
What Is Evidence-Based Practice? A Survey of Psychotherapy Service Providers and Leaders in Psychology About Evidence-Based Practice in Psychology Qu'est-ce que la pratique fondée sur des données probantes? Sondage auprès de fournisseurs de services de psychothérapie et de chefs de file en psychologie au sujet de la pratique fondée sur des données probantes en psychologie

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ABSTRACT

Despite the increased move towards evidence-based practice (EBP), the attitudes towards EBP of psychotherapy providers and of influential leaders in psychology remain underexplored. An online survey was distributed to licensed Canadian psychologists and psychotherapists ($n = 684$) and leaders ($n = 32$) in psychology. Leaders were comprised of authors of influential taskforce documents and published reports on EBP in North America, and leaders of psychology regulatory bodies. The survey explored demographics, professional practice characteristics, and attitudes of respondents to questions on psychotherapy practice from the tenets of EBP. Overall, both samples were found attitudinally to be favourably receptive to EBP tenets, although notable differences emerged. Recommendations for continued research into EBP are provided.

RÉSUMÉ

Malgré la tendance actuelle en faveur de la pratique fondée sur des données probantes (PFDP), on a très peu étudié les attitudes qu'adoptent les fournisseurs de psychothérapie et les chefs de file de la psychologie à l'égard de la PFDP. On a donc distribué un sondage en ligne à des psychologues et psychothérapeutes canadiens agréés ($n = 684$) et à des chefs de file ($n = 32$) dans le domaine de la psychologie. Le groupe des chefs de file était constitué d'auteurs de documents de réflexion influents et de publications sur la PFDP en Amérique du Nord, ainsi que de leaders au sein d'ordres professionnels du domaine de la psychologie. Le sondage portait sur des données démographiques, les caractéristiques de la pratique professionnelle et sur les attitudes des répondants à des enjeux de la pratique de la psychothérapie selon les grands principes de la PFDP. Dans l'ensemble, les deux échantillons ont révélé une attitude favorable et réceptive aux principes de la PFDP, quoique des différences notables aient été observées. L'article formule des recommandations sur la poursuite des recherches sur la PFDP.

Evidence-based practice (EBP) is routinely defined as encompassing the tripartite components of the best available research, clinical expertise, and patient characteristics (DiMeo, Moore, & Lichtenstein, 2012; Goodheart, 2006; Institute of Medicine, 2001; Lee & Hunsley, 2015). Numerous organizations in the health professions (e.g., Canadian Task Force on Preventive Health Care, 2003; Institute of Medicine, 2001), the Canadian Psychological Association Task Force on Evidence-Based Practice of Psychological Treatments (CPA-EBP, 2012), and the American Psychological Association Presidential Task Force on Evidence-Based Practice (APA-EBP, 2006) have created taskforces and published reports that define and promote EBP. The CPA and APA statements on EBP (i.e., CPA-EBP, 2012, and APA-EBP, 2006) also refer to a tripartite model that includes the best available research, clinical expertise, and client preferences, culture, and characteristics.¹

Regarding the best available research, the APA and CPA taskforces (referring to APA-EBP, 2006, and CPA-EBP, 2012) were clear about the relative merits of multiple research designs, depending on the clinical question. Both taskforces delineated that the best available research ideally comprises high internal and high external validity, although the CPA was explicit about a hierarchy of evidence drawn from different research designs. For the component of client preferences, culture, and characteristics, both taskforces emphasized that clinicians ought to be sensitive to such client characteristics as the needs, values, treatment preferences, cultural background, and goals of clients, but they remained vague on how one ought to prioritize these client characteristics in practice.

Both taskforces also affirmed that clinical expertise is a crucial component of EBP by ensuring the ongoing monitoring of client progress, and the flexibility to change treatments and assessments if client progress is not being made. Related to this, while the CPA taskforce defined clinical expertise as a component of EBP, the APA taskforce viewed it as incorporating the best available research with clinical information on the patient while attending to patient characteristics in delivering therapeutic services in line with patient goals. It construed this expertise as competencies in assessment, systematic case formulation, diagnostic judgment, and treatment planning; in clinical decision making, implementing treatment, and monitoring patient progress; in interpersonal skills; in reflexivity (of biases and heuristics) and development of skills; in evaluating and using research; in appreciating individual, cultural, and social contexts of patients; in securing resources to enhance treatment effectiveness; and in establishing a “coherent rationale for clinical strategies” (APA-EBP, 2006, p. 276).

Despite such initiatives, issues remain in the promotion of EBP in psychology, as there are both perceived advantages and disadvantages to EBP. Of the advantages, Huppert, Fabbro, and Barlow (2006) surmised that if clinical psychologists fully adopt an EBP for psychological treatments, they may well experience more favourable results in securing status and remuneration commensurate with that of psychiatrists. Another advantage is to help bridge what has been shown as a science-practice gap regarding implementing EBP treatments within the U.S.

(e.g., Kazdin, 2008; Nunez, Poole, & Memon, 2003) and within Canada (e.g., Tasca, Grenon, Fortin-Langelier, & Chyurlia, 2014; Tasca et al., 2015). Indeed, practitioners have been found often to lack the knowledge to understand the results of research fully (Hayes, 2005).

On the other hand, perceived disadvantages of EBP (see also Maier, 2012) include: its potentially hefty cost implications to implement into healthcare (Hayes, 2005), that many clinicians in private practice find it hard to dedicate time to attend EBP workshops, and that EBP can overshadow approaches preferred by clinicians (Stout, 2005). In addition to this, specific, salient aspects of EBP have been vigorously discussed. These range from matters over the real-world application of EBPs, influenced by earlier discussions of the effectiveness of psychotherapy (e.g., Eysenck, 1952; Seligman, 1995, 1996), the contentious matter over what constitutes evidence on which to base EBPs (Bohart, 2005; Bower & Gilbody, 2010; Goldfried, 2013; Tanenbaum, 2006), and epistemological and paradigmatic questions about the positivist approach of empirical research as applied to the practice of psychology (Kuhn, 1962; Ponterotto, 2005). There also has been confusion over differences between EBP and related concepts such as empirically supported treatments (ESTs; see Messer, 2004; Roberts & James, 2008; Schlosser & Sigafos, 2008).²

Notwithstanding the publication of these reports and other initiatives to promote EBP, it remains unclear whether clinicians have the critical skills to access, assess, and apply pertinent scholarly literature to the selection of psychotherapy interventions (Drapeau & Hunsley, 2014). Researchers have similarly suggested that mental health professionals are not quite ready to embrace EBP, likely because of a paucity of clear-cut definitions of what exactly it encompasses, of the foregoing disadvantages, and of questions about how EBP should be applied in practice (e.g., Lilienfeld, Ritschel, Lynn, Cautin, & Lutzman, 2013; Spring, 2007). This has led some scholars to conclude that EBP should be construed as more of an abstract concept (Westen & Bradley, 2005) that aims to inform the general decision making of clinicians (Maier, 2012) rather than as a true approach to service delivery. Indeed, while aspirational, EBP has been criticized for being less clear on how exactly it should be applied in practice (Satterfield et al., 2009).

Surprisingly, very few studies have explored the attitudes of psychotherapy providers towards EBP as applied to their practices. Exceptions include a study by DiMeo et al. (2012), who administered a survey to community children's mental health providers across the U.S. on their perceived level of knowledge of EBP and perceived advantages and disadvantages of using EBP. DiMeo et al. found that most practitioners reported confusion over the difference between EBP and evidence-based treatments. Similarly, Luebbe, Radcliffe, Callands, Green, and Thorn (2007) found, in a large web-based survey of clinical psychology graduate students from the U.S. and Canada, that only 3.7% of respondents (of $n = 1,195$) correctly provided the three components to the definition of EBP.

Of those studies that exist in Canada, most relied on small sample sizes. For example, one study found that among 52 Calgary therapists who regularly treated

clients with eating disorders, approximately 39% reported research and 60% reported (clinical) experience on an approach's effectiveness as the reason for using their primary therapeutic approach (von Ranson & Robinson, 2006). In another study, von Ranson, Wallace, and Stevenson (2013) found that among 118 clinicians who treated eating disorders, besides clinical experience on the effectiveness of an approach (81.4%), other principal reasons for using their primary therapeutic approach included its consistency with their theoretical orientation (83.1%), its compatibility with their clinical style (78.8%), and its flexibility to meet the needs of clients (70.3%). Despite these few studies and attempts by organizations in psychology to define EBP, it remains unclear to what extent clinicians genuinely understand what constitutes EBP, and to what extent they endorse the CPA and APA's definition of EBP. The lack of research in this area is concerning and hinders efforts to promote EBP in a manner that sits well with practitioners.

Consequently, this study aimed to investigate, from a national perspective, the attitudes specific to EBP among psychotherapy providers and leaders in psychology. For this study, the terms *psychotherapy service provider* and *psychotherapist* are used interchangeably and refer to a mental health professional who was delivering psychotherapy services as a psychotherapist or psychologist. In this study, moreover, leaders were comprised of authors of influential taskforce documents and published reports on EBP in North America, and of board members of psychology regulatory bodies. Notably, leaders in the field set standards, have an impact on clinical practice, and are influential to the adoption of innovative practices, as espoused in such theories as Rogers' (2003) diffusion of innovations. This is another impetus for comparing the attitudes between psychotherapy providers and leaders.

As such, this study aimed to fill this empirical gap in the literature on EBP and to discern any similarities and differences in attitudes of EBP tenets, as applied to psychotherapy practices, between licensed psychologists and psychotherapists in Canada and leaders in the field. The first phase of this study involved surveying these attitudes among a large Canadian sample of psychotherapy service providers; the second phase focused on surveying a comparatively smaller sample of leaders in psychology. Both phases of this study received ethical approval from the McGill Research Ethics Board.

PHASE I: PSYCHOTHERAPY SERVICE PROVIDERS AND EBP

The Survey

Survey questions were extracted from the CPA (CPA-EBP, 2012; Dozois et al., 2014) and APA (APA, 2005; APA-EBP, 2006) taskforce documents and published reports, by iteratively reading them to identify central EBP concepts. Namely, salient phrases from these published reports were extracted, elaborated on, and transposed into clear statements that led to survey questions. Two graduate-level researchers reviewed all documents independently, with a working definition of EBP as encompassing the best available research; client preferences, culture, and characteristics; and clinical expertise, and then met to establish consensus. A

senior clinical researcher and clinician verified all statements for their clarity and adequacy of capturing EBP concepts. A draft survey was piloted with 12 clinicians, then revised and translated into French, and then piloted again in both French and English.

Survey questions comprised 14 statements on EBP tenets, on each of which respondents indicated to what extent they practiced in a way congruent with the statement (“I do...”), to what extent clinicians should practice in a way congruent with the statement (“Clinicians should...”), and to what extent other clinicians do practice in a way accordant with the statement (“Other clinicians do...”; see Table 1). As prior research indicates that mental health providers overestimate their skills compared to their peers (Walfish, McAlister, O’Donnell, & Lambert, 2012), this study asked respondents not only their attitudes towards themselves but also towards what other clinicians *should* and *do* in practice. The “I do” statements gauged the EBP tenet of clinical expertise, namely agreement with competencies of expertise by the APA (with overlap of the CPA) taskforce of delivering effective psychotherapy. Competencies included monitoring patient progress; treatment planning and implementation, via staying abreast of research, which relates to skills acquisition; evaluating and using research; appreciating individual, cultural, and social contexts of the patient and adapting treatments to these; securing resources to enhance treatment effectiveness; and establishing a solid basis for clinical strategies (APA-EBP, 2006).

Chiefly, clinical expertise is required to integrate the other components of EBP and is seminal to all clinical activities. Thus, some statements in Table 1 capture components of the best available research and patient preferences/characteristics by the APA taskforce; however, as each statement was prefaced by the anchor *in my opinion, in practice, when identifying and selecting psychotherapy interventions*, each further captures the clinical application of these expert competencies to effect positive therapeutic outcome.

Parenthetically, the statement “possess strengths in designing and conducting research studies that can guide EBP” is not construed as a prerequisite to expertise by the APA taskforce but was included as an exploratory variable. This study also viewed the statement to “pay attention to factors related to the clients’ development and life stage” as overlapping with clinical expertise, besides patient preferences and characteristics as per the APA, given the clinical skill in diagnosis to attend developmentally to clients’ life stages. Finally, the last statement in Table 1, “ensure clients understand costs/benefits of different psychotherapy modalities for their presenting problem,” was conceptualized as relating both to patient preferences and characteristics, as per the APA, and to clinical expertise in helping the client understand these costs/benefits via relating them empathically and duly to the client’s treatment engagement.

Seven other statements gauged agreement with a variety of precepts concerning EBP. Three measured patient preferences and characteristics; the next three were more generalist statements on EBP related to such therapeutic aspects, albeit relevant to the patient’s well-being, as effective psychological practice, promoting

Table 1
Mean Attitudes to "I Do," "Clinicians Should," and "Other Clinicians Do" Statements on Clinical Expertise, on a 5-Point Likert Scale, Across Both Samples

Question Stem: <i>In my opinion, in practice, when identifying and selecting psychotherapy interventions...</i>	I do...		Clinicians should...		Other clinicians do...		I do...		Clinicians should...		Other clinicians do...	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Statement:												
Consider specific client characteristics	*4.63	*.53	*4.70	*.54	*3.85	*.70	4.50	.84	4.75	.44	3.94	.67
Consider specific client cultural backgrounds	*4.41	*.62	*4.60	*.56	*3.72	*.71	4.44	.56	4.59	.80	3.69	.64
Consider specific client treatment preferences	4.18	.73	*4.26	*.73	*3.61	*.71	4.19	.64	4.31	.74	3.66	.75
Monitor and evaluate the services provided to (my) their clients throughout treatment using standardized tools for outcome monitoring or progress tracking	*3.17	*1.17	3.77	1.10	*2.88	*.82	3.56	1.22	4.00	1.16	2.75	.76
(Stay) continually be informed by research evidence so as to select interventions that maximize the chance of benefit, minimize the risk of harm, and deliver the most cost-effective treatment	*4.11	*.73	4.35	.82	*3.41	*.76	4.38	.61	4.53	.72	3.19	.82
Critically evaluate peer-reviewed scientific literature, recognizing both the applied value and the limitations of current knowledge	*4.04	*.82	*4.42	*.69	*3.26	*.80	4.22	.71	4.53	.62	3.09	.89

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Question Stem:

Statement:	I do...		Clinicians should...		Other clinicians do...		I do...		Clinicians should...		Other clinicians do...	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Possess strengths in designing and conducting research studies that can guide EBP	*3.48	*1.09	*3.32	*1.03	*3.06	*.86	4.03	.74	3.16	1.11	3.03	1.00
Possess strengths in understanding research studies that can guide EBP	*4.20	*.78	*4.33	*.75	*3.47	*.82	4.53	.51	*4.38	*.83	3.41	.80
Consider clients' worldviews and values	*4.59	*.52	*4.62	*.54	*3.86	*.74	4.59	.56	4.72	.46	*4.03	*.54
Consider clients' goals	*4.74	*.44	*4.77	*.43	*4.04	*.76	*4.72	*.58	*4.84	*.37	4.28	.73
Consider clients' preferences for treatment	*4.15	*.69	*4.16	*.72	*3.67	*.71	4.25	.57	*4.38	*.55	3.97	.70
Consider clients' religious beliefs	*4.18	*.76	*4.23	*.71	*3.60	*.73	*4.13	*.66	4.16	.68	3.72	.63
Pay attention to factors related to the clients' development and life stage	*4.62	*.53	*4.68	*.48	*3.90	*.77	4.66	.55	4.75	.44	3.94	.72
Ensure clients understand costs/benefits of different psychotherapy modalities for their presenting problem	*4.11	*.82	*4.36	*.72	*3.52	*.81	4.00	.72	*4.25	*.72	3.34	.87

Note. For psychotherapy providers, all but three questions had missing responses (marked with an*), for which multiple imputed values were calculated and which ranged from $n = 1$ to $n = 24$ cases. For leaders, the seven questions with missing responses (indicated with an*) had either one or two missing cases, in exchange for which multiply imputed values were provided. Missing values were imputed via multiple imputations combining the expectation maximization method of the Bayesian Hierarchical classification model (EM-B algorithm), by using the Amelia II package on RStudio (Honaker, King, & Blackwell, 2011). For each missing data point, the median estimate from five imputed data sets produced by the EM-B algorithm was selected. Although a visual inspection of Q-Q plots and histograms revealed many negatively skewed attitudes for these questions across both samples, the means are reported as most representative of the views of all respondents per sample. M = mean; SD = standard deviation.

public health, and improving outcome. The last statement was an access question to the scholarly literature pertaining to effective practice (Table 2; all precepts were mainly from the APA taskforce). All the foregoing survey questions used 5-point, Likert-scale anchors (*strongly disagree, disagree, neither, agree, strongly agree*), with an option to indicate if a respondent was unfamiliar with the concept addressed in a question.

Table 2
Mean Attitudes on Other EBP Likert-Scale Statements, per Sample, Concerning Patient Preferences, Culture, and Characteristics and EBP More Generally

Question:	Rate the extent to which you agree with the following statements.			
	<i>Psychotherapy Providers</i>		<i>Leaders in Psychology</i>	
Statement:	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Cross-diagnostic client characteristics, such as personality traits or constellations, moderate the impact of empirically tested interventions	4.14	.81	*4.16	*.57
Interventions that have been widely tested in the majority population can be readily used with clients from different ethnic or socio-cultural backgrounds	2.65	.96	2.78	1.10
Clinical manifestations, such as co-morbidity and polysymptomatic presentations, moderate the impact of interventions	4.35	.72	*4.50	*.51
EBP is important in promoting effective psychological practice	4.22	.91	*4.38	*.98
EBP is important in promoting public health	4.23	.91	*4.38	*.94
EBP improves psychotherapy outcome	4.08	.97	*4.31	*1.15
It is difficult for clinicians in private practice to have access to scholarly literature and research	3.09	1.34	*3.03	*1.18

Note. For psychotherapy providers, all statements had occurrences of missing responses, which ranged from $n = 7$ to $n = 21$ cases, for which multiply imputed values were calculated. For leaders, questions with missing values (marked with an*), for which multiply imputed values were calculated, each had only one or two missing responses. Although a visual inspection of Q-Q plots and histograms revealed a preponderance of negatively skewed attitudes for these questions across both samples, the means are reported, given their representativeness of all viewpoints of the participants and consistent with similar studies in this literature reporting the means of attitudes. *M* = mean; *SD* = standard deviation.

Three final questions used a sliding scale. Two involved rating the extent clinicians *should*, and to what extent respondents *do*, rely on eight different knowledge sources (from 0, *not relevant*, to 100, *very relevant*) to inform their practice (Table 3; knowledge sources were from the knowledge hierarchy of the CPA taskforce). Six of the eight knowledge sources focused on the best available research; the last two, on components of EBP more in line with clinical expertise as discussed in the EBP literature. The last sliding-scale question involved rating the importance of 11 research designs for EBP, as construed by the APA taskforce (0 to 100 = *very significant*; Table 4); these focused on the EBP component of best available research.

Table 4
Mean-Rated Importance of Various Research Designs for EBP Across Both Samples

Question:	Rate the following research designs in regard to their contribution to EBP (100 = very significant contribution).			
	<i>Psychotherapy Providers</i>		<i>Leaders in Psychology</i>	
Research Design:	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Clinical observation (including individual case studies)	60.09	25.62	53.88	22.88
Basic psychological science	60.59	22.86	57.22	20.30
Qualitative research	61.32	24.09	60.30	21.03
Systematic case studies	62.74	21.44	61.32	18.44
Single-case experimental designs	55.69	23.08	62.13	17.87
Public health research	62.09	20.74	65.69	14.03
Ethnographic research	58.86	22.91	58.51	17.61
Process-outcome studies	71.90	19.10	75.38	16.36
Studies of interventions as delivered in naturalistic settings (i.e., effectiveness research)	72.95	18.78	78.15	14.60
Randomized clinical trials and their logical equivalents (efficacy research)	75.46	20.03	76.88	22.34
Meta-analyses	80.84	17.22	83.60	14.54

Note. For psychotherapy providers, all 11 research designs had missing responses, which ranged from $n = 29$ to $n = 145$ cases, for which multiply imputed values were provided. Similarly, for leaders, all 11 research designs had missing responses, which ranged from $n = 2$ to $n = 6$ cases, for which multiply imputed values were calculated. Although a visual inspection of Q-Q plots and histograms revealed a preponderance of negatively skewed attitudes for these questions across both samples, means are reported as most representative of the viewpoints of respondents across both samples. *M* = mean; *SD* = standard deviation.

Table 3

Mean-Rated Importance of Various Knowledge Sources for EBP, on “Clinicians Should” and “You Do” Statements, Across Both Samples

Question:	Indicate to what extent, when identifying and selecting psychotherapy interventions ...															
	Clinicians should rely on...				You do rely on...				Clinicians should rely on...				You do rely on...			
	Psychotherapy Providers		Leaders in Psychology		Psychotherapy Providers		Leaders in Psychology		Psychotherapy Providers		Leaders in Psychology		Psychotherapy Providers		Leaders in Psychology	
Question stem:	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Knowledge Source:																
Non-peer-reviewed literature (e.g., book)	51.47	23.74	53.27	26.61	*48.74	*23.06	*56.66	*25.86								
A group of studies that together have high internal validity	67.31	20.88	58.58	23.24	64.88	21.01	*63.08	*22.72								
A group of studies that together have high external validity	72.59	19.02	62.88	21.94	74.19	15.00	*65.31	*19.45								
A group of studies that together have high internal and high external validity	83.08	16.81	71.32	22.29	88.69	11.19	*74.95	*19.81								
Published expert consensus built on structured and formal procedures (e.g., Delphi technique)	70.73	22.01	63.66	24.48	*71.22	*22.57	*67.49	*23.86								
Systematic knowledge syntheses (meta-analyses or another form of replicable systematic review of the scientific literature)	80.62	19.22	75.81	20.78	82.41	16.54	*74.85	*17.81								
Personal opinion and clinical intuition	59.65	24.97	65.86	24.40	*53.31	*21.19	*61.67	*21.17								
Prior professional experience	70.22	20.52	73.70	20.22	*62.77	*24.79	*66.09	*22.39								

Note: For psychotherapy providers, all questions had the occurrence of missing responses, which ranged from $n = 4$ to $n = 191$ cases, for which multiply imputed values were calculated. For leaders, all questions, except for four with complete cases, had missing responses (with $n = 5$ or fewer cases, indicated with an *), for which multiply imputed values were calculated. Although a visual inspection of Q-Q-plots and histograms revealed a preponderance of negatively skewed attitudes for these questions across both samples, means are reported as most representative of the viewpoints. M = mean; SD = standard deviation.

In sum, respondents were surveyed on their perceptions of (a) the extent that they *do* practice according to EBP tenets of clinical expertise; (b) the extent clinicians *should* practice from these tenets; (c) the extent that their colleagues actually *do* practice from these tenets; (d) their agreement with salient statements regarding patient preferences, culture, and characteristics and EBP more generally; and (e) their perceived importance of research designs for EBP.

Participants

Detailed demographic data can be found in Table 5. The survey was completed by 684 psychotherapy service providers, of whom 405 completed the English survey and 279 completed the French survey. Most respondents were female (71.6%), and the modal age range was between 31 and 40 years old (30.0%). The modal years of psychotherapy experience for respondents was 21 or more years (29.5%). More respondents were in private practice (52.8%) and urban settings (83.8%). Regarding the field in which they earned their highest degrees, the majority trained in the fields of clinical (62.9%) and counselling (16.8%) psychology.

The modal primary therapeutic approach was cognitive and/or behavioural therapy (CBT; 48.8%), and the modal secondary therapeutic approach was humanistic/existential/person-centred therapy (31.3%). Of the primary province or territory in which respondents practiced psychotherapy in Canada, the majority were situated in Québec (42.0%) and Ontario (19.3%). Of the 815 respondents who completed at least the first EBP statement of the survey, 684 finished at least 80% of survey questions and were thereby retained for further analyses.

Table 5
Demographic and Professional Practice Characteristics of Psychotherapy Service Providers
(*n* = 684)

Question	<i>n</i>	%	Question	<i>n</i>	%
Gender			Practising clinically as a		
Male	187	27.3	Psychologist	565	82.6
Female	490	71.6	Psychotherapist	119	17.4
Prefer not to disclose	7	1.0	Main province or territory		
Age range			of psychotherapy practice		
20–30	29	4.2	Québec	287	42.0
31–40	205	30.0	Ontario	132	19.3
41–50	170	24.9	British Columbia	63	9.2
51–60	136	19.9	New Brunswick	39	5.7
61–70	116	17.0	Manitoba	36	5.3
70+	28	4.1	Nova Scotia	36	5.3
Field of Highest Degree			Alberta	33	4.8
Clinical Psychology	430	62.9	Saskatchewan	27	3.9
Counselling Psychology	115	16.8	Newfoundland/Labrador	13	1.9

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Question	<i>n</i>	%	Question	<i>n</i>	%
Field of Highest Degree (<i>cont.</i>)			Province or territory (<i>cont.</i>)		
Educational Psychology	22	3.2	Prince Edward Island	6	0.9
School Psychology	22	3.2	Nunavut	5	0.7
Social Work	20	2.9	Northwest Territories	3	0.4
Guidance Counselling	10	1.5	Yukon	1	0.1
Marriage/Family Therapy	6	0.9	Across two provinces	3	0.4
Other	59	8.6	Highest Degree		
Primary Therapeutic Approach			Doctorate	365	53.4
Psychoanalytic/psychodynamic	97	14.2	Masters	307	44.9
Humanistic/existential/person-centered	162	23.7	Bachelors	12	1.8
Cognitive and/or Behavioural	334	48.8			
Systemic/Systems	27	3.9			
Other	63	9.2			
Secondary Therapeutic Approach					
Psychoanalytic/psychodynamic	66	9.6			
Humanistic/existential/person-centered	214	31.3			
Cognitive and/or Behavioural	172	25.1			
Systemic/Systems	84	12.3			
Other	83	12.1			
Years of Professional Psychotherapy Experience					
Less than 1	16	2.3			
1–5	124	18.1			
6–10	111	16.2			
11–15	120	17.5			
16–20	108	15.8			
21+	202	29.5			
Primary setting of practice					
Private Practice	361	52.8			
University	31	4.5			
Hospital/community mental health centre	190	27.8			
School	32	4.7			
Other	70	10.2			
Predominantly practice in a(n)					
Urban setting	573	83.8			
Rural setting	108	15.8			

Note. Three respondents neither indicated if they practiced in an urban or rural setting, nor their years of professional experience. One respondent did not indicate a primary therapeutic approach. $N = 65$ psychotherapy providers did not indicate a response for their secondary therapeutic approach.

Procedure

Data collection occurred between November 2016 and April 2017. The colleges and associations in psychology and counselling/psychotherapy across Canada were contacted ($n = 23$ organizations), requesting that they forward a hyperlink to the online survey to their members. Moreover, the study was advertised via CPA's R2P2 portal, with a hyperlink to both English and French surveys. Thus, a non-probability, convenience sample of participants was recruited.

Interested participants accessed the hyperlink to the consent form, and those who completed the survey were invited to enter their email address for a chance to win an iPad mini. Multiply imputed values were used for missing responses on EBP survey statements (Honaker, King, & Blackwell, 2011; Meyers, Gamst, & Guarino, 2017). As the APA was influential to psychology in Canada by accrediting graduate psychology programs until 2015, to control for a potential confound of organizational influence on providers' attitudes towards EBP, both APA and CPA documents and reports on EBP were perused. It is difficult to ascertain the representativeness of this sample; however, the percentages of psychotherapy providers who answered this survey align most generally with those of practitioners by province done in a national study by Hunsley, Ronson, and Cohen (2013): more respondents were from Québec followed by Ontario, fewer from the Western provinces, and fewer still from the Eastern provinces.

RESULTS OF PHASE I (PSYCHOTHERAPY PROVIDERS IN PSYCHOLOGY AND EBP)

Preliminary Survey Questions on Critical Scientific Understanding and Productivity

On one survey question that asked respondents to "rate your ability in critically understanding scientific research," on a scale from 0 (*weak*) to 100 (*strong*), psychotherapy providers scored rather strongly ($M = 76.65$, $SD = 15.51$). On another, counterpart question that asked respondents "within the last five years, have you been involved in any research activities in which a peer-reviewed scientific publication has resulted (i.e., you were principal or co-author)," slightly more than one-fourth of respondents ($n = 175$, 25.6%) responded affirmatively.

Attitudes Towards Clinical Expertise in Self and Other Clinicians

Overall, attitudes towards self ("I do") and towards what "other clinicians should" be doing in clinical practice culminated in means that exceeded a value of 4, which underscores not only the agreeable views towards these many EBP tenets but also that psychotherapy providers presumably heed these precepts in practice (see Table 1 for detailed results). Crucially, respondents rated their practices as following these EBP tenets of expertise more favourably than those of what other clinicians do. Another general pattern is that for the "I do" statements, respondents unequivocally did well as per their mean attitudes, but they also believed, on several statements, that clinicians *should* be doing better. Of the "I do" state-

ments, the highest mean ratings were accorded to the statements, from highest to lowest, “to consider clients’ goals” ($M = 4.74, SD = .44$), to “consider specific client characteristics” ($M = 4.63, SD = .53$), to “pay attention to factors related to the clients’ development and life stage” ($M = 4.62, SD = .53$), and to “consider clients’ worldviews and values” ($M = 4.59, SD = .52$). Put simply, psychotherapy providers were quite in agreement with attending to characteristics of the client in fulfilling their expert competencies of treatment planning and of appreciating individual, cultural, and social contexts of the client.

Finally, of the mean attitudes of psychotherapy providers, those below a value of 4 are remarkable, as they suggest that respondents were either indifferent to these statements if not leaning towards disagreeing attitudes. Particularly, the statements that “I do monitor and evaluate the services provided to my clients throughout treatment using standardized tools for outcome monitoring or progress tracking” ($M = 3.17, SD = 1.17$) and “I do possess strengths in designing and conducting research studies that can guide EBP” ($M = 3.48, SD = 1.09$) constituted lower means compared to the other “I do” statements. Similarly, these same two statements were found to have means lower than 4 when asked with the “clinicians should” question stem: “clinicians should monitor and evaluate the services provided to their clients throughout treatment using standardized tools for outcome monitoring or progress tracking” ($M = 3.77, SD = 1.10$) and “clinicians should possess strengths in designing and conducting research studies that can guide EBP” ($M = 3.32, SD = 1.03$). Last, all the “other clinicians do” statements, except for the one on “other clinicians do consider clients’ goals” ($M = 4.04, SD = .76$), had means below 4, or mean attitudes that hovered towards a neither attitude.

Attitudes More Specific to Patient Preferences, Culture, and Characteristics and EBP More Generally

Consult Table 2 for the attitudinal means of psychotherapy providers on statements more germane to patient preferences, culture, and characteristics and to EBP more generally. Commendably, psychotherapy providers were, on average, in agreement with these tenets, which coincides with the preceding results that they attend duly to the client in executing competencies of clinical expertise. In line with the APA taskforce on EBP, psychotherapy providers were most in agreement, respectively, that “clinical manifestations, such as co-morbidity and polysymptomatic presentations, moderate the impact of interventions” ($M = 4.35, SD = .72$), that “EBP is important in promoting public health” ($M = 4.23, SD = .91$), that “EBP is important in promoting effective psychological practice” ($M = 4.22, SD = .91$), that “cross-diagnostic client characteristics, such as personality traits or constellations, moderate the impact of empirically tested interventions” ($M = 4.14, SD = .81$), and that “EBP improves psychotherapy outcome” ($M = 4.08, SD = .97$). In the expected direction, they had a relatively lower rated attitude (in the disagreeing range) that “interventions that have been widely tested in the majority population can be readily used with clients from

different ethnic or socio-cultural backgrounds” ($M = 2.65$, $SD = .96$). Last, on average, there was a more neutral attitude towards whether “it is difficult for clinicians in private practice to have access to scholarly literature and research” ($M = 3.09$, $SD = 1.34$), reflecting the heterogeneity of psychotherapy providers in having access to this scholarship.

Attitudes Towards Knowledge Sources Central to EBP

Consult Table 3 for the mean-rated importance by psychotherapy providers of various knowledge sources. Consistent with the views of CPA’s taskforce on EBP (Dozois et al., 2014), psychotherapy providers had the highest mean rating for whether “clinicians should rely on a group of studies that together have high internal and high external validity” ($M = 83.08$, $SD = 16.81$). Similarly, “systematic knowledge syntheses” are placed at the top of the hierarchy of research evidence for EBP (Dozois et al., 2014), for which psychotherapy providers rated high importance on whether clinicians should ($M = 80.62$, $SD = 19.22$), and whether they do ($M = 75.81$, $SD = 20.78$), rely on these. Vis-à-vis the counterpart “you do” statements, the mean ratings were all patently higher for whether clinicians should rely on “a group of studies that together have high internal validity” ($M = 67.31$, $SD = 20.88$ vs. $M = 58.58$, $SD = 23.24$), “on a group of studies that together have high external validity” ($M = 72.59$, $SD = 19.02$ vs. $M = 62.88$, $SD = 21.94$), “on a group of studies that together have high internal and high external validity” ($M = 83.08$, $SD = 16.81$ vs. $M = 71.32$, $SD = 22.29$), “on published expert consensus” ($M = 70.73$, $SD = 22.01$ vs. $M = 63.66$, $SD = 24.48$), and “on systematic knowledge syntheses” ($M = 80.62$, $SD = 19.22$ vs. $M = 75.81$, $SD = 20.78$). Conversely, they had higher mean ratings on whether “you do rely on personal opinion and clinical intuition” ($M = 65.86$, $SD = 24.40$) and “on prior professional experience” ($M = 73.70$, $SD = 20.22$) compared with their ratings of whether “clinicians should rely on” these knowledge sources ($M = 59.65$, $SD = 24.97$ and $M = 70.22$, $SD = 20.52$, respectively).

Perceived Importance of Specific Research Designs for EBP

Consult Table 4 for the mean ratings of the importance of different research designs for EBP. In keeping with the views of the CPA taskforce on EBP (Dozois et al., 2014), psychotherapy providers recognized that “meta-analyses” ($M = 80.84$, $SD = 17.22$) are at the zenith of the hierarchy of research designs central to EBP. Prominently, and consistent with the CPA’s hierarchy of research designs, the next highest mean rating concerned the importance of “randomized clinical trials and their logical equivalents” ($M = 75.46$, $SD = 20.03$) for EBP. However, the comparatively lower mean rating for research designs that include “basic psychological science” ($M = 60.59$, $SD = 22.86$) may well accentuate the illusory schism in perception towards basic psychological scientists held by some psychotherapy providers. This last finding was arguably at variance with the high value placed on basic psychological science to inform treatment selection by the APA and CPA taskforces.

PHASE 2: LEADERS IN PSYCHOLOGY AND EBP

The Survey

The same survey administered to psychotherapy service providers was given to leaders.

Participants

Invitations to take the survey were extended to authors of the Canadian (CPA-EBP, 2012; Dozois et al., 2014) and of the American (APA, 2005; APA-EBP, 2006) taskforces on EBP. Of these authors, five were of the CPA and three of the APA taskforces on EBP. Psychology regulatory bodies from across Canada and the U.S. were also contacted, to invite their leaders to complete the survey. Of these, four leaders were current members of the CPA Board of Directors and 12 with the APA Council of Representatives. Of the members of executive committees of Canadian psychology organizations, two were from the Psychology Association of Saskatchewan; one, the Saskatchewan College of Psychologists; two, the Psychological Association of PEI; one, the Association of Psychologists of Nova Scotia; one, the Psychological Association of Manitoba; and one, the College of Alberta Psychologists. Thus, 32 leaders in psychology completed the survey.

All leaders completed the English survey, and all were doctorate trained except for three who possessed a master's degree. Relatively more respondents were male (56.3%), and the modal age range was between 61 and 70 years old (37.5%). More than half of the leaders (56.3%) had 21 or more years of psychotherapy experience, almost half were in private practice (40.6%), and most practiced primarily in an urban setting (81.3%). Like psychotherapy providers, most leaders had trained in clinical (75.0%) and counselling (12.5%) psychology.

Analogous to psychotherapy providers, CBT was the modal primary therapeutic approach for leaders (59.4%), and humanistic/existential/person-centred was the modal secondary therapeutic approach (28.1%). Regarding the primary province, territory, or state of psychotherapy practice, relatively more leaders practiced in Ontario (15.6%) and Saskatchewan (9.4%) compared to the other provinces and states. Detailed demographic information can be found in Table 6. Of the 40 leaders who completed at least the first EBP statement of the survey, 32 finished at least 80% of all survey questions and were thereby retained for further analyses.

Procedure

Data collection occurred between November 2016 and March 2017. In exchange for completing the survey, leaders were invited to enter their email for a chance to win an iPad mini. Multiply imputed values were used for missing responses on EBP survey statements.

Table 6
Demographic and Professional Practice Characteristics of Leaders in Psychology (n = 32)

Question	n	%	Question	n	%
Gender			Main province, territory, or state of psychotherapy practice		
Male	18	56.3	Ontario	5	15.6
Female	14	43.8	Nova Scotia	2	6.3
Age range			Alberta	2	6.3
20–30	3	9.4	Saskatchewan	3	9.4
31–40	2	6.3	British Columbia	2	6.3
41–50	6	18.8	Prince Edward Island	2	6.3
51–60	8	25.0	Manitoba	2	6.3
61–70	12	37.5	Québec	1	3.1
70+	1	3.1	New York	2	6.3
Highest Degree			Texas	2	6.3
Doctorate	29	90.6	Connecticut	1	3.1
Masters	3	9.4	Wisconsin	1	3.1
Field of Highest Degree			Washington, DC	1	3.1
Clinical Psychology	24	75.0	Nebraska	1	3.1
Counselling Psychology	4	12.5	Kentucky	1	3.1
Educational Psychology	1	3.1	Florida	1	3.1
School Psychology	2	6.3	Hawaii	1	3.1
Other	1	3.1	Years of Professional Psychotherapy Experience		
Primary Therapeutic Approach			Less than 1	1	3.1
Psychoanalytic/psychodynamic	4	12.5	1–5	5	15.6
Humanistic/existential/ person-centered	4	12.5	6–10	2	6.3
Cognitive and/or Behavioural	19	59.4	11–15	4	12.5
Other	5	15.6	16–20	2	6.3
Secondary Therapeutic Approach			21+	18	56.3
Psychoanalytic/psychodynamic	5	15.6			
Humanistic/existential/ person-centered	9	28.1			
Cognitive and/or Behavioural	4	12.5			
Systemic/Systems	5	15.6			
Other	5	15.6			

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Question	<i>n</i>	%	Question	<i>n</i>	%
Primary setting of practice			Predominantly practice in a(n)		
Private practice	13	40.6	Urban setting	26	81.3
University	7	21.9	Rural setting	5	15.6
Hospital/community mental health centre	9	28.1			
School	1	3.1			
Other	2	6.3			

Note. Of the secondary therapeutic approach, *n* = 4 leaders did not indicate a response; *n* = 1 leader was not practising and could not indicate a response for practising in an urban or rural setting or for primary province, territory, or state of psychotherapy practice. One leader practised across three states.

RESULTS OF PHASE 2 (LEADERS IN PSYCHOLOGY AND EBP)

Preliminary Survey Questions on Critical Scientific Understanding and Productivity

Regarding self-rated ability to critically understand scientific research, leaders in psychology scored higher (*M* = 84.66, *SD* = 9.73) compared with the psychotherapy providers (*M* = 76.65, *SD* = 15.51). In relation to psychotherapy providers (*n* = 175, 25.6%), considerably more leaders had published peer-reviewed scientific research within the last five years (*n* = 20, 62.5%).

Attitudes Towards Clinical Expertise in Self and Other Clinicians

Consult the leaders' section of Table 1 for their mean attitudes to these EBP statements pertinent to clinical expertise. Overall, these attitudes of leaders towards self and towards what "other clinicians should" be doing in clinical practice culminated in means that exceeded a value of 4 and converge appreciably with those of the psychotherapy providers on these statements. Correspondingly, the mean ratings of leaders on these precepts of clinical expertise concerning their practices are unilaterally higher (i.e., more agreeable) compared with their ratings of what other clinicians do in practice.

A striking difference from the psychotherapy providers was that leaders had a comparatively higher mean rating on the statement that "I do possess strengths in designing and conducting research studies that can guide EBP" (*M* = 4.03, *SD* = .74) compared with psychotherapy providers (*M* = 3.48, *SD* = 1.09). Of the "I do" statements, the highest mean ratings were accorded to the statements, from highest to lowest, to "consider clients' goals" (*M* = 4.72, *SD* = .58), to "pay attention to factors related to the clients' development and life stage" (*M* = 4.66, *SD* = .55), to "consider clients' worldviews and values" (*M* = 4.59, *SD* = .56), to "possess strengths in understanding research studies that can guide EBP" (*M* = 4.53, *SD* = .51), and to "consider specific client characteristics" (*M* = 4.50, *SD* = .84). Put simply, like psychotherapy providers, leaders were quite in agreement with attending to characteristics of the client in fulfilling their expert competen-

cies of treatment planning and of appreciating individual, cultural, and social contexts of the client, but they also markedly agreed with the expert competency of understanding research studies that can guide EBP as per the APA taskforce.

Finally, of the mean attitudes of leaders, those below a value of 4 are noteworthy. Of the “I do” statements concerned the following statement: “I do monitor and evaluate the services provided to my clients throughout treatment using standardized tools for outcome monitoring or progress tracking” ($M = 3.56, SD = 1.22$). Among the “clinicians should” statements included the one that “clinicians should possess strengths in designing and conducting research studies that can guide EBP” ($M = 3.16, SD = 1.11$). Finally, all but two “other clinicians do” statements had means lower than 4. Leaders and psychotherapy providers had convergent attitudes and means below 4 on most statements in Table 1, which underscores their similar attitudes on these statements.

Attitudes More Specific to Patient Preferences, Culture, and Characteristics and EBP More Generally

See the leaders’ section of Table 2 for their attitudinal means on statements central to the facet of patient preferences, culture, and characteristics of EBP, on all of which both samples had similar mean attitudes. There was, however, a slightly higher attitudinal mean for leaders ($M = 4.31, SD = 1.15$) on the statement that “EBP improves psychotherapy outcome” compared with that for psychotherapy providers ($M = 4.08, SD = .97$). Thus, like psychotherapy providers, leaders agreed with salient tenets of patient preferences and characteristics as per APA’s taskforce on EBP. Like psychotherapy providers, leaders had a lower mean attitude that “interventions that have been widely tested in the majority population can be readily used with clients from different ethnic or socio-cultural backgrounds” ($M = 2.78, SD = 1.10$). Last, like psychotherapy providers, leaders had, on average, a more neutral attitude on whether “it is difficult for clinicians in private practice to have access to scholarly literature and research” ($M = 3.03, SD = 1.18$).

Attitudes Towards Knowledge Sources Central to EBP

Consult Table 3 for the attitudinal means of leaders towards knowledge sources central to EBP. Consonant with the recommendations of the CPA taskforce on EBP (Dozois et al., 2014) and with psychotherapy providers, leaders had the highest attitudinal mean for whether “clinicians should rely on a group of studies that together have high internal and high external validity” ($M = 88.69, SD = 11.19$). Relatively more similarities in mean ratings across both question stems existed between the samples. For instance, “systematic knowledge syntheses” were among the top mean ratings for leaders, across both question stems, as they were for psychotherapy providers.

Striking differences were found in the mean ratings among leaders of whether “clinicians should rely on personal opinion and clinical intuition” ($M = 53.31, SD = 21.19$ for leaders; $M = 59.65, SD = 24.97$ for psychotherapy providers), and

whether respondents rely on this knowledge source ($M = 61.67$, $SD = 21.17$ and $M = 65.86$, $SD = 24.40$, respectively). Larger differences in mean ratings, from a direct comparison of a given knowledge source, per question stem, between leaders and psychotherapy providers, were found on whether “clinicians should rely on prior professional experience” ($M = 62.77$, $SD = 24.79$; $M = 70.22$, $SD = 20.52$, respectively) and, notably, whether “you do rely on prior professional experience” ($M = 66.09$, $SD = 22.39$; $M = 73.70$, $SD = 20.22$, respectively).

Perceived Importance of Specific Research Designs for EBP

Consult Table 4 for the mean ratings of significance of different research designs to EBP. Leaders rated similarly to psychotherapy providers, that is under a two-point difference between their respective means, on the importance of “ethnographic research” ($M = 58.51$, $SD = 17.61$; $M = 58.86$, $SD = 22.91$, respectively), of “qualitative research” ($M = 60.30$, $SD = 21.03$; $M = 61.32$, $SD = 24.09$, respectively), of “systematic case studies” ($M = 61.32$, $SD = 18.44$; $M = 62.74$, $SD = 21.44$, respectively), and of “randomized clinical trials and their logical equivalents (efficacy research”); $M = 76.88$, $SD = 22.34$; $M = 75.46$, $SD = 20.03$, respectively) for EBP.

Comparatively larger differences among the ratings of leaders and psychotherapy providers concerned, from lower to higher, “meta-analyses” ($M = 83.60$, $SD = 14.54$; $M = 80.84$, $SD = 17.22$, respectively), “basic psychological science” ($M = 57.22$, $SD = 20.30$; $M = 60.59$, $SD = 22.86$, respectively), “process-outcome studies” ($M = 75.38$, $SD = 16.36$; $M = 71.90$, $SD = 19.10$, respectively), and “public health research” ($M = 65.69$, $SD = 14.03$; $M = 62.09$, $SD = 20.74$, respectively). Still larger differences in mean ratings between leaders and psychotherapy providers were found on the perceived importance of “studies of interventions as delivered in naturalistic settings (i.e., effectiveness research”); $M = 78.15$, $SD = 14.60$; $M = 72.95$, $SD = 18.78$, respectively) for EBP. The relative premiums placed on “clinical observation (including individual case studies)” by psychotherapy providers ($M = 60.09$, $SD = 25.62$) compared with leaders ($M = 53.88$, $SD = 22.88$), and on “single-case experimental designs” by leaders ($M = 62.13$, $SD = 17.87$) in relation to psychotherapy providers ($M = 55.69$, $SD = 23.08$), are remarkable, as these research designs constituted the largest differences among the mean ratings of both samples.

DISCUSSION

This is among the first surveys, using the CPA and APA taskforce documents and published reports on EBP, to gauge the attitudes of psychotherapy providers and North American psychology regulatory leaders. Descriptive results supported the largely favourable attitudes on many EBP tenets as applied to psychotherapy practices among both samples. Results elucidated each component of EBP, which will be discussed in turn, as will findings on knowledge sources central to EBP, other survey findings, study limitations, and ideas for future research.

Best Available Research

Psychotherapy providers and leaders had similar attitudes of agreement on the importance of “ethnographic research,” “qualitative research,” “systematic case studies,” and of “randomized clinical trials and their logical equivalents” for EBP. What stands out among these attitudes is the perceived importance, as has been a hallmark of efficacy research, of randomized clinical trials and their logical equivalents for EBP compared with the relatively lower ratings for more qualitative research approaches. Future research should explore psychotherapy providers’ and leaders’ endorsement of a biomedical and/or more contextual model towards mental health and how these models, discussed in the EBP literature (e.g., Goodheart, 2006; Wampold & Imel, 2015), are perceived.

As somewhat larger differences in attitudes were found, between samples, for “meta-analyses,” “basic psychological science,” “process-outcome studies,” and for “public health research,” future research should explore if such attitudes differ by nature of practice venue (e.g., many leaders were involved in research, which might relate to their relatively more approbatory attitudes towards meta-analyses compared with psychotherapy providers, many of whom were in private practice). Similarly, discrepancies between the relative magnitudes of attitudinal means, in leaders perceiving “studies of interventions as delivered in naturalistic settings” and “single-case experimental designs” as somewhat more salient to EBP, and in psychotherapy providers rating “clinical observation (including individual case studies)” as relatively more central, may reflect the role differences or practice venues of these mental health providers. Last, both samples largely agreed with the importance of many research knowledge sources, as explicated by the CPA taskforce, for their practices (see the “Knowledge Sources Central to EBP” section below).

Clinical Expertise

Generally, both samples had agreeable attitudes on many competencies salient to clinical expertise. The findings also intimated that psychotherapy providers and leaders alike rated their mean attitudes on the clinical expertise statements as higher for what they *do* compared with what they perceived “other clinicians doing” in practice. This finding is consistent with a previous study that found a positive self-assessment bias among clinicians (Walfish et al., 2012) and with such biases noted elsewhere (Garb, 2005; Garb & Boyle, 2015). This finding requires empirical replication, however. As clinical expertise incorporates the other two components of EBP, and as discerned in the APA taskforce document, further research needs to unravel what exactly constitutes expertise and how this unfolds via clinical practice in applying EBP. Moreover, this study did not ask about the biases of respondents of their relative treatment successes in terms of positive client outcome (e.g., Walfish et al., 2012) or of their perceived accuracy in arriving at diagnoses that have been explicated, for which future research may establish a further empirical basis.

Saliently, that many psychotherapy providers and leaders had comparatively lower mean attitudes on several of the “other clinicians do” statements may either suggest, at best, that they do not know enough about the psychotherapy practices of their colleagues or, at worst, that they regard their colleagues as following EBP tenets haphazardly. Future research should explore the reason(s) for which both samples endorsed these relatively lower mean attitudes, whether it be because they practise independently of their colleagues or that they are in fact aware of their colleagues’ practices but are dubious on whether they follow these precepts of clinical expertise.

That leaders had a comparatively higher attitudinal mean than psychotherapy providers on the expert competency of understanding research studies that can guide EBP in practice is remarkable, as clinical expertise is informed by scientific expertise per the APA taskforce. This dovetails with the finding that leaders had a relatively higher mean attitude on self-rated “ability in critically understanding scientific research” and that more than half published in peer-reviewed scientific research in the last five years compared to about a quarter of psychotherapy providers.

Future research should explore this link between empirical productivity, confidence in scientific understanding, and clinical expertise. For both samples, the statement that “I do monitor and evaluate the services provided to my clients throughout treatment using standardized tools for outcome monitoring or progress tracking” also had relatively lower attitudes compared to the other expert competencies. This finding may echo the insights of other theorists that therapists conceptualize their cases anecdotally and less frequently evaluate their clients using well-validated and replicated methods or instruments (Kazdin, 2006). This finding should be explored alongside empirical accounts that psychologists surveyed with a (post)doctorate compared to a master’s degree (or diploma) were significantly more likely to be cognizant of progress monitoring measures to track treatment progress (Ionita & Fitzpatrick, 2014).

Patient Preferences, Culture, and Characteristics and EBP More Generally

Psychotherapy providers and leaders alike had agreeable attitudes towards the importance of patient preferences, culture, and characteristics. That is, both samples had largely agreeable attitudes towards the statements that “clinical manifestations, such as co-morbidity and polysymptomatic presentations, moderate the impact of interventions”; that “EBP is important in promoting public health”; that “EBP is important in promoting effective psychological practice,” (although leaders agreed somewhat more with this statement than did psychotherapy providers); and that “cross-diagnostic client characteristics, such as personality traits or constellations, moderate the impact of empirically tested interventions.” Among both samples, these attitudes are consistent with their attitudes towards the clinical expertise domain of EBP, namely that they attend closely to the client in executing competencies germane to clinical expertise and consistent with both taskforces on EBP. Overall, these attitudes demonstrated that psychotherapy providers and

leaders agreed with the centrality of patient preferences, culture, and characteristics to EBP and that they are appreciably client centred.

Knowledge Sources Central to EBP

Consistent with the CPA taskforce on EBP (Dozois et al., 2014), both samples accorded high mean attitudes towards “systematic knowledge syntheses” and “a group of studies that together have high internal and high external validity.” That said, psychotherapy providers have been noted to resort to clinical intuition, which is informed appreciably by their clinical expertise, rather than scientific evidence (Drapeau & Hunsley, 2014). The study’s first phase of psychotherapy providers supported this finding. Namely, the mean ratings were all patently higher for whether “clinicians should rely on a group of studies that together have high internal validity,” “on a group of studies that together have high external validity,” “on a group of studies that together have high internal and high external validity,” “on published expert consensus,” and “on systematic knowledge syntheses” compared to the “you do” statements.

Conversely, in line with Drapeau and Hunsley’s (2014) assertion, psychotherapy providers had higher mean ratings on whether they “do rely on personal opinion and clinical intuition” and “prior professional experience” compared to their ratings of whether “clinicians should” rely on these sources. However, according to the CPA taskforce, the best available research should be relied on, foremost, over the other components. While clinical experience is a strong component of EBP, given the variability in attitudes of practitioners over how best to treat a given clinical issue, relying on research evidence helps to inform EBP more consistently (Lilienfeld et al., 2013). Remarkably, leaders had lower attitudes of agreement, on average, on whether “clinicians should” and whether they “rely on personal opinion and clinical intuition” and “prior professional experience” compared to psychotherapy providers, which future research should elucidate.

Other Noteworthy Findings from the Survey

That a full $n = 65$ (9.5%) of psychotherapy providers and $n = 4$ (12.5%) of leaders did not respond to their primary secondary therapeutic approach is somewhat remarkable. Although this represents a minority of respondents per sample, it suggests that about 1/10th of psychotherapy providers and leaders alike may not practice from a stipulated secondary therapeutic modality. That this survey did not directly have an option stated as “Do not practice from a secondary modality” makes it difficult to know how valid this result is, though, which requires empirical replication. Nevertheless, according to the CPA’s *Accreditation Standards and Procedures for Doctoral Programmes and Internships in Professional Psychology*, training programmes must comprise training opportunities “in more than one therapeutic modality...” (CPA, 2011, p. 21, as cited in CPA-EBP, 2012).

Moreover, as psychotherapy providers ($n = 573$, 83.8%) and leaders ($n = 26$, 81.3%) predominantly practiced in an urban setting, this underscores the need for an infusion of more psychotherapy service providers in rural areas (Ryan-Nicholls

& Haggarty, 2007). In medicine, financial incentives have been given to physicians to practise in rural areas; it is opportune for policymakers to consider such incentives for psychotherapy providers to work in rural areas.

Limitations

Limitations of the present survey study include the smaller sample size in its second phase. Moreover, Likert-type questions are subject to the central tendency, acquiescence, and social desirability biases, which must be tempered in exploring the results. Furthermore, survey statements were not counterbalanced, partly to keep them conceptually easier to follow given the survey's length. However, the responses garnered remain a valid representation of the samples. Given also the negative skew noted of several survey responses, interpretative cautions should be rendered, which await empirical replication; but findings are generally consistent with the empirical literature on EBP. Likewise, survey findings with an attitudinal mean in the neither direction (a value of 3) also await empirical replication; if half of the respondents rated an item as *agree/strongly agree*, and the other half as *disagree/strongly disagree*, the resultant mean is neither, which differs from a mean that results if all respondents rated this same item as "Neither." However, such survey findings aligned strongly with the empirical literature on EBP, which strengthens these results. Given that the EBP component of patient preferences, culture, and characteristics requires empirical attention, as elucidated in the APA taskforce document on EBP, it was difficult, at times, to categorize statements as falling just into one component of EBP, when many related to other components; this is as much a reflection of the abstractness of the concept of EBP as of the challenge, at times, of applying these precepts into practice, which future research should clarify.

Future Research

Nelson, Steele, and Mize (2006) used focus groups to gauge practitioner attitudes towards EBP, whereas other researchers have employed mixed-methods (Barnett et al., 2017). Future research should accordingly utilize more open-ended questions to gauge attitudes towards EBP and how psychotherapy providers and leaders integrate these rather piecemeal components of EBP into the complexity of clinical practice.

Finally, akin to psychotherapy providers, that the leaders had a more neutral attitude, on average, on whether "it is difficult for clinicians in private practice to have access to scholarly literature and research" is remarkable. This factor alone decidedly ensures that psychotherapy providers practice according to the best available research. Encouragingly, the fact that psychotherapy providers and leaders recognized the importance of several research designs in this study may indicate that more efforts at increasing access to this literature would advance dissemination and implementation efforts of EBP. Future research should explore factors that facilitate and hinder EBP in psychotherapy practice and consider such theorized variables as the ability of the practitioner, motivation, and available opportunities to practice EBP (Rousseau & Gunia, 2016).

Notes

- 1 While the CPA taskforce used the term client in describing this component, the APA used the term patient; however, both taskforces used these terms interchangeably, as does this paper.
- 2 Briefly, as Levant and Hasan (2008, p. 661) noted, the position statements of APA on EBP transcend the EST “hallmark” of demonstrated efficacy via randomized controlled clinical trials before which a treatment can be dubbed empirically supported, to including, in its criteria for EBP, recognition of clinical expertise and patient preferences, culture, and characteristics.

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