process construct *working alliance*– can fairly reliably predict outcomes (Horvath & Luborsky, 1993; Lambert & Barley, 2001). Third, the field of therapy has shifted to emphasizing evidence-based practices, which in the context of process-outcome research, seeks to explain how, why, and to what extent an intervention works (Lambert & Barley, 2001).

Objectives of process research

In a chapter introducing process research, authors Hardy and Llewelyn (Gelo et al., 2015) outline four objectives of process research. They state that the first objective is to understand the mechanisms of treatment and client change processes. This seeks to understand *why* clients might change in response to a therapy session. Second, they contend that process research helps improve understanding of aspects of therapy that are most important, thus helping practitioners attend to these aspects, and focus researchers. This seeks to understand *what* happens as part of the therapeutic process. Third, once researchers understand what aspects on which to focus, their results will provide rationales that will contribute to the development of theories to help understand what process research is. Theories will explain *how* therapeutic process works. The final objective of process research is to contribute to the development of effective training

programs. Hardy and Llewelyn also outline three key formats of process research. They list (1) descriptive and exploratory research to help identify where and on what to focus their attention; (2) hypothesis testing to develop the rationales; and (3) theory building to help develop and crystalize their theories.

According to Krause and Altimir (2016), process research can be categorized into two units of analysis. The first unit is macro-processes, or the complete therapeutic experience. Research into macro-processes looks at the evolution of change (Krause & Altimir, 2016). Examples of this can include the working alliance, session evaluation, or client perception of change. The other unit of analysis is micro-process, where segments or specific events are analyzed (Horvath, 2016; Krause & Altimir, 2016). Examples of micro-processes can be in-session behaviours such as vocal quality, homework completion, and participant in-session behavioural responses.

In a description of emerging trends in process research, Horvath (2016) describes what he believes to be a movement towards micro-processes. He argues that macro-process research, such as common factors and working alliance, have served their purpose in firmly establishing pan-theoretical process-outcome links, but remain limited to only being able to represent correlational analyses (see also Crits-Christoph, Gibbons, & Mukherjee, 2013). Horvath argues that research into micro-processes allows researchers to establish causal models and building a unified theory of how therapy works.

History of Process Research

Hill and Corbett (1993) credit Frank Robinson at Ohio State as one of the earliest process researchers. Robinson published papers dating back to 1938 that examined counsellor similarity across sessions and across clients and different patterns between counsellors. While the act of

therapy has been going on for years, early process researchers struggled to find appropriate ways to study what went on during sessions (Hill & Corbett, 1993). This changed with the invention of recording devices, meaning sessions could now be recorded without the interference of having a third person being in the room (Hill & Corbett, 1993; Lambert, 2013; Pachankis & Goldfried, 2007). Recording sessions was the first of many milestones in the evolution of process research and therapy research in general. Hill and Corbett (1993) and Pachankis and Goldfried (2007) provide a overview of the landmarks, and Hardy and Llewelyn (Gelo et al., 2015) provide a framework for grouping process research into distinct generations, including pre-1950s, the Justification period (1950s and '60s), the Specificity period (1970s and '80s), and the Third Generation (1990s –to present). We will begin with Hill and Corbett's milestones that led to the development of the field of process research.

After researchers began recording sessions, Hill and Corbett (1993) noted the next major landmark in process research in the United States occurred immediately following World War II. Returning veterans required more support than the psychiatry community could handle. The Veterans Affairs department (VA) began training psychologists who, until that time, were primarily assessors and career counsellors in supporting returning troops (Gelo et al., 2015). This, incidentally, led to the establishment of Counselling Psychology as a stand-alone field and the creation of journals, such as the JCP. Hill and Corbett also note the arrival of luminary Carl Rogers at this time, and his influence in popularizing observational and self-report measures in therapy-based research.

While the VA required evidence that their investments were worthy, improved scientific rigor began taking hold in the scientific research community. Researchers slowly began applying scientific models to their studies. The entire field took a turn, for example, in 1952 when Hans

Eysenck published his paper questioning the effectiveness of talk therapy, and then doubled down on his proclamations in 1964 and 1965 (Barlow, Boswell, & Thompson-Hollands, 2013). Eysenck's condemnation of the effectiveness of talk therapy served to both highlight what he perceived to be weaknesses in the scientific rigor in the field as much as it was a criticism of what then was predominantly psychodynamically oriented therapy (Lambert, 2013). Hardy and Llewelyn termed this first generation of therapy research, the *Justification* period (Gelo et al. 2015).

Process and outcome researchers, at the time, joined others and the bulk of research produced (as well as funding) focused on establishing scientific rigor and countering Eysenck's charge, in establishing the efficacy of therapy. Specifically, process researchers, such as Rogers, began studying process variables and testing whether they could be used to reliably predict client change (Gelo et al., 2015). An important consequence of this research period led to what would later be termed the *uniformity myth*, or the misperception that clients are highly similar, and depending on symptoms, will benefit from the same treatment; or that all therapists are equal and will provide the same treatment to all clients (Guinee & Avenue, 2000; Safran, Greenberg, & Rice, 1988).

With the growing body of evidence that therapy was indeed efficacious (Lambert, 2013; Smith, Glass, & Miller, 1980), researchers began exploring the specific ingredients of change. Pachankis and Goldfried (2007) termed this the generation of *specificity*. The Menninger Project also made great contributions to the field of process-outcome research during this time (Gelo et al., 2015); taking a longitudinal look at therapy, and including patient, process, and extratherapeutic characteristics.

Therapy research also experienced great change at this time, with the adoption of

treatment manuals (to support specificity research), randomized control trials (to match their medicine counterparts in establishing scientific rigor) involving control groups and random assignment (Goldfried, 2016). In keeping with this focus on the specificity of therapy, process researchers began studying specific therapist skills and began proposing new theories for client change. It was also during this time that Bordin and Luborsky began describing their concepts of the therapeutic alliance (Horvath & Luborsky, 1993; Lambert & Barley, 2001), concepts that proved central to contemporary process research.

Goldfried (2016) points out an interesting series of parallel events that may have also indirectly contributed to the direction of therapy research. He notes that during this generation, the field of psychiatry was also undergoing great change. Psychiatry faculties experienced mass exodus of psychodynamically oriented therapy professors at their schools who were leaving in frustration at the emphasis on behaviour and overt symptom treatment. Goldfried notes that in their wake, the remaining professors who were mostly focused on biology were left to determine the training programs for the next generation of psychiatrists. Goldfried attributes this to a) the shift in psychiatry away from the provision of talk therapy and toward emphasizing biological interventions, and b) the gaining popularity of the biological model of understanding mental health.

The third generation of therapy research was a direct response to the medical model of treating mental health, through the emphasis of diagnose-and-treat overt systems (Goldfried, 2016). Refining specificity research, and focusing on the relationship between treatment modalities and diagnosable disorders define this generation (Gelso et al. 2015; Goldfried, 2016; Pachankis & Goldfried, 2007). Adherence to treatment manuals, competency checks, and use of clinical trial models are all key features of the third generation research. It is here that the

relationship between funding and research trends becomes more overt (Lambert, 2013). Third party payors and United States (US) congress begin to put pressure on funders, such as the (US) National Institute of Mental Health (NIMH), to focus dollars on outcome-oriented research to get the most benefit and deliverables (Goldfried, 2016; see also Lambert, 2013). In response, Goldfried notes a dramatic reduction in funding for process research in the early 1990s (Goldfried, 2016).

The latter part of this generation also saw important advancements in the process research field. Keisler made some of his most important and influential findings, including the above-noted *uniformity myth*; and greater attention to the interaction patterns and interpersonal approaches of clients and therapists (Gelo et al., 2015). Bordin's and Luborsky's theories of therapeutic alliance also came to the forefront during this generation; technology and statistical innovation was making it easier to capture and analyze vast amounts of process data (Horvath & Luborsky, 1993). An argument that there were pan-theoretical common factors in therapy was also beginning to coalesce (Wampold & Imel, 2015). In order to align research to funding priorities, process researchers continued to link their work to outcomes, thus establishing a progress monitoring paradigm (Fitzpatrick, 2012; Horvath, 2013). Interestingly, progress monitoring features prominently in Pachankis and Goldfried's recommendations for the future of process research (Pachankis & Goldfried, 2007). They note that during the third generation of therapy research, most process-outcome studies captured measures pre-mid-post treatment only. Pachankis and Goldfried argue that in order to understand what happens during the process of therapy, more frequent measures must be taken to more closely understand the evolving progress of the relationship between in-session events and client response, not just overall outcomes.

Significance of the Study and Relevance to Counselling Psychology

This study is significant for 5 reasons, including increasing accountability, enhancing therapist reflexivity, identifying gaps in the process literature, updating Hill et al. (1994), and, in doing so, expanding Hill et al.'s study by including two additional leading journals. Therapy process research contributes to the accountability of the profession and those within it (Goodyear et al., 2015). Goodyear et al. describe accountability as a method to monitor and regulate behaviour in an actor-audience relationship, where there are expectations of certain levels of performance. Researching the process of therapy ensures participants are carefully considering not only what takes place in therapy, but also paying attention to why choices are made, whether those interventions produce intended results, and how each participant responds to the events. In therapy, accountability as a form of process can look like expectations of certain behaviours, such as unconditional positive regard, adherence to manualized protocols, participation in training programs or even homework completion.

As scientist-practitioners, counselling psychologists are trained to ensure approaches we take are well reasoned and empirically supported, in order to provide effective services to our clients. They are encouraged to be reflexive in practice and make sure approaches fit both clients and therapists (Spengler, 2005). Spengler also argues that it is important that counselling psychologists engage in self-reflection. This helps ensure they are well supported with the most appropriate, complete, and relevant information possible. One way to do that is to stay abreast of published research.

Periodic content analysis of journals, like the one conducted here, helps evaluate the current state of therapy research, both to identify trends in the literature and gaps in the literature (Buboltz, Walter C., Miller, & Williams, 1999; Hill et al., 1994). Furthermore, published research reflects the zeitgeist of the times and profession, how therapists see and think of

themselves, and how journals respond to their readership (Lee, Rosen, & Burns, 2013; Munley, 1974). With careful, purposeful focusing on specific topics in a content analysis, researchers can monitor a particular domain to ensure it is responsive to shifts in the broader field of counselling psychology. An example of this is the increased importance of multicultural awareness in all aspects of counselling (Buboltz, Walter C. et al., 2005; Lee et al., 2013).

As Canada becomes increasingly diverse, it becomes more important for psychologists to ensure they are equipped to work with diverse clientele. This can be addressed in two ways: the first is to focus on clients who are culturally diverse to evaluate whether certain approaches and techniques are more or less effective (Nilsson et al., 2003; Nilsson, Love, Taylor, & Slusher, 2007). The second is to ensure study participants are more reflective of the broader population, in order to understand whether an intervention can be generalized to a more representative population (Nilsson et al., 2003, 2007). Given the increased importance of multicultural awareness in counselling psychology as a whole, one would expect this trend to also appear in process research.

In addition to allowing us to compare process research to trends in counselling psychology as a whole, a content analysis will also help identify current trends and understand how those trends have evolved in the 20+ years since Hill et al. (1994) published the last process research analysis. It also allows for comparison of previously-developed process measures to other studies (Hill et al., 1994). An analysis such as this also identifies gaps in the literature. By identifying these gaps, directions of future research can be readily identified (Munley, 1974). Should, for example, this content analysis highlight a lack of diversity in the samples, future process researchers could develop more creative approaches to encouraging a more diverse sample.

The intervening 22 years has seen important developments in the therapy process, especially from a research standpoint. Empirically based perspectives, such as common factors (Wampold & Imel, 2015), and pan-theoretical concepts, such as working alliance (Horvath & Luborsky, 1993), have become central to understanding how and why therapy works. More attention is paid now to understanding and evaluating the process-outcome relationship (Lambert & Barley, 2001). Further, global process-outcome measurement tools, such as Outcome Questionnaire (Lambert et al., 2004) and Partners for Change Outcome Management (PCOMS; Duncan, 2012), are moving out of academia and into practicing clinicians hands. Similarly, the field of counselling psychology continues evolving. Process research is now competing for external funding and publication attention against other research areas, such as empirically supported treatments, practice based evidence procedures, and developing psychologists' multicultural competencies.

It is especially timely to conduct this study now, as it is about the same 20-year time period as Hill et al. (1994) when comparing their results with Keisler and Strupp's studies from the 1970s. The timing of this study will also address some specific observations made in three recent publications (Mallinckrodt, 2011; Murdock, 2011; Scheel et al., 2011b). As will be noted later in this chapter, Mallinckrodt and Scheel each conducted separate process-focused journal content analyses, each observing a decline in published process research in the Journal of Consulting and Clinical Psychology (JCCP). Each researcher speculated whether that decline was due to an actual decrease in research, or that research could be moving to other journals that recently gained prominence, such as Psychotherapy and Psychotherapy Research (PR) (Lichtenberg, 2011; Mallinckrodt, 2011; Scheel et al., 2011a, 2011b). This study will address this by including these journals in data collection**.** Furthermore, the editorial standards have

evolved, with more emphasis on extensive research studies requiring larger sample sizes, random sampling methods, and using nonclinical participants (Nilsson et al., 2007).

Descriptive quantitative content analyses. Descriptive quantitative content analyses are one of three common ways to evaluate journal publications, the other two being reviews of special issues and qualitative reviews (B. T. Erford, Miller, Duncan, & Erford, 2010). Much like the qualitative review, the quantitative approach identifies important themes, but does so using statistical frequencies, and often begins with a pre-selected set study characteristics. Examples of these types of content analyses have been conducted on study characteristics published in Measurement and Evaluation in Counselling and Development (B. T. Erford et al., 2010), Journal of Counseling and Development (Bradley T Erford et al., 2011; Nilsson et al., 2007), and Professional Psychology: Research and Practice (Nilsson et al., 2003). They have also been conducted on specific topics, such as the use of theory in counselling psychology research (Karr & Larson, 2005) and therapist demographics (Guinee & Avenue, 2000).

In the next section, I review 7 published content analyses and 1 unpublished analysis related to therapy process research. These studies relate directly to the current thesis.

Literature Review: Descriptive Quantitative Content Analyses of Therapy Process Research

Munley (1974) conducted perhaps the first process-related content analysis of JCP. Arguing that, at the time, JCP was the foremost publication in counselling psychology, he reviewed all articles in the first 19 volumes, from 1954-1972, to identify topics and study characteristics. In total, this review included 1,400 studies and 8 study characteristics. He found movement toward empirical studies and away from theoretical papers, from 51% of all published papers in 1954 to 93% in 1972. Next, he found that nearly 25% of all empirical studies addressed

process (9%) or outcome (15%), and that less than 1% addressed the process-outcome relationship. When looking at study characteristics, 27% did not mention sex of the subjects, and 47% of the samples consisted of volunteer university students.

Munley's (1974) findings are a good representation of how people thought about counselling psychology at the time. Given that most researchers worked in an academic setting in the 50's, 60's and 70's, it is not surprising that JCP would publish empirical studies involving conveniently sampled, predominantly male university-aged students. Furthermore, while the processes and outcomes of therapy were studied separately, the process-outcome relationship was still many years from being understood as it is today. In this article's discussion, Munley called on counselling psychology researchers to pay attention to study characteristics –namely expanding samples to include non-university students, and capturing sample characteristics, such as sex. He argued that doing so would make research more applicable to general practitioners and support the field's goals of providing service to clients during their entire lifespan. Three strengths of this study included that it was one of the first efforts at recording both the types of studies and the characteristics within this study; that by systematically assessing a single journal, Munley could map out all the types of studies and study characteristics; and these characteristics could be used to identify the trends over time. Weaknesses of this study included that by focusing on only one journal, it is difficult to generalize; that only age and sex were captured as client demographics, again affecting generalizability; and therapist characteristics were limited to level of education rather than experience.

Hill et al. (1994) reviewed studies published in JCP and JCCP since Munley's (1974), and Kiesler (1973) and Strupps (1973) condemnations of process research. Hill et al. used the Munley's study to guide their research. Since counselling psychologists were not the only ones

studying the therapy process JCCP. As with Munley, they selected these journals because of their prominence in clinical and counselling psychology. They analyzed and compared all articles from JCP and JCCP between 1978 and 1992. In total, they reviewed 3,145 articles and 11 study characteristics. They found that overall, while there was no difference in the volume of outcome research (13% JCP to 14% JCCP), they found that process (12% JCP to 2% JCCP) and process-outcome (6% JCP vs 3% JCCP) was published more frequently in JCP. They did, however, note that over the 15-year span, JCP saw a decrease in outcome (from 21% to 7%) and process-outcome research (6% to 3%), while process-only research remained the much the same (12% to 14%). Compared to Munley (1974), they found that, for JCP, there was an increase in process studies (from 9% to 12%) and an increase in process-outcome studies (from 1% to 6%); outcome research decreased from 15% to 13%.

Pausing here, these results seem to indicate that during the 80's and 90's, outcome research is of similar importance to both counselling and clinical psychologists, and that while there was little overall change since Munley's (1974) findings, perhaps outcome-centric research might have peaked in the late 70s and early 80s. This does not appear to be the same trend for process-centric research, which increased dramatically, particularly in the counselling psychology field, going from ~10% in Munley's study to 18% in Hill et al.'s (1994) study. This makes sense given counselling psychology's emphasis on therapy process, and emerging pan-theoretical concepts, such as the Working Alliance (Horvath & Luborsky, 1993; Horvath & Symonds, 1991), that were affecting the field.

When analyzing study characteristics, Hill et al. (1994) noted researchers responded to some of Munley's (1974) concerns. For example, they found that samples were more accurately described (i.e. identifying the sex makeup), and that more diverse participants were included.

They noted, however, that one of Munley's concerns had not been adequately addressed, namely, that a majority of participants continued to be university students. This finding was most evident in JCP, noting that clinical researchers often had better access to agencies, clinics, and other non-student centric organizations. Additionally, the predominant mode of therapy was individual and brief counselling. While this was not an immediate concern, they observed it left an opportunity for work to be done with groups, couples, and families, as well as long-term therapy. They also noted participants were predominantly recruited, rather than nonsolicited, meaning they were invited to participate in therapy rather than being already in therapy and merely invited to be included in the study. They raised concerns that perhaps the recruited clients' motivation and reasons for participating in studies might not represent those nonsolicited clients.

As they analyzed process research directly, they documented important characteristics about process measures that were used. Hill et al. (1994) noted that, while most studies used existing measures (59%) rather than developing their own, they believed some newly developed, one-off measures were unnecessary. An important concern that they raised was their observation that, at times, it appeared constructs were being defined differently, thus making cross-study comparisons difficult and hampering efforts to advance the field theoretically. They also noted global measures were used predominantly (e.g., Counselor Rating Form, Vanderbilt Psychotherapy Process Scale), noted that a variety of perspectives were surveyed (self, other member of dyad, observer), and they listed the most popular measures in their sample, including Counselor Rating Form, Barrett-Lennard Relationship Inventory, Hill Counselor Verbal Response Category System.

Finally, the Hill et al. (1994) study identified a core set of productive researchers, and that core group were producing measurements as well as developing theories, and that the

research appeared to be skewed towards any particular theoretical orientation. Highly productive process researchers, at the time, included Robert Elliott, Myrna Friedlander, Leslie Greenberg, and Clara Hill. Strengths included additional characteristics of clients (e.g., race, diagnosis); additional characteristics of therapists (e.g. therapist gender or race); and an effort to identify productive programmatic researchers who contribute to both the development of measures as well as the understanding of therapy process. Hill et al. (1994) identified two weaknesses, or critical limitations. First, the findings cannot account for what research is being conducted, but not published, or for what the editors rejected for publication -- the proverbial "file drawer" problem. The volume of unpublished research is nearly impossible to address, although one suggestion might be to analyze dissertations in addition to actual published articles (Lichtenberg, 2011). Second, they noted that only studies from JCP and JCCP were reviewed, which may not represent the general trend in process research.

Buboltz, Miller and Williams (1999) returned to Munley's (1974) design and evaluated the content of published JCP articles, volumes 20 to 45 (1973 to 1998). Thus, all studies included in Hill et al. (1994) were also included here, with an additional 11 years of data (5 before and 6 after), totalling 2,027 studies and 14 study characteristics. Using their own definitions of study types, which differed from Hill et al., Buboltz et al. found that process research constituted 13% of published studies, and process-outcome research constituted 25%. As expected, given they coded many of the same studies, there was similarity in the proportion of therapy process research found by Hill et al. (13% here to 12% in Hill's study). Unexpectedly, Buboltz et al.'s finding that a full quarter of research studied the process-outcome relationship, whereas the Hill et al. study reported only 6%, a noteworthy difference of 19%. It is possible, though, that this finding is unintentionally misleading and may actually be a summary number, comprised of 13%

process research, 6% outcome, and 6% process-outcome. It is also possible that differing definitions accounted for the result.

When considering all empirical studies (not just process and/or outcome), Buboltz et al. (1999) observed a change in study characteristics, noting that nearly all studies reported gender (98%) and ethnicity (93%). As with Hill et al. (1994), university students still comprised the bulk of participants (56%). Strengths included using the Munley (1974) to guide their coding allows for ease of comparison between various content analysis studies; extending the programmatic research evaluation to include both researchers and institutions. Buboltz et al. outlined four limitations of their study. First, that they developed their own content categories and definitions of characteristics; second, that they assumed the first author represented the most influential researcher in the paper; third they used author ranking as a symbol of impact; and fourth, that looking at historical trends cannot predict the future of process research.

In a relevant, but unpublished paper, Hanson, Petska, and Hayes (2004) extended Hill et al. (1994) by examining an updated data set, and further describing features of process measures used. The team drew articles from the same two journals, JCP and JCCP between 1993-2002 and randomly sampled 20% of those articles for evaluation, resulting in 356 total studies and 5 characteristics. As with the Hill et al., they first coded articles for type of study, and then coded the characteristics of the studies identified as process or process-outcome.

Hanson et al. (2004) found a decrease from Hill et al. (1994) in the proportion of process studies (from 5.33% to .8%) and an increase in process-outcome studies (4% to 15.2%). In terms of study characteristics, Hanson et al. (2004) noted the ratio of new to previously-used measures shifted from 2:3 to 2:1. They also reported a shift in attention, where in Hill et al. (1994) the focus was on therapist characteristics, this study focused on client characteristics (49.6%), with

increasing attention on the client-therapist relationship (12.8%). The perspective, or person completing the measurement, also shifted to over half of all measures now completed by the client (56.1%). This study added a new characteristic to their article evaluations; specifically, capturing the inclusion of reliability estimates of process measure scores. Hanson et al. noted reliability estimates were appropriately provided 12.2% of the time.

As this study built on the Hill et al. (1994), the research team's use of the same journals and similar definitions of process and process-outcomes facilitated direct comparison of the results, which is a strength. And, by including the new characteristic of reliability estimates, this study extended Hill et al. by providing information on recently passed journal reporting standards. Limitation-wise, there are at least three. First, while the study used the same journals and study type definitions, only nine years of data were collected, rather than the 15 years in Hill et al. Further the study evaluated only a 20% sample of articles, instead of the entire set of articles as in Hill et al. Second, the study was limited in the direct comparison, as it did not evaluate all the same study characteristics, focusing mostly on characteristics of process measures. Finally, the study did not sample journals other than the two that were identified in Hill et al. While this allowed for direct study-to-study comparison, it limited generalizability to other therapy-oriented journals.

Buboltz, Deemer and Hoffman (2010) returned to this topic 11 years later and, using their same definitions, and again focusing on JCP exclusively, analyzed articles between 1999-2009. It included 514 studies total and 5 study characteristics. They found studies focusing on multicultural issues (15%) were now the most frequently studied topic, and studies related to processes and outcomes now ranked 10th (where they were previously first), with process at 5%, outcome at 9%, and process-outcome at 4%. They posited that perhaps process and outcome

research no longer met the rigor of JCP's editorial standards. They also wondered whether other journals had attracted process and outcome studies away from JCP. A different way to consider falling rank order of process and outcome research is to apply the inverse idea that was suggested above. For their 1999 study, it was suggested that perhaps the finding that 25% of all studies were process-outcome was instead a sum of process plus outcome plus process-outcome findings. If one were to aggregate the 9% outcome plus 5% process plus 4% process-outcome, one would find that 18% of all studies in JCP during that time focused on process and/or outcomes. While still a concerning drop from 25% to 18% over 10 years, the change is not nearly as significant and might be more understandable.

Regarding study characteristics, Buboltz et al. (2010) found that, although participants were still primarily university students, the proportion dropped by over 10%, indicating a shift in the recommended direction. A majority of studies included the sex makeup of the sample, although interestingly they noticed an upswing in female-only study samples. Regarding ethnicity, the researchers reported a continued trend towards including this description in the sample characteristics, although they did call on researchers to improve on this front when multiculturalism was not the focus. Core strengths included that the same journal, and same definitions were used as the previous study, thus allowing comparison to the previous study. The authors acknowledged many weaknesses from the first study were also evident in this study; in particular, that they were using idiosyncratic definitions, assumed first authors were most significant contributors, that a single journal did not represent the zeitgeist and that historical analysis could not predict future trends. An additional limitation to this study was that only 10 years were evaluated, rather than the 26 years from their previous study.

In response to a perception there was a decrease in the quality of counselling-focused

research, Scheel et al. (2011b) conducted a 30-year content analysis of JCP and The Counselling Psychologist (TCP), from 1979-2008. The sample included 2,283 total published studies were coded for study type. Their results supported the perceived decline, noting that counselling-focused studies dropped from about 77% in 1978 to about 37% in 2008. They also anecdotally noted (but did not provide statistics) that much of this difference was attributed to the sharp decline in process-outcome research. While they did not analyze what topics had increased in proportion, they noted social justice and cultural competence were topics that seemed to be gaining more attention.

In their discussion of reasons for the drop in counselling-focused research, Scheel et al. (2011b) posited that it might be due to a number of changes, including fewer manuscripts being submitted, the change was in response to the shift in editorial preferences in these two flagship journals, and that researchers were turning their attention to other publications. They also noted that the identity of the field was changing and perhaps the field was not as interested in articles about the provision of therapy, that with more buy in from the Common Factors model (Wampold & Imel, 2015), fewer researchers were interested in exploring what has become a widely accepted perspective on the ingredients in therapeutic change. They also offered that with fewer researchers exploring this topic, there were fewer "role models" and researchers were not being mentored or encouraged to study these topics. Scheel et al. note that one of the key impetuses for their observations was JCP's 1994 decision to remove the separate, stand-alone process-outcome section in subsequent issues, and the decision to return this section on an occasional basis after 2006. Three strengths were that this study included the longest span of articles (30 years), they provided a direct head-to-head comparison between two leading journals; and they evaluated all articles that were published during their sample period. Study

weaknesses include very different base rates of articles in each publication (TCP published 561 articles and JCP published 1,722 during the same period); and statistics were not provided for many of the key anecdotal observations that the authors made.

Murdock (2011) published an article in the same issue of TCP, in response to Scheel et al. (2011b). She offered three arguments for Scheel et al.'s results. First, she noted that process research heavily relied on analogue studies, a practice that JCCP banned outright in the early 1980s, and many journals such as TCP and JCP likely followed suit. Second, she stated that conducting large *n*'s studies (highly valued during this time period) with real clients was time consuming, messy, and difficult. Finally, she agreed that JCP (and JCCP) are no longer the exclusive publishers of process research and named Psychotherapy and PR as two journals that produce high-quality therapy process research.

The other important reaction to Scheel at al. (2011b) came from Mallinckrodt (2011) who was editor of the JCP at the time. To begin, Mallinckrodt highlighted the confusing definition of "counselling related", and offered an alternative definition focusing on "counselling and supervision process and outcomes" or CSPO. With this description, Mallinckrodt conducted his own study, using the keyword terms offered by PsychInfo in all articles published in JCP from 1975-2009. He found the term *counselling* was the second-most popular keyword between 1975-1979, but that it had dropped to sixth place by 2005-2009, noting it was coded to only 8% of all articles in that time period. The keywords *counsellor characteristics* and *psychotherapeutic process* enjoyed first and third position in the 1975-1979 period, but they dropped to 369th and 26^{th,} respectively, in the 2005-2009 period. He also noted the *psychotherapeutic process* keyword was coded to over 35% of all articles in the 1970's, but was coded to less than 5% of articles in the 2000's.

As with Hill et al. (1994), Mallinckrodt (2011) also found a precipitous decline in the publication of process and outcome studies. In addressing the editorial standards and preferences, he disagreed with Scheel et al.'s (2011b) suggestion by pointing out that the steady decline of the publication of process outcome articles had started well before he took over as editor in 2005, and the rate of decline did not change significantly over time. To extend that theme, he noted he did not believe (though did not provide any data) that the journal's editors had rejected CPSO studies to any greater proportion than other topics. He did, however, agree with many other arguments put forward by Scheel et al. and endorsed by Murdock (2011), namely, that there was an increase in competition from other journals, such as Psychotherapy and PR, and that he believed less process-outcome research was being conducted with fewer role models to foster research in this area of study.

Interestingly, as with Scheel et al. (2011a, 2011b) and Murdock (2011), Mallinckrodt wondered whether this reduction in publications could be attributed to changes in the field of research. Each article specifically mentions the increasing emphasis on the quality of research that is conducted, with preference for in-field (i.e. in real counselling settings), large sample sizes, and random control trials (RCTs). Mallinckrodt expanded on this observation, noting that, doing so, requires researchers to have regular access to thriving and active clinical setting. He stated this can be challenging when significant amounts of funding and senior research leadership (role models) is required to maintain relationships with those types of settings. Mallinckrodt suggests one way to address this might be to develop a network of consultants to support and promote the next generation of researchers. Such arrangements are beginning to emerge in Canada, including the Psychotherapy Practice Research Network (PPRNet) out of Ottawa, and the Ontario Practitioner-Led Resource Network (OPRN) out of Toronto (G. Tasca,

n.d.; G. A. Tasca, Grenon, Fortin-Langelier, & Chyurlia, 2014).

Summary of Research. The seven empirical articles and one commentary article evaluated an average of 1,621 studies across an average of 7.3 characteristics over an average of 18 years. Four articles were published as stand-alone articles in leading journals, one was presented at an international conference, and three as part of a TCP special issue. The empirical articles presented data in standard descriptive formats. Together, these studies evaluated articles in leading publications, consider trends over many years, and situated process research in the context of other study types published at the time. In terms of weaknesses, these studies are limited by idiosyncratic definitions of study characteristics, use of different base rates of articles, and failure to capture contributions of non-empirical, but therapy process-related works.

After reviewing the content analysis literature systematically, one may conclude that process research is somewhat limited. And, further complicating matters, many analyses reported a precipitous drop in the production or *perceived production* of process research. These studies also noted shifts taking place within process research, with different constructs and different measurement practices taking place. Additional research is needed, as this is an important, yet seemingly muddled, topic in the field.

The Present Study

The present study reviews therapy process research published in four leading therapy-oriented journals: JCP, JCCP, Psychotherapy, and PR. It focuses on studies published between 2000-2016 and includes a random sample of 33% of these studies (n=1,516). For each identified process study, 15 characteristics are assessed. To address the research questions, it uses a descriptive quantitative content analytic approach. The research questions are as follows:

1. How much therapy process research did JCP, JCCP, Psychotherapy, and PR publish between

2000-2016.

2. Did they publish process research differently and at different rates?
3. What were typical process study characteristics?
4. Which measures were used most frequently?
5. What constructs were measured most frequently?
6. To what extent were score reliability estimates reported for "data in hand?"

Chapter 2

Methods

This study modeled Hill et al.'s (1994) sampling procedures and Hanson et al.'s (2004) coding guidelines.

Sample

A sample of 1,516 articles were randomly selected from four leading journals for evaluation. Within that sample, 200 were identified as *process* or *process-outcome* studies and further coded for study and process characteristics. The studies, published between 2000 and May 2016, were sampled from the Journal of Counseling Psychology (JCP; n = 35), the Journal of Consulting and Clinical Psychology (JCCP; n = 50), Psychotherapy (n = 34); Psychotherapy Research (PR; n = 81).

Judges

A total of three judges participated in the study, coding various data sets. One judge is the principle investigator (PI); the other two graduate students were otherwise unconnected with the study. The PI and the two other judges were graduate students at a Canadian university. The PI and one of the other judges coded the initial sample of 1,516 articles, of which 258 were included in subsequent codings and analyses. The second round of codings involved the PI and the third judge. Here, characteristics of 10% of the process and process-outcome studies were randomly selected and coded by this second judge. This was done as a reliability check and to improve the accuracy of future codings, which were conducted by the PI only.

Procedure

Prior to data collection, definitions, study inclusion and exclusion criteria were established. The definition of the types of studies was expanded. The definitions of *process*,

process-outcome, *outcome*, *analogue*, other, and *not applicable* (N/A) were maintained from the original Hill et al. (1994) article (please see Glossary of Terms, p. ix); and additional codes were added for articles that discussed the process experience but did not provide actual data, these were called *non-empirical process* (please see coding sheet in Appendix A, Table A1). There were two reasons for these additional study codes. First, to ensure that articles relating to the field of process research were appropriately captured, and second to match Hanson et al.'s (2004) coding. Briefly, process studies focused on face-to-face interactions between clients and therapists. Outcome studies did not. These studies focused on therapeutic effects. Process-outcome studies focused on in-session interactions and therapeutic effects. Analogue studies focused on simulations or hypothetical therapeutic situations.

For the purposes of this study, content analyses included studies from four leading journals, including *JCP*, *JCCP*, *Psychotherapy,* and *PR*; the first 2 were included in Hill et al.'s (1994) original study. Psychotherapy and PR were added here for four reasons. First, the PI conducted a search on May 6, 2016 on PsychInfo (using the Ovid interface) using the keywords "psychotherapeutic process." Frequency analyses showed these were the top four journals that had frequently tagged articles. Second, this was supported and encouraged in a personal communication with the second author of the original study (Libby Williams, personal communication August 1, 2016). Third, Mallinckrodt (2011) specifically cited these two journals as alternate publication venues for process researchers. Fourth and finally, these four journals are top-tier, fully indexed journals with 5-year journal impact factors of 4.335, 6.663, 2.907, and 2.226, respectively (captured January 18, 2017 via the Web of Science).

Individual studies were identified on PsychInfo using the Ovid interface. Search parameters included all published articles in JCP, JCCP, Psychotherapy, and PR from 2000 –

May 2016. In total, 4,548 articles were coded initially. All articles were exported to a .csv file using a specific set of meta-data fields outlined in Appendix B. Each .csv file was opened in Microsoft Excel for MAC 2011 and converted to an .xslx table, and a Coding Legend tab was added to the file for ease of reference by coders. Files were kept separately for JCP/JCCP and Psychotherapy/PR in order to manage file sizes.

As this research study included significantly more articles than Hill et al. (1994), a random sample of 33% of articles was evaluated. A random number sequence was captured for each database on June 24, 2016 from (Service, n.d.), and applied to the records. Only the records with numbers in the first third of the sequence were evaluated (n = 1,516).

For the first round of coding of the types of studies, the characteristics for inclusion and exclusion were carried forward from Hill et al. (1994). Articles that did not involve any original empirical work were excluded, like letters to the editor, errata, rejoinders, or commentaries (n = 141). All remaining articles were coded with one of the study type codes outlined above. For the second phase of coding, the inclusion criteria consisted of studies that were initially coded as process or process-outcome (n = 258). A second judge evaluated a random sample of 10% of records. This subset was selected using a random number sequence generator that was conducted on November 30, 2016 (Service, n.d.). During this second stage of coding, 58 articles were identified as not containing any process measures and were assigned different study types (example non-empirical process); thus, 200 studies were coded for study and process measure characteristics.

Individual study coding criteria were drawn primarily from Hanson et al. (2004). The codes assessed characteristics of studies and process measures. Study characteristics included *type of therapy*, *location* where the therapy took place, the client *arrangement*, whether the

clients were *in-patient* or had a *diagnosis*, the *therapist type*, the *age of the client cohort*, client cohort *gender*, and client cohort *race*. Codes describing characteristics of process measures included whether the measure was *new or previously used*, the *perspective* of the measure, the *focus* of the measure, and the *construct* that was being measured, and appropriate reporting of interrater reliability estimates of scale scores. For legend, see APPENDIX C.

During the second coding meeting, additional definitions were added for a select set of codes. These select codes included arrangement, population status, and client race. *Arrangement* codes described the arrangement between the therapist and client. The code *real setting* was defined as arrangements where a client actively pursued treatment as they would in a real therapeutic setting. The code *solicited client/volunteer* was defined as clients who would not have otherwise pursued the subject treatment, and were asked to participate in treatment. The codes *combination* (real and solicited), and *unspecified* were not further defined.

Population status codes described the status of the client. The code *clinical* (outpatient/diagnosis) was defined as clients who were not seeking inpatient treatment and had diagnoses and those diagnoses were a feature of the study. The code *community* was defined as clients who may or may not have diagnoses, were not seeking inpatient treatment, and were participants in a study were their diagnoses were not a feature of the study. The code *volunteer* was defined as participants who would not have otherwise sought service and offered to participate in the study. The code *uni/college* was assigned to participants who were volunteers and were students. The *clinical* (inpatient) and *unspecified* codes were not further defined. During the meeting, judges agreed on assigning the *primarily white* code only to studies where at least 85% of participants were identified as white; any proportion lower than 85% were assigned the *mixed race* code.

Data Analysis

Each of the first two judges was provided with an Excel document that included the initial random sample of 1,516 published studies and coding legend described above and outlined in Appendices A, B and C. Each judge reviewed each record to determine type of study (e.g., process, process-outcome). Judges accessed information, such as journal title, abstract, PsychInfo keywords to determine their coding, and could access the complete article for review, if necessary. Judges added codes to their separate databases, and once complete, codes were compared using a simple excel matching function. Judges met to compare results, and for records where there was a discrepant response, they discussed their respective codings until consensus was achieved. Before the consensus meeting, judges had 81.5% agreement on codings. After, it was 100%, as discrepancies were discussed and consensus was reached.

As noted earlier, the PI served as primary coder for the second round of assessment. The second round included only studies identified as process or process-outcome (n = 258 studies). A separate excel file was created for the second stage coding, again to manage file sizes, and all coding was added directly to this new database. The article accompanying each record was reviewed in careful detail and coded for study characteristics, and about the process measures that were used; both of which have been described above. As noted above, the third judge evaluated a subset of 10% of these studies (26 studies) for reliability checks and ultimately consensus. As this second assessment initially had just 57.9% percent agreement, the judges also met in person to review discrepant responses and revisit definitions of criteria. Much of this discrepancy was resolved by providing additional training of the second coder, and where judges could agree on criteria definitions but consensus could not be achieved, the coding assigned by the PI was maintained. Following this consensus meeting, less than 39 of the 392 data points, or

<10%, were changed by the PI, as there ended up being considerable agreement. As noted above, during this second assessment, 58 studies were identified as containing no process measures, and were recoded to study types, thus only 200 studies were coded for study and process measure characteristics.

As each journal published articles at different frequencies during the 15.5-year period (JCCP published 1,830 articles; JCP published 891 articles; Psychotherapy published 955 articles; PR published 872 articles), the findings were converted to proportions. Pivot tables, excel formulas and graphing were all used to generate the results. In the end, all data were analyzed using standard descriptive statistics, similar to Hill et al. (1994) and Hanson et al. (2004).

Chapter 3

Results

Research Question 1: How much therapy process research did JCP, JCCP, Psychotherapy, and PR publish between 2000-2016?

Of the 1,516 articles coded across the four journals, 141 were coded as *not applicable* and were excluded from further evaluation. Of the remaining 1,375 articles, 90 were coded as *process* (6.55%), 110 were *process-outcome* (8%), 306 were *outcome* (22.25%), 17 were *analogue* (1.24%), 106 were *non-empirical process* (7.71%), 746 were *other* (54.25%; see Figure 1).

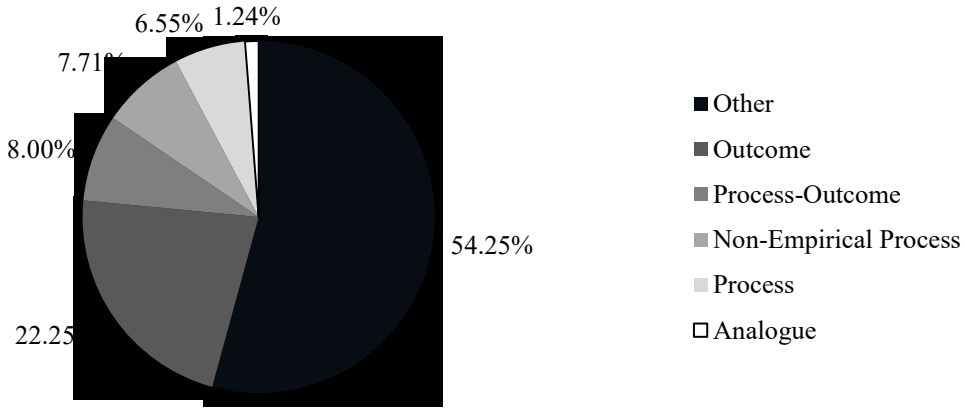


Figure 1. Types of Therapy Studies, 2000 – 2016 (n = 1,375)

Research Question 2: Did they publish process research differently and at different rates?

PR published the greatest proportion of therapy *process* research (13.92%), followed by Psychotherapy (9.06%) and JCP (8.03%), and finally by JCCP (1.22%). PR also published the greatest proportion of *process-outcome* research (15.75%), followed by JCCP (7.49%), JCP (4.74%), and finally Psychotherapy (4.33%). JCCP published the greatest proportion of *outcome* research (35.37%), followed by PR (22.34%), Psychotherapy (11.02%), and finally JCP (5.11%).

JCP published the greatest proportion of *analogue* research (2.19%), followed by PR (1.47%), JCCP (1.05%) and finally Psychotherapy (.39%). Psychotherapy published the greatest proportion of *non-empirical process* research (21.26%), followed by PR (14.65%), JCCP (1.46%), and finally JCP (1.39%; see Figure 2).

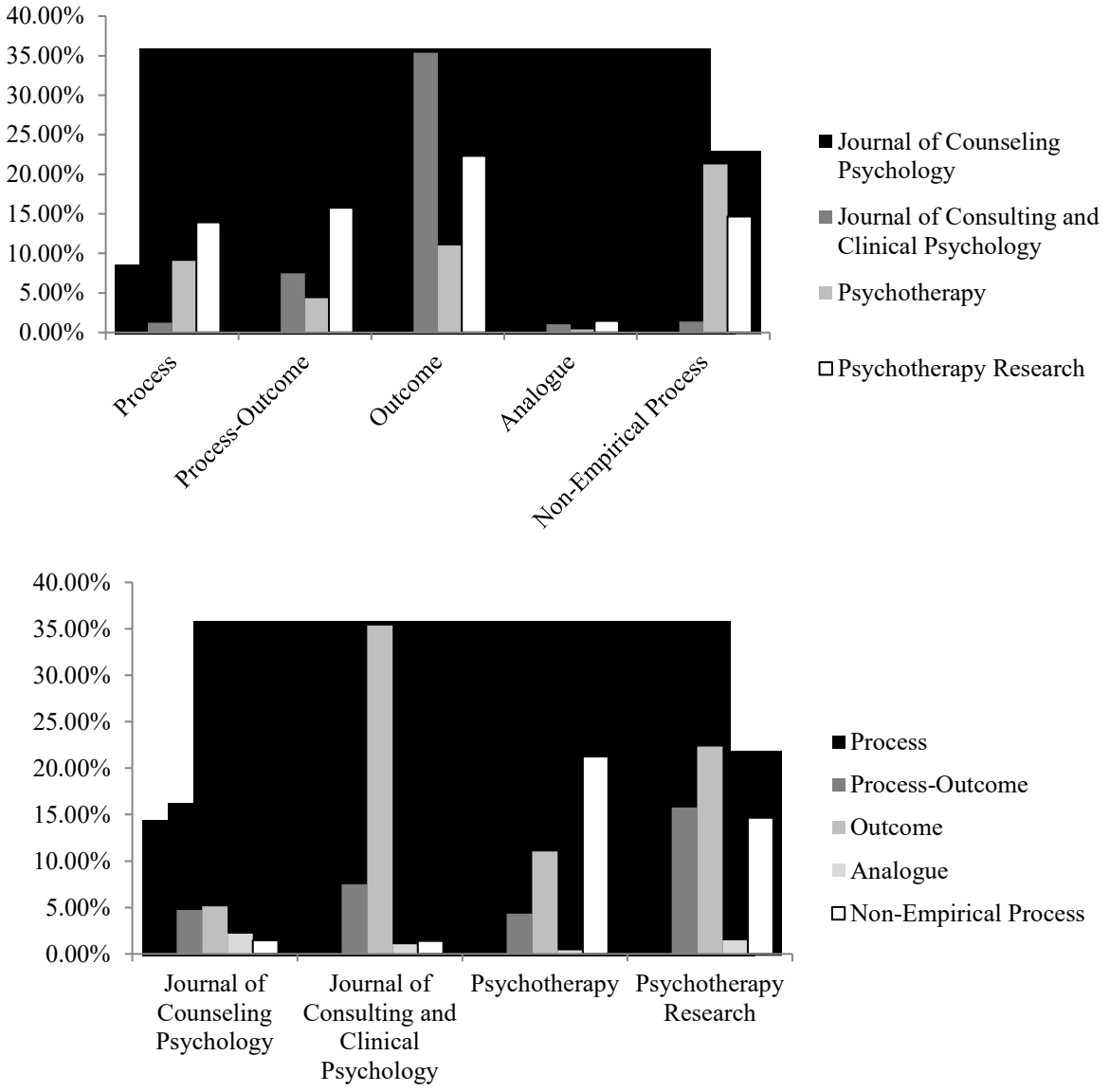


Figure 2. Proportion of Therapy Studies by Journal, 2000 – 2016. (JCP n = 274; JCCP n = 574; Psychotherapy n = 254; PR n = 273).

Publication Trends. As with Hill et al. (1994), articles were also organized by 5-year time blocks. While displayed in the accompanying tables, interpretation of the 2015-2016 block

should be interpreted cautiously, as it includes only 18 months of data – not all 24.

Over the 15.5-year study period, *process* studies increased from 2.96% to 8.45%. *Process-outcome* studies also increased, from 5.66% to 11.27%. The proportion of *outcome* studies increased, as well, from 19.68% to 26.76%. Analogue studies fluctuated (.54% up to 1.84% in ’10-14 then and then down to .7% in ’15-‘16). *Non-empirical process* studies also fluctuated (7.28% up to 8.74% in ’10-14 then returned down to 4.23% in ’15-16; see Table 1 and Figure 3).

Table 1

Trend of Therapy Studies, 2000 – 2016.

Type of Study	2000-2004	2005-2009	2010-2014	2015-2016*	Grand Total
Process	2.96%	7.96%	7.59%	8.45%	6.55%
Process-Outcome	5.66%	7.49%	9.43%	11.27%	8.00%
Outcome	19.68%	23.42%	21.84%	26.76%	22.25%
Analogue	0.54%	1.41%	1.84%	0.70%	1.24%
Non-Empirical Process	7.28%	8.20%	8.74%	4.23%	7.71%

* 2015 – 2016: contains 18 months of data

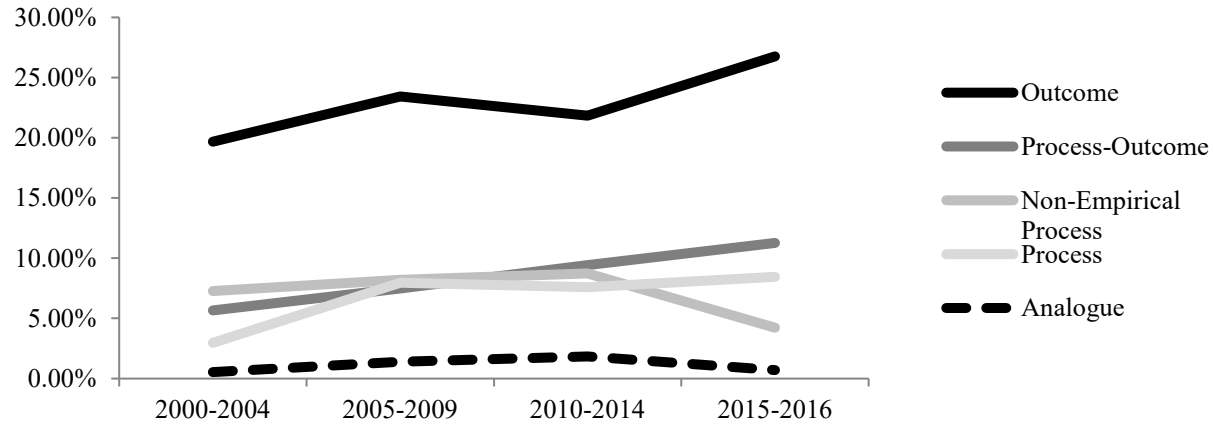


Figure 3. Trend of Therapy Studies Across All Journals, 2000 – 2016.

Trend of therapy studies within journals. Over the 15.5-year study period, the proportion of studies fluctuated across time-blocks. In JCP, an average of 8.03% of articles were

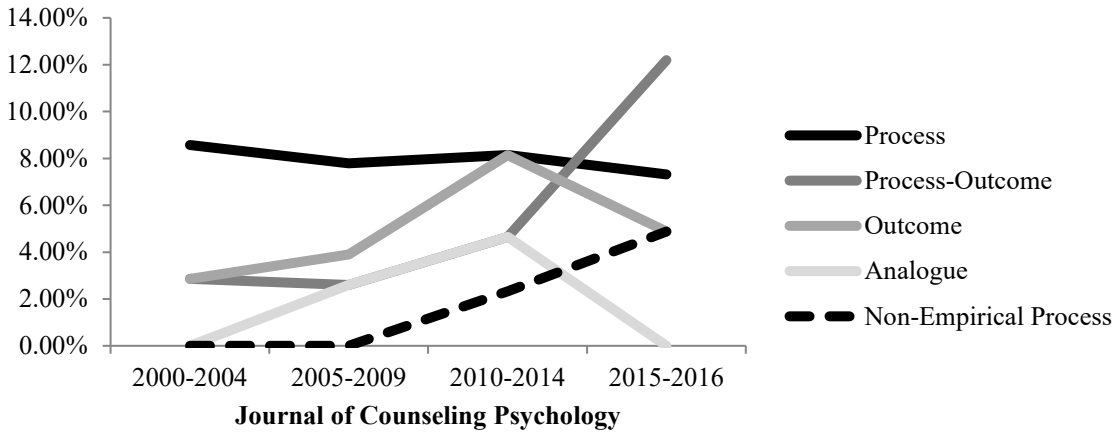
process studies (8.57% of all therapy studies in ’00-’04, 7.79% in ’05-’09, 8.14% in ’10-’14, and 7.32% in ’15-’16). An average of 4.74% were *process-outcome* studies (2.86% of all therapy studies in ’00-’04, 2.60% in ’05-’09, 4.65% in ’10-’14, and 12.2% in ’15-’16). An average of 5.11% were *outcome* studies (2.86% of all therapy studies in ’00-’04, 3.9% in ’05-’09, 8.14% in ’10-’14, and 4.88% in ’15-’16). An average of 2.19% were *analogue* studies (no analogue studies were published in ’00-’04, 2.6% in ’05-’09, 4.65% in ’10-’14, and no studies were published in ’15-’16). An average of 1.46% were *non-empirical* studies (no analogue studies were published between ’00-’09, 2.33% in ’10-’14, and 4.88% in ’15-’16; see Figure 4).

In JCCP, an average of 1.22% of articles were *process* studies (no process studies were published in ’00-’04, 2.17% in ’05-’09, 1.82% in ’10-’14, and no studies’15-’16). An average of 7.49% were *process-outcome* studies (4.57% of all therapy studies in ’00-’04, 8.7% in ’05-’09, 9.7% in ’10-’14, and 6% in ’15-’16). An average of 35.37% were *outcome* studies (32% of all therapy studies in ’00-’04, 33.7% in ’05-’09, 36.36% in ’10-’14, and 50% in ’15-’16). An average of 1.05% were *analogue* studies (.57% of all therapy studies in ’00-’04, 1.63% in ’05-’09, 1.21% in ’10-’14, and no studies were published in’15-’16). An average of 1.39% were *non-empirical process* studies (1.14% of all therapy studies in ’00-’04, 2.17% in ’05-’09, .61% in ’10-’14, and 2% in’15-’16; see Figure 4).

In Psychotherapy, an average of 9.06% of articles were *process* studies (3.28% in ’00-’04, 9.72% in ’05-’09, 7.61% in ’10-’14, and 24.14% in ’15-’16). An average of 4.33% were *process-outcome* studies (no therapy studies were published in ’00-’04, 4.17% in ’05-’09, 2.17% in ’10-’14, and 20.69% in ’15-’16). An average of 11.02% were *outcome* studies (3.28% of all therapy studies in ’00-’04, 13.89% in ’05-’09, 8.7% in ’10-’14, and 27.59% in ’15-’16). An average of .39% were *analogue* studies (only 1.09% of therapy studies were analogue in ’10-

’14). An average of 21.26% were *non-empirical process* studies (22.95% of all therapy studies in ’00-’04, 22.22% in ’05-’09, 23.91% in ’10-’14, and 6.9% in’15-’16; see Figure 4).

In PR, an average of 13.92% of articles were *process* studies (4.62% in ’00-’04, 18.09% in ’05-’09, 17.39% in ’10-’14, and 9.09% in ’15-’16). An average of 15.75% were *process-outcome* studies (16.92% in ’00-’04, 11.7% in ’05-’09, 20.65% in ’10-’14, and 9.09% in ’15-’16). An average of 22.34% were *outcome* studies (20% of all therapy studies in ’00-’04, 26.6% in ’05-’09, 21.74% in ’10-’14, and 13.64% in ’15-’16). An average of 1.47% were *analogue* studies (1.54% of all therapy studies in ’00-’04, 1.06% in ’05-’09, 1.09% in ’10-’14, and 4.55% in ’15-’16). An average of 14.65% were *non-empirical process* studies (16.92% of all therapy studies in ’00-’04, 15.96% in ’05-’09, 14.13% in ’10-’14, and 4.55% in’15-’16; see Figure 4).



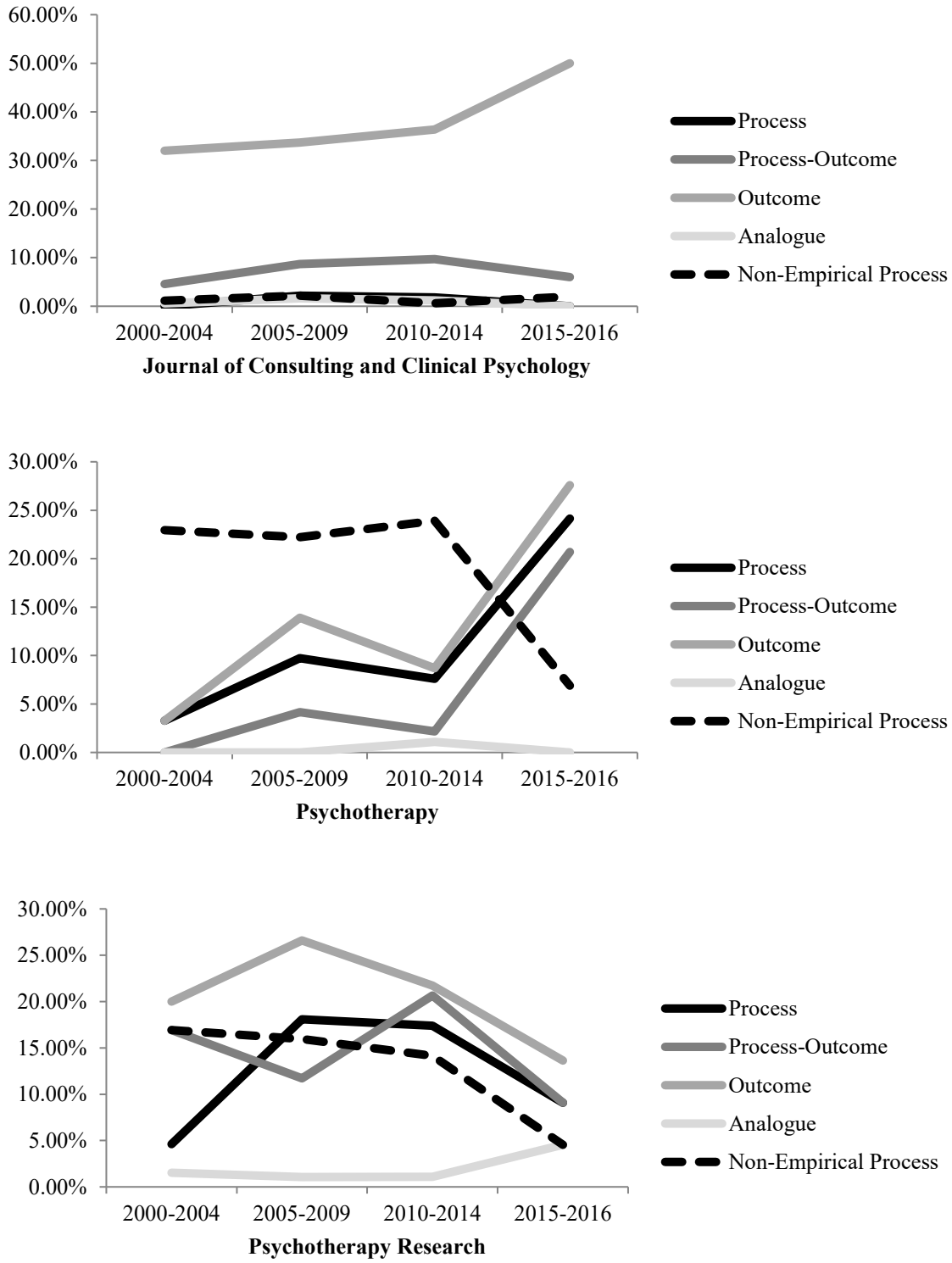


Figure 4. Trend of Study Type by Journal, 2000 – 2016. (JCP n = 274; JCCP n = 574; Psychotherapy n = 254; PR n = 273).

Research Question 3: What were typical process study characteristics?

Modality of Therapy. By far, individual therapy was the most popular mode of process therapy research (see Table 2). More than three quarters of all process and process-outcome research was conducted in an individual setting, ranging from 76% in JCCP to 97.06% in Psychotherapy, with 85% of all process studies focusing on individual therapy. Interestingly, while every article in the other three journals identified the therapy modality, 5.71% of JCP articles did not.

Arrangement. Here, there is considerable variability between journals, with *solicited/volunteer* clients being more prevalent than clients in *real settings*. Almost half of process studies produced in JCCP were conducted on *solicited* clients (48%); JCP published more articles studying clients in real settings (68.57%); Psychotherapy published more articles from real settings, although they also had a comparable number of solicited client studies (52.94% versus 44.12%); and PR showed the strongest preference for solicited clients (62.96%). Of note, over 6% of all studies did not specify the arrangement, with articles in JCCP failing to identify the greatest proportion at 14%.

Location. Campus and Community counselling centres are the most popular locations for process research (27.5% and 27% respectively). Nineteen percent of studies failed to describe the location of their work, although JCP had the fewest of these studies (11.43%).

Type of client. Clients who reside in the *community* are the most popular type of client, with articles on general community members edging out articles focused on community members *with diagnoses* (45.5% to 38%). Four-and-a-half percent of articles did not define client types, although it should be noted that the Psychotherapy was the only journal to define client types in every article.

Therapist type. *Experienced* therapists were the most popular participants in process research (39%) with *inexperienced/minimally trained* therapists next (22.5%) and a *mix of experience* coming in closely behind (21%). A notable portion of articles fails to mention the level of therapist experience (16%), with JCCP failing to note therapist experience in over one third of their articles (34%).

Client cohort. Adults are the most popular client group to study across journals, with 87.5% of all published articles. Every journal also published at least one article that failed to include this demographic characteristic.

Client gender. Three quarters of studies involved a *mix of genders* (77%), with *women-only* studies next at 16% (most commonly attributed to studies involving clients with breast cancer or eating disorders). A full 6% of all studies failed to identify this basic demographic, with at least one article in every journal doing so.

Client race. Nearly half the articles failed to mention any demographics related to clients' race (45%). More than two thirds of Psychotherapy articles failed to mention client race (65.43%), JCCP next (40%). Where this demographic was captured, 30.5% of articles described a mix of races represented in their studies, with 20% of studies evaluating client groups made up of at least 85% white population.

Table 2

Dimensions and Characteristics of Therapy Studies

	Journal of Counseling Psychology	Journal of Consulting and Clinical Psychology	Psychotherapy	Psychotherapy Research	Grand Total
Modality of Therapy					
Individual	80.00%	76.00%	97.06%	87.65%	85.00%
Group	11.43%	18.00%	2.94%	7.41%	10.00%

	Journal of Counseling Psychology	Journal of Consulting and Clinical Psychology	Psychotherapy	Psychotherapy Research	Grand Total
Family	2.86%	6.00%	0.00%	2.47%	3.00%
Indiv & Group	0.00%	0.00%	0.00%	2.47%	1.00%
Unspecified	5.71%	0.00%	0.00%	0.00%	1.00%
Arrangement					
Solicited client/Volunteer	22.86%	48.00%	44.12%	62.96%	49.00%
Real setting (unsolicited client)	68.57%	38.00%	52.94%	34.57%	44.50%
Unspecified	5.71%	14.00%	2.94%	2.47%	6.00%
Combination (real and solicited)	2.86%	0.00%	0.00%	0.00%	0.50%
Location					
Campus Counselling centre	45.71%	18.00%	32.35%	23.46%	27.50%
Community counselling centre	22.86%	36.00%	23.53%	24.69%	27.00%
Unspecified	11.43%	20.00%	20.59%	20.99%	19.00%
Multi-site	11.43%	20.00%	14.71%	11.11%	14.00%
Inpatient	2.86%	4.00%	2.94%	8.64%	5.50%
Private Practice	0.00%	2.00%	2.94%	7.41%	4.00%
Laboratory	5.71%	0.00%	2.94%	3.70%	3.00%
Type of Client					
Community	60.00%	28.00%	61.76%	43.21%	45.50%
Clinical (outpatient/diagnosis)	11.43%	62.00%	29.41%	38.27%	38.00%
Clinical (in patient)	5.71%	2.00%	2.94%	9.88%	6.00%
Unspecified	8.57%	8.00%	0.00%	2.47%	4.50%
Uni/College	8.57%	0.00%	5.88%	1.23%	3.00%
Volunteer	5.71%	0.00%	0.00%	4.94%	3.00%
Therapist Type					
Experienced (Psychologist, Psychiatrist, SW)	25.71%	26.00%	47.06%	49.38%	39.00%
Inexperienced/Early Career/Minimally	22.86%	22.00%	26.47%	20.99%	22.50%

	Journal of Counseling Psychology	Journal of Consulting and Clinical Psychology	Psychotherapy	Psychotherapy Research	Grand Total
Trained (Student)					
Mix of therapists	31.43%	18.00%	20.59%	18.52%	21.00%
Unspecified	11.43%	34.00%	5.88%	11.11%	16.00%
Paraprofessional (ie. Volunteer)	5.71%	0.00%	0.00%	0.00%	1.00%
Counsellor/Therapist	2.86%	0.00%	0.00%	0.00%	0.50%
Client Cohort					
Adult (post secondary-69)	94.29%	80.00%	94.12%	86.42%	87.50%
Mixed cohort	2.86%	6.00%	2.94%	2.47%	3.50%
Unspecified	2.86%	2.00%	2.94%	4.94%	3.50%
Youth (14-end of secondary school)	0.00%	8.00%	0.00%	3.70%	3.50%
Child (0-13)	0.00%	4.00%	0.00%	1.23%	1.50%
Elderly (70+)	0.00%	0.00%	0.00%	1.23%	0.50%
Client Gender					
Mixed gender	82.86%	80.00%	82.35%	70.37%	77.00%
Female-only	11.43%	14.00%	11.76%	20.99%	16.00%
Unspecified	5.71%	6.00%	2.94%	7.41%	6.00%
Male-only	0.00%	0.00%	2.94%	1.23%	1.00%
Client Race					
Unspecified	17.14%	40.00%	65.43%	32.35%	45.00%
Mixed race	51.43%	28.00%	17.28%	44.12%	30.50%
Primarily white	22.86%	28.00%	13.58%	23.53%	20.50%
Race-specific	8.57%	4.00%	3.70%	0.00%	4.00%

Research Question 4: Which measures were used most frequently?

One hundred forty-three different process measures were used a total of 357 times. Each study used an average of 1.79 process measures. Over half used just one measure (56.5%), and a quarter used two measures (25%), and 9.5% used four or more measures (see Table 3). Just over two thirds of studies used previously-developed measures (68%), with the remaining using at least one newly developed, or study-specific, measure (see Table 4). JCP had the highest

proportion of previously-used measures (77.14%) and PR had the lowest (62.96%).

Table 3

Average Number of Process Measures Used by Study

Number of Process Measures Used in Studies	Proportion
1	56.50%
2	25.00%
3	9.00%
4	5.50%
5	2.00%
6	1.00%
7	1.00%
Average Number of Process Measures Used by Study	1.79

Table 4

Proportion of New or Previously-Used Process Measures

	Journal of Counseling Psychology	Journal of Consulting and Clinical Psychology	Psychotherapy	Psychotherapy Research	Grand Total
Study includes only previously-used measures	77.14%	68.00%	70.59%	62.96%	68.00%
Study includes new or study-specific measure	22.86%	32.00%	29.41%	37.04%	32.00%

Table 5 lists measures that were used 3 or more times. Study-specific measures were used 23.8% of the time. The two next most popular measures were the short and long forms of the Working Alliance Inventory (7.28% and 7% respectively). All other measures were represented less than 2% of the time.

Table 5

Most Popular Process Measures (used more than 3 times)

Process Measure Name	2000-2004	2005-2009	2010-2014	2015-2016	Grand Total	Proportion
"One off" Study Question	17	31	27	10	85	23.81%
Working Alliance Inventory - Short Form (WAI-S)	7	10	5	4	26	7.28%
Working Alliance Inventory (WAI)	7	6	9	3	25	7.00%
California Psychotherapy Alliance Scale - Patient Version (CALPAS)	3	1	1	1	6	1.68%
Combined Alliance Short Form - Patient Version (CASF-P)	3	3			6	1.68%
Real Relationship Inventory - Client (RRI - C)		3	2	1	6	1.68%
Cross-Cultural Counseling Inventory — Revised (CCCI-R)	1	1	1	2	5	1.40%
Experiencing Scale (ES)	2	3			5	1.40%
Real Relationship Inventory - Therapist (RRI - T)		3	2		5	1.40%
Comparative Psychotherapy Process Scale (CPPS)	1	3			4	1.12%
Postsession questionnaire (PSQ)	1	3			4	1.12%
Session Evaluation Questionnaire (SEQ)	1	1	1	1	4	1.12%
Verbal Behavior Interaction Category System (SISC–INTER–CVT)	4				4	1.12%
Barrett-Lennard Relationship Inventory (BLRI)		2	1		3	0.84%
Client Resistance Code (CRC)	1	1	1		3	0.84%
Client Satisfaction Questionnaire (CSQ)	1	1	1		3	0.84%
Empathy Scale (Empathy Scale)	2		1		3	0.84%
Helping Alliance Questionnaire - German version (HAQ - German)	2		1		3	0.84%
Session Evaluation Scale (SES)		2	1		3	0.84%
Session Rating Scale (SRS)	1		1	1	3	0.84%
Structural Analysis of Social Behaviour (SASB)		2	1		3	0.84%
Therapeutic Alliance Scale - Children (TAS-C)	1		2		3	0.84%
Vanderbilt Therapeutic Alliance Scale (VTAS)	1	1	1		3	0.84%
Working alliance - Observer (WAI - O)	2		1		3	0.84%

Perspective of Measures. Clients completed over half of all measures (52.1%) with just

under one third completed by observers (30.25%), and 8.68% by therapists. JCP used the most client-only measures (70.13%). Of the observer-only measures, PR published the most (40.74%). Of therapist-only studies, Psychotherapy produced the most (20%; see Table 6).

Focus of measures. Just over one third of all measures focused on evaluating the relationship (35.85%). Client and therapist focus was almost evenly split (25.49% and 21.57%). Notably, JCCP produced research with the most client-focused measures (35.29%), and JCP produced the most therapist-focused measures (28.33%; see Table 6).

Table 6

Perspective and Focus of Measures

	Journal of Counseling Psychology	Journal of Consulting and Clinical Psychology	Psychotherapy	Psychotherapy Research	Grand Total
Perspective of Measures					
Client only	70.13%	54.12%	46.67%	42.96%	52.10%
Observer only	14.29%	29.41%	28.33%	40.74%	30.25%
Therapist only	9.09%	4.71%	20.00%	5.93%	8.68%
Therapist & client	5.19%	7.06%	5.00%	10.37%	7.56%
Observer and therapist	1.30%	2.35%	0.00%	0.00%	0.84%
Observer and client	0.00%	2.35%	0.00%	0.00%	0.56%
Focus of Measures					
Relationship	50.65%	35.29%	50.00%	52.59%	35.85%
Client	15.58%	35.29%	28.33%	23.70%	25.49%
Therapist	28.57%	20.00%	18.33%	20.00%	21.57%
Session	3.53%	10.39%	13.33	17.04%	11.76%
Group	3.90%	8.24%	1.67%	2.96%	4.20%
Separate: client and therapist	1.30%	1.18%	1.67%	0.74%	1.12%

Research Question 5: What constructs were measured most frequently??

In line with “relationships” being the most popular focus, *alliance* was the most popular

construct evaluated (33.89%), with *process* coming in next (16.53%). *Client behaviour* and *experiencing* were the third and fourth most popular constructs (10.92% and 8.4% respectively). Therapist adherence to manualized treatment was also a popular construct (7%; see Table 7 and Figure 5).

Table 7

Characteristics and Dimensions of Process Measures Used in Studies

	Journal of Counseling Psychology	Journal of Consulting and Clinical Psychology	Psychotherapy	Psychotherapy Research	Grand Total
Construct that is being measured					
Alliance	40.26%	32.94%	33.33%	31.11%	33.89%
Process	12.99%	5.88%	18.33%	24.44%	16.53%
Client (Behaviour)	5.19%	14.12%	18.33%	8.89%	10.92%
Client (Experiencing)	2.60%	12.94%	10.00%	8.15%	8.40%
Therapist (Adherence)	3.90%	16.47%	1.67%	5.19%	7.00%
Therapist (Facilitative Conditions)	16.88%	3.53%	1.67%	2.22%	5.60%
Client (expectations)	5.19%	7.06%	0.00%	3.70%	4.20%
Therapist (Techniques)	3.90%	1.18%	3.33%	5.19%	3.64%
Client (satisfaction)	3.90%	3.53%	0.00%	2.96%	2.80%
Therapist (Reactions)	0.00%	0.00%	8.33%	1.48%	1.96%
Client (reactions)	1.30%	1.18%	1.67%	1.48%	1.40%
Therapist (Helpfulness of Interventions)	1.30%	0.00%	0.00%	2.22%	1.12%
Therapist (nonverbal behaviours)	1.30%	0.00%	1.67%	1.48%	1.12%
Therapist (Expectations)	0.00%	1.18%	1.67%	0.74%	0.84%
Therapist (Intentions)	1.30%	0.00%	0.00%	0.74%	0.56%

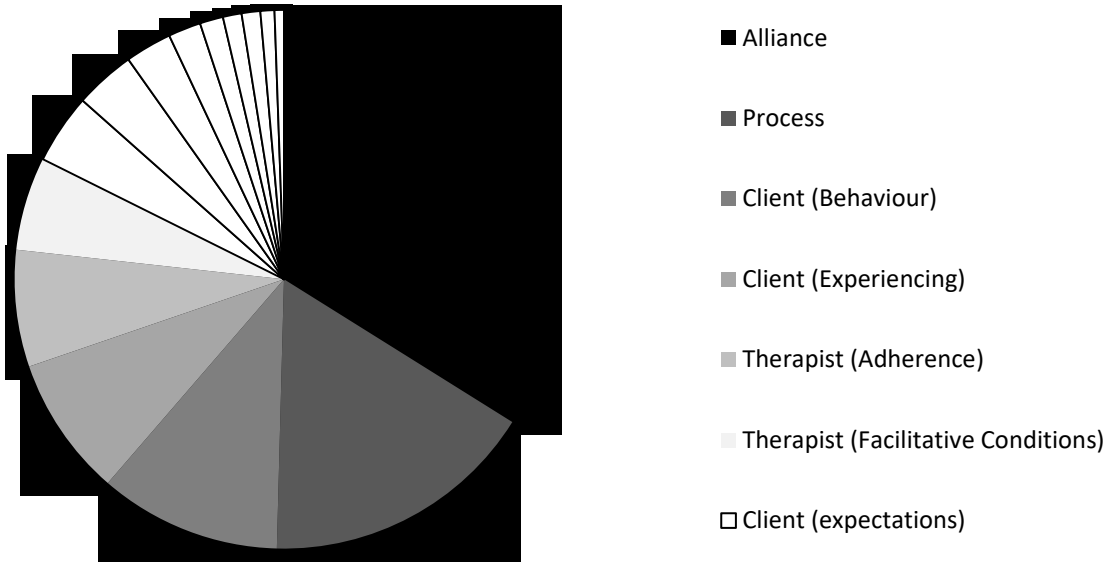


Figure 5. Most popular process measurement constructs. Only the top six constructs are listed in legend.

When the constructs for each measure are separated out between new and previously-used measures, a new pattern of construct attention appears. The *therapeutic alliance* is the most popular construct measured (41.37%; see Table 8); with the psychotherapeutic *process* coming in next a distant second (14.75%) and client behaviour coming in third (10.07%). For study-specific or new measures, the process construct was most popular (22.78%), followed by client behaviour (15.19%) and client experiencing (13.92%).

Table 8

Dimension of Construct Measured by Previously- Used or Study-Specific Measures

	Previously Used	Study-specific	Grand Total
Alliance	41.37%	7.59%	33.89%
Process	14.75%	22.78%	16.53%
Client (Behaviour)	10.07%	13.92%	10.92%
Client (expectations)	4.68%	2.53%	4.20%
Client (Experiencing)	6.47%	15.19%	8.40%

Client (reactions)	1.44%	1.27%	1.40%
Client (satisfaction)	1.44%	7.59%	2.80%
Therapist (Adherence)	6.12%	10.13%	7.00%
Therapist (Expectations)	0.36%	2.53%	0.84%
Therapist (Facilitative Conditions)	5.40%	6.33%	5.60%
Therapist (Helpfulness of Interventions)	1.44%	0.00%	1.12%
Therapist (Intentions)	0.36%	1.27%	0.56%
Therapist (nonverbal behaviours)	1.44%	0.00%	1.12%
Therapist (Reactions)	1.80%	2.53%	1.96%
Therapist (Techniques)	2.88%	6.33%	3.64%

Research Question 6: To what extent were score reliability estimates reported for "data in hand?"

Just under one-third of articles involving previously-used measures reported reliability estimates of both their own and prior studies (30.21%; see Table 9). Just over 20% reported only their own reliability estimates (21.88%), and fewer than 20% did not report any reliability estimates (18.4%). In 12.5% of studies, authors made only passing reference to previous reliability estimates, and did not mention estimates from their own study. In 10% of studies, authors provided previous reliability estimates and did not mention estimates for their own data. In 6.94% of studies, authors made passing reference to (but did not provide) previous reliability estimates, and provided estimates for data in their study. JCP studies were most likely to provide detailed descriptions of both their own and previous reliability estimates (55.88%), and was least likely to not report anything (5.88%). JCCP was least likely to report anything (42.03%), followed by including own-study estimates (27.34%) and then detailed own and previous study estimates (13.04%).

Table 9

Reliability Estimates Across Journals

	Journal of	Journal of	Psychotherapy	Psychotherapy	Grand

	Counseling Psychology	Consulting and Clinical Psychology		Research	Total
4	55.88%	13.04%	21.57%	29.00%	30.21%
5	16.18%	27.54%	21.57%	22.00%	21.88%
0	5.88%	42.03%	11.76%	14.00%	18.40%
1	13.24%	5.80%	13.73%	16.00%	12.50%
2	2.94%	5.80%	15.69%	15.00%	10.07%
3	5.88%	5.80%	15.69%	4.00%	6.94%

Chapter 4

Discussion

This study reviewed a random sample of 200 therapy process/process-outcome studies published in JCP, JCCP, Psychotherapy, and PR between 2000-2016 and addressed 6 research questions regarding study type, publication frequency, typical study characteristics, process measures used, constructs measured, and reliability reporting practices. Three previous studies have undertaken an analysis of the proportion and quality of therapy process research. Munley (1974) looked at JCP articles between 1954 and 1972; Hill et al. (1994) looked at JCP and JCCP articles between 1978 and 1992; and, Hanson et al. (2004) looked at JCP and JCCP articles between 1993 and 2002. Each study built on the one before, commented on current findings, trends, and identified recommendations for future research. Here, this study built on this line of research and used similar data collection methods and analysis techniques, but included two additional therapy-oriented journals. Results are discussed below, comparing and contrasting them with past research.

Study Types and Publication Frequencies

When looking at results of this study, 15.55% of the 200 articles involved therapy process research (6.55% of all articles were coded as *process*, 8% were coded as *process-outcome*). With other researchers, such as Mallinckrodt (2011) and Murdock (2011), wondering whether process research was moving to other publications, two of the next most popular journals, Psychotherapy and PR, were added to this evaluation. It appears there may be merit to this argument; with the two new journals added, there were proportionally more process and process-outcome research than if just the original journals (JCP and JCCP) were used alone, see Appendix D.

Munley (1974) found that 9% of studies published in JCP between 1954 and 1972

focused on *process research*; Hill et al. (1994) found that 5.33% of JCP and JCCP articles published between 1978-1992 studied process; Hanson et al. (2004) found that .8% of articles published between 1993 and 2002 looked at process; and when this study added Psychotherapy and PR journal articles between 2000 - 2016, the proportion of process articles was 6.55% (see Appendix D, Figure D1). When considering *process-outcome* research, Munley (1974) found 1% in JCP, Hill et al. (1994) found 4% in JCP and JCCP, Hanson et al. (2004) found 15.2% in JCP and JCCP, and this study found 8% in JCP, JCCP, Psychotherapy, and PR. Munley (1974) noted that 15% of studies focused on client *outcome*, Hill et al. (1994) noted a similar proportion at 13.67%; Hanson et al. (2004) also noted a similar 12.9% rate, and, when this study added Psychotherapy and PR to the mix, the proportion increased to 22.25%. Fewer Analogue studies appear to be published, with 4.7% represented in Hill et al. to just over 1% in this study (1.24%).

The years spanning Hill et al. (1994) and Hanson et al. (2004) represented a change, where process-outcome surpassed process-only research in popularity; a gap that his since shrank. The timing of this pattern fits trends in the study of therapy noted in chapter 1. In the years captured in Hill et al. (late 1980s and early 1990s) programmatic process research was gaining traction. An example of this was therapeutic alliance's steady gain in popularity. Horvath and Greenberg's Working Alliance Inventory was released in various versions in 1986 and 1989. In the years covered by Hanson et al., the relationship between processes and outcomes came to the forefront. It was during these years that researchers began looking at evidence-based treatments and engaging in RCTs. Then in the 1990s, teams of researchers, led (separately) by Jerome Frank and Bruce Wampold began documenting compelling empirical arguments for common factors (Wampold & Imel, 2015; see also Frank & Frank, 1991). Other researchers, like Michael Lambert, Barry Duncan and Scott Miller began developing their progress monitoring

program; with Duncan and Miller developing Partners for Change Outcome Management System (Duncan, 2012).

Typical Study Characteristics

From the results of this study, process research is primarily conducted in individual counselling (85%), with 10% evaluating the process of group therapy. There is almost an even split between recruited and real-setting clients. The original purpose of capturing this characteristic was to evaluate the generalizability of the findings, as, historically, process research was conducted on student volunteers in artificial situations, such as laboratories. These findings of an even split between recruited and real clients must be interpreted with caution, however, as the next characteristic (settings) shows that nearly all of this process research is conducted in real settings, such as university counselling centers or community clinics. The implication may be that that the "solicited" status of the participants is more a function of agreeing to participate in a research study rather than agreeing to actually undergo therapy. Said another way, this characteristic does not distinguish status as a research participant separately from status as a therapy client. Nor does this characteristic accurately capture whether participants are participating in therapy that they may not have otherwise sought. Interestingly, there is variability between journals on participant status, with JCP reporting 23% and PR reporting 63% of their samples as having been recruited.

Process research is split almost evenly between campus and community settings, and 14% being conducted in multi-site settings. Laboratory settings accounted for 3%. This may signal a strong reciprocal relationship between scientists and practitioners, not unlike the practice research networks described in chapter 1 (G. A. Tasca et al., 2014). Supporting this perspective is the more frequent use of experienced practitioners over inexperienced practitioners (such as

students on internships). A strong relationship between scientists and practitioners signals two things. First, that the findings can be generalized to everyday practice, as process is predominantly measured in real settings; and second, that practice can inform research as well as the typical approach of research informing practice. Some caution must be used, however, when interpreting these findings, as one in five articles did not indicate the location of the work, and 16% of the studies did not indicate type of therapist.

In terms of participant characteristics, most articles involved adults (87.5%). This may reflect pragmatic, or practical issues, with adult populations requiring fewer consent procedures and ethical approvals than children or vulnerable populations. Nearly all research was conducted on community populations, with 6% conducted on inpatient populations. This fits with the mandates of these various journals to focus on community member functioning, leaving significant mental illness concerns to other journals (Buboltz, Walter C. et al., 1999). Unlike the even split between real and solicited participants, 6% involved students or volunteers –cohorts who may not have otherwise sought counselling (of note, only samples where the inclusion criteria was student status were coded as *students*. Any samples where students participated alongside community members were counted as community). Additionally, 38% of articles involved clients with diagnosable disorders and who lived in the community. Together, these findings suggest the coherence and integrity of process research, in particular, that researchers are designing studies where their samples are representative of the client population.

Continuing on the representativeness of sample cohorts, just over three quarters of studies involved a mix of males and females. Female-only studies were next most popular (16%), which could be accounted for by the popularity of studies of breast-cancer and eating disordered patients.

Race appears to be a rather troublesome study characteristic to evaluate. The inclusion of race in the earlier studies was intended to capture the diversity of samples to ensure it was reflective of the therapy population. Despite conscious efforts to address diversity, not to mention over 60 years of these kinds of evaluations, race is not a characteristic that is captured with the same regularity as other characteristics, such as gender. Fewer than half of the articles in this sample provided any information on this demographic. There may be many reasons for this finding; it may be due to researchers inherent ethnocentrism that they would not think to include this demographic; or it may be a limitation of the procedure, where other, more study-suitable diversity characteristics were captured. It is also possible that this characteristic is no longer an appropriate placeholder to represent diversity, and future studies should instead consider other diversity status identifiers. When race was captured, at least the samples most frequently included a mix of races (less than 85% of participants were identified as White), meaning the samples were more representative of a population found in Canada. Unfortunately, just 4% of studies involved race-specific process research; meaning that while process research appears to be conducted on representative samples, almost no research is being published that seeks to understand whether process works differently for members of individually or culturally diverse groups where race is a key identifier.

In the years since Munley (1974) first captured this data, it appears that attention to the processes of groups (29% to just 10% in this study) has continued in favour of individual therapy (65% to 85%), a trend also observed in Hill et al. (1994). While one might interpret this as a shift in trends of process research, it is also possible that, with the proliferation of specialty journals, studies involving the process of group therapy may have merely shifted publication venues to more appropriate journals. Solicited clients continue to be the most popular form of participation.

As noted earlier this finding must be interpreted with caution, as it may reflect study participation rather than actual therapy participation. Nevertheless, solicited clients in more real settings signals the possibility of more programmatic process research activities, such as with Practice Research Networks (PRNs; see Pachankis & Goldfried, 2007), or that progress monitoring (i.e. evaluating process and outcomes) may becoming a more popular feature of community-based practices.

While there is a clear trend away from using inpatient samples, campus counselling centres are gaining more popularity. While more process research is being done on campus, there is a dramatic swing away from using university/college clients (47% to 3%), meaning process research appears to be conducted more frequently in real or quasi-real settings. This was a strong recommendation in Munley (1974), and the advice appears to have been heeded. The swing away from inexperienced to experienced therapists (32%/24% to 22.5%/29%) is interesting; however, it must be treated cautiously, as Munley found that a full 44% of articles failed to mention any statistics on therapists. To that end, the uptick in articles that fail to identify therapist characteristics between Hill et al. and this study is concerning. In a head-to-head comparison of JCP and JCCP articles, Hill et al. found just 5% of articles failed to mention therapist type, where this study found a full quarter (24.7%) of articles in failed to mention it.

There has been a noticeable drop in youths (11% to 3.5%), which as noted earlier, may be a function of study procedures, as consent requirements for working with vulnerable populations are far more stringent than in Munley's (1974) era. When looking at gender, this study found a welcome drop in the number of articles that failed to identify participant gender (from 27% to just 6%). Even after considering the articles where participant gender is not specified, there has been a significant swing toward using mixed gender samples (40%, 48% and 77% respectively).

As noted earlier, the upswing in female-only participant cohorts (from 7% to 16%) may be a reflection on the medical field's attention (and funding) on including psychological measures in their studies, such as breast cancer and eating disorders. It may also reflect the ease of including a process measure, such as alliance, as a way to predict outcomes in a larger more comprehensive medical study. As noted earlier, capturing participant race to represent diversity continues to be problematic, some improvement has been made; where 87% of articles in Munley's study failed to capture race, 45% of this study left participant race unspecified.

Process Measures and Constructs

At a ratio of roughly two to one, studies involving *only* previously-used measures outnumbered studies that included a unique process measure. Despite a clear preference for previously-used measures, there was very little agreement on which measures to use; 143 different pre-existing process measures were used in this sample. While an average 1.79 measures were used on each study, it was most common to see just one measure used per study; additionally, 18.5% of articles used three to seven process measures. By far, the most popular measure of process involved asking a question that was designed specifically for the study, with nearly a quarter of all measures being of this type (23.8%). Because the second and third most popular measures were the short and long version of the Working Alliance inventory, even combined, they represented less than 15% of the proportion of process measures used. Additionally, the Working Alliance Inventory accounted for more than the next 10 most frequently used tools combined.

In this study, the client's perspective was most frequently measured (52%), and within that perspective, alliance and overall process were the most popular constructs measured (34% combined). This is not surprising, as there is evidence that the client's perspective best predicts

outcome (Ardito & Rabellino, 2011). Observer perspective is the next most popular (30%). Interestingly, rather than capturing the expected alliance or overall process constructs, observer perspective is primarily used to capture client behaviour (26% of the time) and therapist adherence to manualized treatment (20% of the time). Almost half of all measures were used to evaluate the therapeutic relationship (48%), primarily the alliance (32%) or overall process (14%). About a quarter of measures were used to evaluate client (25.5%) with client behaviour (10.6%) the most popular.

Perhaps the most curious trend when looking across studies is the shifting ratios between new and previously-used measures. Where Hill et al. (1994) listed a two to three ratio, meaning for every two studies involving new measures, three other studies used previously-used measures, Hanson et al. (2004) observed the ratio had flipped, meaning for every two studies involving new measures, just one relied on previously-used measures. As noted above, this study found the ratio had flipped yet again, so that for every study involving a new measure, three studies relied on previously-used measures. This is a difficult finding to explain and one that would benefit from further research. It is possible that the period of time captured by Hanson et al. merely reflected a spike in the development of new process measures. It is also possible that with the 1990s trend toward outcome evaluations and the popularity of the alliance-outcome relationship, other researchers were attempting to build on that finding with similar measures. It is also possible, however, that these findings merely reflect what Mallinckrodt (2011) and Murdock (2011) each remarked, that process research was messy and difficult to conduct.

In Hill et al. (1994), studies capturing the observer's perspective were most popular (44%). Since Hanson et al.'s (2004) study, the attention has flipped to the client's perspective (56% and 52% respectively. Interestingly, the observer's perspective dipped during the period

captured by Hanson et al. (from 49% to 22%), and increased somewhat in this study (30%). Nearly all that difference appears to be made up at the cost of the therapist perspective, with their observations being captured less in this study (9%) than in Hanson et al. (18%). As the case has been made previously, with so much attention on the relationship, and in particular the working alliance, previous studies have found that the client and the observer perspectives on alliance are better predictors of outcome than the therapist's (Ardito & Rabellino, 2011). In terms of construct being measured across the studies, an additional trend stood out. Where perceived helpfulness of interventions appeared to peak during the Hanson et al. study (from 3% in Hill et al. to 19% in Hanson et al.), almost all interest in that construct disappeared in this study (falling to just 1.12%).

When looking broadly across the focus, perspective, and construct being measured, a clear trend appears. Hill et al.'s (1994) study showed the attention was primarily on the therapist and what they were doing and much of that data was captured using existing measures. In Hanson et al.'s (2004) study, attention shifted to the client's experience and role in therapy, with data more likely to be captured in novel ways. Here, in this study, capturing the client's perspective of the working alliance and therapeutic process using existing measures appears to be most favoured. A possible explanation for this is the ease of administration of tools such as the WAI, which is free to use, and is easily coded. These respective findings may also reflect researchers efforts to address the evolving zeitgeist; first by addressing efficacy of therapy by looking at what the therapist was doing, then on outcomes by evaluating the client experience, and now the relationship between process and outcomes, in particular from the client's perspective.

Reliability Reporting Practices

The final characteristic evaluated here involves reporting practices of reliability estimates. Reliability estimate monitoring appears to have undergone a significant change in the years since Hanson et al. (2004) and this study. Where Hanson et al. found that less than half of all articles included any mention of reliability estimates, this study shows the trend is to mention both pre-existing reliability estimates as well as calculations based on the research paper's own data. The most likely explanation of this is improved editorial standards following recommendations as outlined by Vacha Haase & Nilsson (1998). In this study, JCCP appears to be the slowest to make this change (42%), with more than twice the number of articles failing to mention either kind of estimate as the average (18%).

Limitations and Directions for Future Research

This study has at least nine notable limitations, including that this study evaluated only a sample of all available studies rather than all published studies during that time (N = 4,548). A future study could evaluate all articles in the four journals during the time period, thus allowing for precise proportions rather than an estimate. The second limitation was that a single researcher coded the bulk of the data, thus limiting the reliability of the findings. A future study could return to Hill et al. and Hanson et al.'s protocol where two judges coded all studies. Another approach would be to involve either expert process researchers, or coders who were highly trained in evaluating process research. Third, only basic descriptive statistics were calculated for this study; a future study could conduct inferential statistics to consider between group and sample differences.

Fourth, this study only evaluated the data quantitatively and post-positively. This quantitative approach inadequately captures the unique contribution of qualitative research (grouping most of these measures into "study specific" and "one off questions"), and articles that

may give important insights into the therapy process but were not designed around empirical research were not captured here. A future study could use a qualitative approach such as a thematic analysis to consider the contribution that non-empirical articles have to the body of process research. Given the quantitative structure of content analyses such as this, future studies using this format should be hypothesis driven, using either prevailing theories of change or existing research. The fifth limitation is attributed to the use of only four journals in this evaluation. Any generalizability to the zeitgeist of process research is inherently limited to only those studies that were actually published in these four journals. Rather than considering the contents of just four journals over a long time period, a future study may want to use broader capture methods in smaller time units. One suggestion is to use specific key words and capture articles produced every fifth year. Unlike Hill et al.'s (1994) analysis, this study evaluated only a random sample of published studies. It is possible that the proportion of studies may be different if the entire population of available articles were evaluated –as it was in the Hill et al.

Sixth, study and process measure characteristics were coded only for the subset of studies that were identified as *process* or *process-outcome* in the first round. It is possible that there were studies that did not appear to be about the process of therapy in the first round, but nonetheless included process measures, which would not have been reflected here. The findings here were presented in proportional, rather than absolute, form in order to allow for comparison. Thus, proportions for some findings may appear to be unusually large, or differences may be unusually small depending on the volume of studies included in the analysis. As noted above, a future study that included inferential statistics would address this. Seventh, this study was modeled after Hill et al. (1994) and Hanson et al. (2004), so the inherent limitations noted in their studies carry forward. As has been documented elsewhere, there is a lack of common definitions in the

field of process research, and so while this study was able to use pre-existing definitions to evaluate the types of studies, other researchers may have defined some characteristics differently. Two examples of this include the definition of the *primarily-white* race characteristic (defined here as 85% or more identified as white or Caucasian), or *therapist facilitative conditions* construct. The lack of common definitions in process research has been well documented in previous studies as well as in this one, and might be addressed with a purposeful program of research that stretches beyond teams of researchers; an example of a similar effort is modeled by the Society for the Exploration of Psychotherapy Integration (SEPI). Additionally, researchers should include codings to reflect the fine-grained distinctions between micro-processes, episodic/intermediate processes and macro-process variables (Horvath, 2016).

Eighth, participant characteristics, such as race, may have once been useful to evaluate the representativeness of the participant sample; the field has developed a more nuanced understanding of diversity and intersectionality, such as religious affiliation, SES, ability, or sexual orientation. A future study could use a mixed-methods or even a qualitative thematic analysis of participant demographics to understand what demographic characteristics researchers are collecting and how they attending to the representativeness of their sample. Alternatively, researchers using a quantitative approach could create additional demographics codes using recommendations such as those outlined in Nilson et al. (2007). Finally, this research format is limited in that it continues to reflect studies primarily involving correlations, in particular process-outcome correlations. Future studies should include designs and measures to capture causational factors, such as prior symptom course, the relative contribution of alliance to outcome, or other additional *third* variables that may have a role in the therapy process (Crits-Christoph et al., 2013). The process-outcome relationship could also benefit from more

researching using a mixed-methods approach, possibly one that involves interviewing recognized experts in the field. Additionally, future studies should also include a characteristic from Hill et al. (1994) but not reflected here, namely, whether the article's evaluated global or micro-processes as outlined by Horvath (2016).

Conclusion

The profile of a typical study in the last 15 years appears to involve process *and* outcome of individual therapy in a real setting, between an experienced therapist and an adult client who as been asked/recruited to participate. Further, the prototypical study likely involves asking clients to complete a single, previously-used process measure of their impression of the working alliance, which will be report reliability estimates for "data in hand."

Looking across studies, research that was produced in the 1980s and early 1990s focused primarily on therapists and their techniques and facilitative conditions using pre-existing measures (Hill et al., 1994). In the late 1990s and early 2000s, the attention shifted to the client, including their expectations and perceived helpfulness of interventions, using novel measurements (Hanson et al., 2004). Now, in the late 2000s and early 2010s, using existing measure to evaluate the client's perspective of the alliance and general process is most popular.

At first glance, it appears that more process research is being conducted now than when Hill et al. (1994) reported their findings. But it may be misleading to state that process research is alive and well. From these findings, process research may be coalescing around already well-established correlational findings, namely, that the client's perspective of the working relationship is a well-validated, easy to capture predictor of therapy outcome. This may be both a blessing and a curse to the scientist-practitioner model.

Practitioners are likely to be pleased with these findings: the samples are likely to be

representative of their own practice demographics, the most popular measures used easy to administer and are commercially available, they can be used regardless of theoretical orientation, and can be highly predictive of their client's likelihood of improvement. Producing research in ways that could easily be incorporated into a practitioner's routine would contribute to the practice-informed treatment model to which the field is aspiring. A study evaluating practitioner attitudes found that practitioners were highly sceptical of the applicability of research, with 46% reporting that they would rather conduct research than read about it (Safran, Abreau, Olgivie, & DeMaria, 2011). That same study found that when practitioners did conduct their own research (such as incorporating process measures in to their practices), over 90% found it helpful.

Scientists, on the other hand, may be dismayed at these findings. The reduction in measures that focused on client-only or therapist-only constructs likely speaks to the concerns that Horvath (2016), Mallinckrodt (2011), and Murdock (2011) all raised: that less programmatic process research is being done; meaning the field is losing out on novel, experimental, nuanced or causational research into essential components of the therapy process.

Is therapy process research in disarray, as suggested 45 years ago? While it appears that proportionally more research is being conducted than in earlier years, work is still needed to harmonize the field. In particular, integration in the field of process research appears to be key. A model such as SEPI would facilitate researchers in developing a common set of definitions, agree on the scope of the field, and set out a more programmatic approach to research. That integration at a local level has started with centres such as the McGill Psychotherapy Process Research Group, and other PRNs as outlined above. Another particularly valuable approach might involve interviewing recognized experts in process research; this would help both in setting out common definitions, as well as providing focus to the field of study.

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Appendix A

Table A10

Description of Study Type

Code	Name	Description
P	Process	Those studies that examined the within-session interaction in face-to-face treatment with therapists and clients. Treatment of any length (10 min to many years) included in sample. We included retrospective accounts of process only if they were specific cases rather than on general thinking about the process of therapy. We also included studies that measured satisfaction or evaluation of the treatment, because we assumed the researchers were evaluating what occurred in the therapy process. Include groups.
X	Process-Outcome	Examined at least one aspect of both process and outcome as defined above. Outcome studies in which a manipulation check was used to determine whether therapist interventions were implemented accurately were included as process-outcome studies because they studied some aspect of the therapy process even though it may not have been a major focus. Include groups
O	Outcome	Those studies that examined the global effects of treatment or changes that occurred as a result of treatment. As with process studies, therapy had to have been conducted in a face-to-face setting. Accordingly, studies in which interventions were delivered by means of audiotape or videotape or in which self-help interventions were studied were not included. Include groups. [Include predictions of outcomes]
R	Non-Empirical Process	Any article that does not present original data, but still discusses process
A	Analogue	Were those that investigated therapy process without actual face-to-face interaction between a therapist and client (e.g. by means of a transcript or audio- or videotaped excerpt of a real or simulated session). Must include description of the therapeutic interaction. Process & analogue --> process.
T	Other	Original empirical work on topics other than process or outcome.
n/a	Not applicable (i.e. erratum)	Articles that did not provide any original empirical work (like erratum, editorials, commentaries, rejoinders, etc.).

Appendix B

Search process

Completed on: May 16, 2016

1) PsychInfo 1987 – current
2) Select:
    a. 1 "journal of consulting and clinical psychology".jn.[results 3538]
    b. 2 “journal of counseling psychology".jn. [results 1678]
    c. 1 or 2 [5216]
    d. Additional limits: years 2000 – current [2721]
3) Export process
    a. Export to: Excel Sheet
    b. Custom fields: see Table B1
4) Export action
    a. Change range to show 1000 records at a time, select all
    b. Export each file to excel
    c. Rename “citations” tab to represent the record range (i.e. 1-1000)
    d. Add record range to “label” tab name
    e. Move both tabs to database file in Excel
5) Cleaning up database
    a. Move all data on to one tab in Excel, ensuring the columns align.

Completed on: June 21, 2016

1) PsychInfo 1987 – current
2) Select:
    a. 1 (psychotherapy or psychotherapy theory research practice training).jn. [results 2164]
    b. 2 “psychotherapy research".jn. [results 1093]
    c. 1 or 2 [3257]
    d. Additional limits: years 2000 – current [1827]
3) Export process
    a. Change range to show 1000 records at a time, select all
    b. Export to: Excel Sheet
    c. Custom fields: see attached
4) Export action
    a. Export each file to excel
    b. Rename “citations” tab to represent the record range (i.e. 1-1000)
    c. Add record range to “label” tab name
    d. Move both tabs to database file in Excel
5) Cleaning up database
    a. Move all data on to one tab in Excel, ensuring the columns align.

Table B11

Custom Field selection (Ovid)

☑ *ab*: Abstract	☐ *in*: Institution	☐ *ph*: Publication History
☑ *an*: Accession Number	☐ *ia*: Intended Audience	☑ *mo*: Publication Month/Season
☐ *ar*: Article ID	☑ *ip*: Issue/Part	☐ *ps*: Publication Status
☑ *au*: Author	☑ *jn*: Journal Name	☐ *pt*: Publication Type
☐ *ai*: Author ID	☑ *id*: Key Concepts	☐ *pu*: Publisher Information
☐ *st*: Book Series	☐ *lg*: Language	☐ *rv*: Reviewed Item
☐ *rf*: Cited References	☐ *lm*: Local Messages	☑ *so*: Source
☐ *cf*: Conference	☐ *lo*: Location	☐ *si*: Special Issue Title
☐ *cn*: Conference Note	☑ *md*: Methodology	☐ *ss*: Special Section Title
☐ *cp*: Copyright	☐ *nt*: Notes	☑ *sh*: Subject Headings
☐ *ca*: Corporate/Institutional Author	☐ *nr*: Number of Cited References	☐ *sv*: Supplemental Material
☐ *ch*: Correction Date	☐ *nm*: Numeric Month	☐ *sm*: Supplemental Material DOI
☐ *cq*: Correspondence Address	☑ *ou*: Open URL	☐ *tc*: Table of Contents
☑ *do*: Digital Object Identifier	☐ *ot*: Original Title	☐ *td*: Test DOI
☑ *dt*: Document Type	☐ *oc*: Other Publishers	☐ *tm*: Tests & Measures
☐ *ma*: E-Mail Address	☑ *ol*: Other Serial Titles	☑ *ti*: Title
☐ *ap*: First Parent Book Author	☑ *pm*: PMID	☐ *by*: Type of Book
☐ *fo*: Format Covered	☐ *pe*: Page Count	☐ *on*: UMI Order Number
☐ *gs*: Grant/Sponsorship	☐ *pg*: Pagination	☐ *up*: Update Code
☐ *ib*: ISBN	☐ *po*: Population Group	☑ *vo*: Volume
☐ *it*: ISSN Electronic	☑ *cc*: PsycINFO Classification Code	☑ *yr*: Year of Publication
☐ *is*: ISSN Print	☐ *dp*: Publication Date	

Additional selections:

- FTURL – full text URL
- MH – MeSH subject headings

- ORN – Ovid Result Number
- PG – page(s)

Appendix C

Table C12

Study Characteristic Codes

Type of Therapy	Location	Arrangement	Population status	Therapist Type	Client Cohort	Client Gender	Client Race
Individual	Private Practice	Real setting (unsolicited client)	Clinical (in patient)	Inexperienced/Early Career/Minimally Trained (Student)	Child (0-13)	Male-only	Primarily white
Group	Campus Counselling centre	Solicited client/Volunteer	Clinical (outpatient/diagnosis)	Experienced (Psychologist, Psychiatrist, SW)	Youth (14-end of secondary school)	Female-only	Mixed race
Indiv & Group	Community counselling centre	Combination (real and solicited)	Uni/College	Counsellor/ Therapist	Adult (post secondary-69)	Mixed gender	Race-specific
Family	Inpatient	Unspecified	Community	Paraprofessional (ie. Volunteer)	Elderly (70+)	Unspecified	Unspecified
Unspecified	Multi-site		Volunteer	Mix of therapists	Mixed cohort		
	Laboratory		Unspecified	Other	Unspecified		
	Unspecified			Unspecified			

Table C2

Process Measure Characteristics

Type (PM)	Perspective (PM)	Focus (PM)	Construct being measured	Process Topic
Study-specific	Therapist only	Client	Therapist (Social Influence)	Alliance
Previously Used	Client only	Therapist	Therapist (Facilitative Conditions)	Therapist intentions
	Supervisor Only	Relationship	Therapist (Techniques)	Client's perception of experience (not alliance)
	Observer only	Separate: client and therapist	Therapist (Intentions)	Treatment Adherence
	Therapist & client	Group	Therapist (Helpfulness of Interventions)	

Type (PM)	Perspective (PM)	Focus (PM)	Construct being measured	Process Topic
	Observer and therapist		Therapist (nonverbal behaviours)	
	Observer and client		Therapist (Adherence)	
	Observer, therapist & client		Therapist (Expectations)	
	Other		Therapist (Reactions)	
			Client (Experiencing)	
			Client (Behaviour)	
			Client (reactions)	
			Client (expectations)	
			Client (satisfaction)	
			Process	
			Control & Dominance	
			Alliance	
			Other (Other)	

Table C3

Interrater Reliability Estimates

0	Didn't provide or mention reliability estimate(s)
1	Provided or mentioned only citation of reliability estimate(s) (e.g., "see Horvath & Greenberg [1989])
2	provided and mentioned citation and reliability estimate(s) (e.g., "Horvath and Greenberg [1989]reported a reliability coefficient of .84 for the WAI total score.")
3	provided and mentioned citation and reliability estimate(s) of own study data (e.g.., "see Horvath & Greenberg [1989]. In our study, a reliability coefficient of .91 for the WAI total score was obtained in the adolescent sample.")
4	provided and mentioned citation and reliability estimate(s) of other study and own study. (e.g.,"Horvath & Greenberg [1989] reported a reliability coefficient of .84 for the WAI total score. In our study, a reliability coefficient of .91 for the WAI total score was obtained in the adolescent sample."
5	provided and mentioned only reliability estimate(s)of own study data (e.g., "In our study, a reliability coefficient of .91 for the WAI total score was obtained in the adolescent sample.")
n/a	example: qualitative evaluation

Appendix D

Trends in Study Types

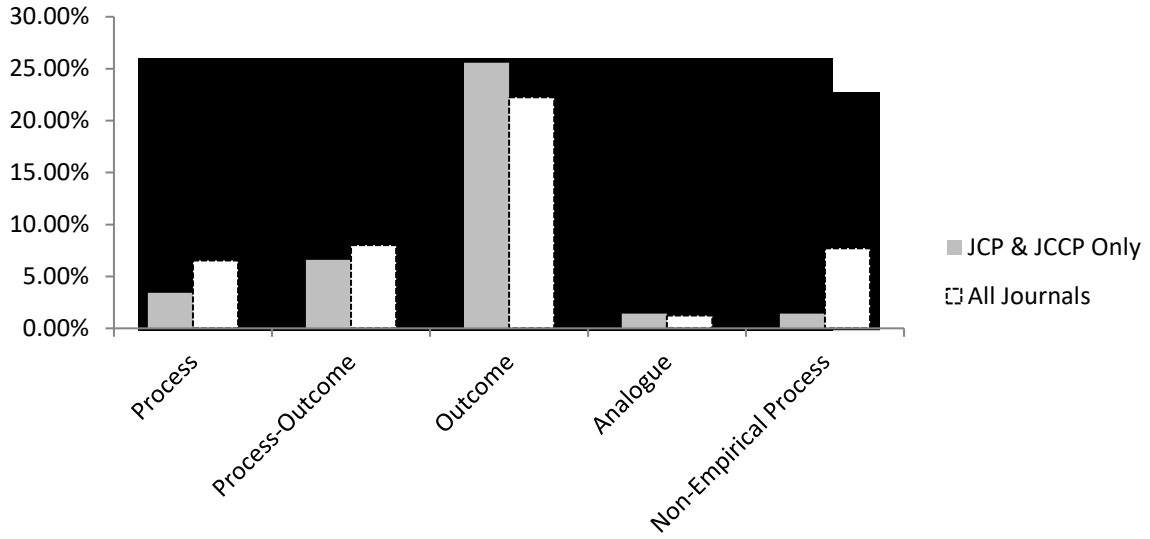

Figure D1. Proportion of Therapy Studies, 2000 – 2016. (JCP n = 274; JCCP n = 574; Psychotherapy n = 254; PR n = 273).

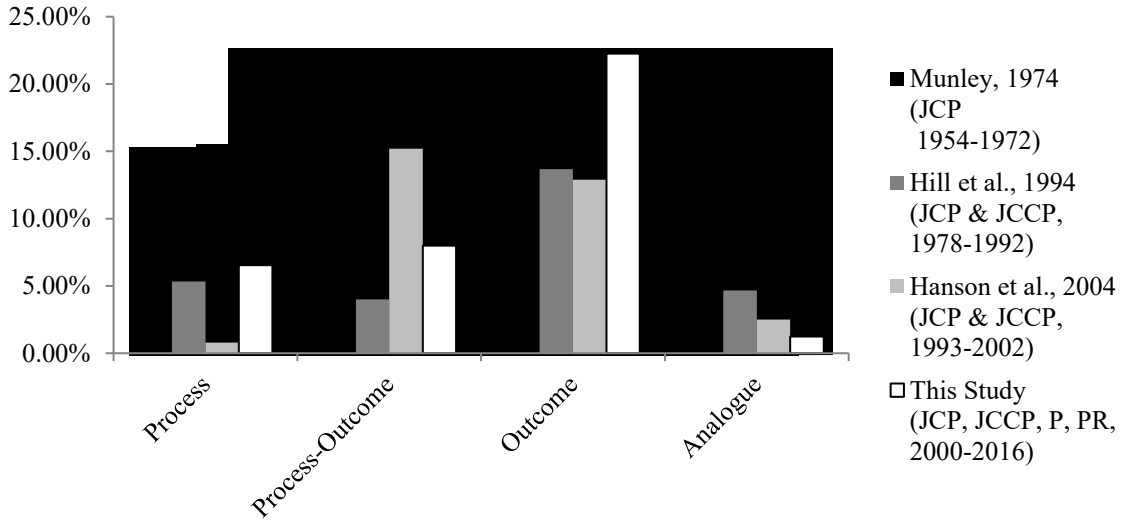

Figure D2. Trend of Process and Process-Outcome studies for JCP and JCCP Only. "All journals" result included for reference.

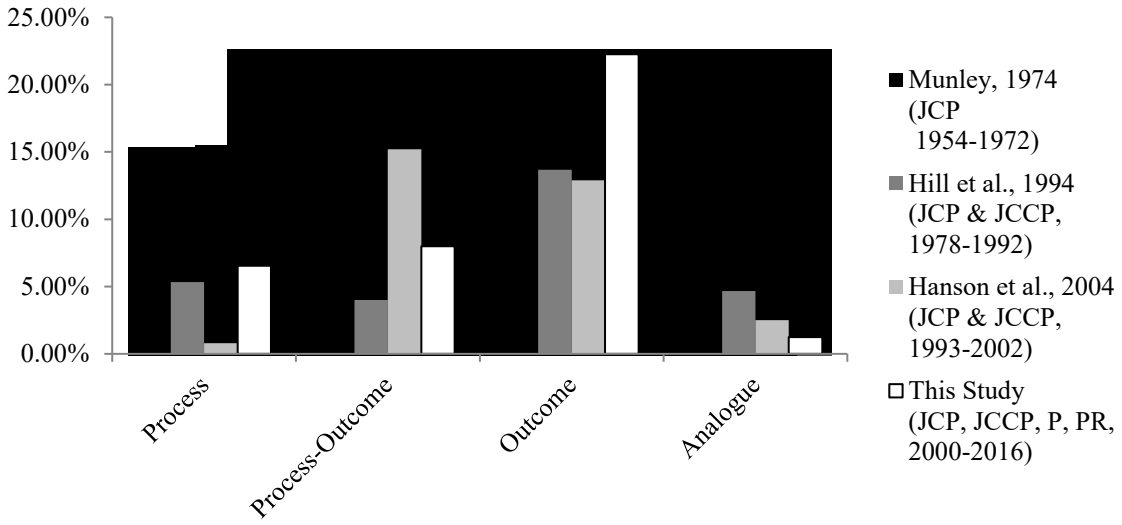

Figure D3. Trends in Research. Across four studies, Munley (1974), Hill et al, (1994), Hanson et al, (2004), and this study.

Appendix E

Table E1

Trends in Study Characteristics

	Munley, 1974 (JCP 1954-1972)	Hill et al., 1994 (JCP & JCCP, 1978-1992)	This Study (JCP, JCCP, P, PR, 2000-2016)
Modality of Therapy			
Individual	65.00%	78.50%	85.00%
Group	29.00%	15.40%	10.00%
Family	1.00%	6.10%	3.00%
Indiv & Group	6.00%		1.00%
Unspecified			1.00%
Arrangement			
Solicited client/Volunteer	56.00%		49.00%
Real setting (unsolicited client)		40.60%	44.50%
Unspecified			6.00%
Combination (real and solicited)			0.50%
Location			
Campus Counselling centre	16.00%		27.50%
Community counselling centre			27.00%
Unspecified			19.00%
Multi-site			14.00%
Inpatient	7.00%		5.50%
Private Practice	0.50%		4.00%
Laboratory			3.00%
Type of Client			
Community			45.50%
Clinical (outpatient/diagnosis)			38.00%
Clinical (in patient)	5.00%		6.00%
Unspecified			4.50%
Uni/College	47.00%		3.00%
Volunteer	12.00%		3.00%
Therapist Type			
Experienced (Psychologist, Psychiatrist, SW)	24.00%	36.20%	39.00%
Inexperienced/Early Career/Minimally Trained (Student)	32.00%	38.00%	22.50%

	Munley, 1974 (JCP 1954-1972)	Hill et al., 1994 (JCP & JCCP, 1978-1992)	This Study (JCP, JCCP, P, PR, 2000-2016)
Mix of therapists		25.10%	21.00%
Unspecified	44.00%	5.00%	16.00%
Paraprofessional (ie. Volunteer)			1.00%
Counsellor/Therapist			0.50%
Client Cohort			
Adult (post secondary-69)	84.50%		87.50%
Mixed cohort			3.50%
Unspecified			3.50%
Youth (14-end of secondary school)	11.00%		3.50%
Child (0-13)	3.00%		1.50%
Elderly (70+)			0.50%
Client Gender			
Mixed gender	40.00%	48.80%	77.00%
Female-only	7.00%	8.60%	16.00%
Unspecified	27.00%	27.00%	6.00%
Male-only	26.00%	4.70%	1.00%
Client Race			
Unspecified		86.70%	45.00%
Mixed race		7.30%	30.50%
Primarily white		5.70%	20.50%
Race-specific		3.00%	4.00%

Appendix F

Table F1

Comparison of process measure characteristics across studies

	Hill et al., 1994 (JCP & JCCP, 1978-1992)	Hanson et al., 2004 (JCP & JCCP, 1993-2002)	This Study (JCP, JCCP, P, PR, 2000-2016)
Proportion of New or old Measures	*n = 297*	*n = 122*	*n = 357*
New or one-off measures	41.8%	60.7%	32%
Study includes new or study-specific measure	59.3%	27%	68%
Perspective of Measures			
Client only		56.10%	52.10%
Observer only	48.80%	22.30%	30.25%
Therapist only		18.00%	8.68%
Therapist & client			7.56%
Observer and therapist			0.84%
Observer and client			0.56%
Focus of Measures			
Relationship	23%	15.80%	35.85%
Client	26%	49.60%	25.49%
Therapist	42%	31.60%	21.57%
Session	12%	3%	11.76%
Group		2.20%	4.20%
Separate: client and therapist			1.12%
Construct that is being measured			
Alliance	16.29%	11.80%	33.89%
Process			16.53%
Client (Behaviour)		0.8%	10.92%
Client (Experiencing)		12.6% (*)	8.40%
Therapist (Adherence)		6.30%	7.00%
Therapist (Facilitative Conditions)			5.60%
Client (expectations)			4.20%
Therapist (Techniques)		9.40%	3.64%
Client (satisfaction)			2.80%
Therapist (Reactions)			1.96%
Client (reactions)			1.40%
Therapist (Helpfulness	3.17%	19.70%	1.12%

	Hill et al., 1994 (JCP & JCCP, 1978-1992)	Hanson et al., 2004 (JCP & JCCP, 1993-2002)	This Study (JCP, JCCP, P, PR, 2000-2016)
of Interventions)			
Therapist (nonverbal behaviours)			1.12%
Therapist (Expectations)			0.84%
Therapist (Intentions)			0.56%