

Elsevier required licence: © <2022>. This manuscript version is made available under the CC-BY-NC-ND 4.0 license <http://creativecommons.org/licenses/by-nc-nd/4.0/>  
The definitive publisher version is available online at [10.1016/j.cpr.2022.102132](https://doi.org/10.1016/j.cpr.2022.102132)

**Correlates of Therapist Drift in Psychological Practice: A Systematic Review of  
Therapist Characteristics**

Andrew J. H. Speers <sup>a</sup>

Navjot Bhullar <sup>a</sup>

Suzanne Cosh <sup>a</sup>

Bethany M. Wootton <sup>b</sup>

<sup>a</sup> School of Psychology, University of New England, Australia

<sup>b</sup> Graduate School of Health, University of Technology Sydney, Australia

Declaration of interests: None.

This statement is true for all authors.

Corresponding author: Dr Bethany M. Wootton. University of Technology Sydney, PO Box  
123 Broadway, NSW, Australia, 2007. Email: [bethany.wootton@uts.edu.au](mailto:bethany.wootton@uts.edu.au). Telephone: +61  
2 9514 3942.

### **Abstract**

Therapist drift refers to the tendency for psychologists to move away from the delivery of the evidence-based practices in which they are trained, even when resourced to implement them. When therapists do not provide, or only partially provide, empirically supported treatments their patients may receive interventions that are not effective, or that are harmful. The aim of the current study was to conduct a systematic review of the literature to ascertain the correlates of therapist drift in psychological practice, focusing on therapist characteristics. Relevant articles were identified through a comprehensive search of the literature. Sixty-six studies met the inclusion criteria and nine therapist characteristics that correlate with therapist drift were identified. These characteristics included: (1) therapist knowledge; (2) attitudes toward research; (3) therapist anxiety; (4) clinical experience; (5) therapist age; (6) theoretical orientation; (7) critical thinking; (8) personality traits; and (9) cultural competency. The interrelationships between these factors are explored and the clinical implications of results are discussed. Recommendations are made for future research.

*Keywords:* Therapist drift; empirically supported treatments

## **Correlates of Therapist Drift in Psychological Practice: A Systematic Review of Therapist Characteristics**

Evidence-based psychological practice (EBPP) requires “integration of the best available research with clinical expertise in the context of patient characteristics, culture and preferences” (American Psychological Association [APA], 2006, p. 276). Despite the emphasis placed on dissemination and implementation of EBPP, there is now a large body of research that demonstrates that when individuals with mental health disorders seek treatment, they are commonly provided with interventions that are not empirically supported (e.g., Berry & Haddock, 2008; Borntrager, Chorpita, Higa-McMillan, Daleiden & Starace, 2013). This tendency by psychologists (and other mental health workers) not to implement fully the empirically supported practices in which they are trained, even when resourced to do so, has been referred to as “therapist drift” (Waller, 2009).

Therapists not providing, or only partially providing, empirically supported interventions may deliver ineffective treatments (Waller, 2009; Waller & Turner, 2016). For example, Deacon, Lickel, Farrell, Kemp, and Hipol (2013) reported that in a study of therapists working with patients with panic disorder, 41% of therapists who provided interoceptive exposure therapy also instructed patients to use controlled breathing, despite there being no empirical evidence that the use of controlled breathing enhances interoceptive exposure (Deacon, Lickel et al., 2013; Deacon, Farrell et al., 2013; Schmidt et al., 2000; Whiteside et al., 2020) and the use of controlled breathing may become a safety behavior for some patients (Craske, Rowe, Lewin, & Noriega-Dimitri, 1997; Salkovskis, 1991). Similarly, it is common for therapists to neglect to provide homework tasks for patients (Waller, 2009), even though evidence suggests that the setting of homework tasks by therapists and homework completion by patients both correlate significantly with positive patient outcomes (Kazantzis, Deane, & Ronan, 2000; Wootton et al., 2020).

The use of non-evidence-based interventions may also worsen outcomes for patients. For example, a comparative study of CBT for panic disorder and treatment as usual in an outpatient clinic found that 43% of patients receiving CBT experienced a clinically significant reduction across various outcome measures (panic severity; phobic avoidance; depression; general wellbeing), compared to only 19% of patients in the treatment as usual condition (Addis et al., 2004). Similarly, at an outpatient university psychology training clinic, patients who received an empirically supported treatment (EST) achieved significantly greater symptom improvement than patients receiving non-ESTs (primarily psychodynamic and traditional humanistic interventions). Furthermore, patients in the EST group achieved their results in fewer sessions ( $M = 10.20$ ,  $SD = 9.39$ ) than those who did not receive an EST ( $M = 19.63$ ,  $SD = 16.13$ ; Cukrowicz et al., 2005).

Even when therapists report familiarity with empirically supported interventions, such interventions are often delivered inconsistently or idiosyncratically. For example, while most participants in a study of therapists working with patients with eating disorders were able to identify ESTs, approximately half used ESTs in combination with non-ESTs (Wallace & von Ranson, 2012) and Waller, Stringer, and Meyer (2012) found that none of the therapists in their study who were working with patients with eating disorders delivered any cognitive-behavioral technique more than 50% of the time. Relatedly, Allen, Gharagozloo, and Johnson (2012) found that while only 25% of therapists in their study identified play therapy, which is not an EST, as an empirically supported intervention, 70% of therapists used it in practice. Finally, in a Dutch study of psychotherapy for depression, therapists often reported modifying manualized approaches, even when they were aware that such modification had no scientific foundation (Bruijniks, Franx, & Huibers, 2018).

Several important reviews have been undertaken that are important to the understanding of correlates of therapist drift. First, Lilienfeld, Ritschel, Lynn, Cautin, and Latzman (2013)

explored the reasons therapists may demonstrate resistance to adoption of ESTs. The associations identified by these researchers included biases that may lead therapists to place undue reliance on personal experience at the expense of empirical evidence; therapists' misconceptions about the nature and operationalization of ESTs; and difficulty encountered by therapists in comprehending increasingly technical outcome studies. Second, Shafran et al. (2009) examined barriers to dissemination of CBT. This review suggested that therapists' attitudes toward the generalizability of laboratory studies to clinical environments, their reliance on experience at the expense of evidence-based practice, the rigorousness of training, misconceptions as to the importance of fidelity to CBT, and lack of knowledge as to the mechanisms of change explicit in CBT each played a role. Third, Waller and Turner (2016) published an important review of the literature, focusing on correlates of drift among cognitive-behavioral therapists and means by which they may be overcome. These barriers included knowledge; beliefs and attitudes; emotions; personalities and the interpersonal milieu (e.g., clinical setting; supervision) in which therapists operate.

While each of these studies is uniquely valuable, as yet there has been no systematic attempt to review the correlates of therapist drift among psychologists in clinical practice. Such a review could include characteristics of therapists, and the institutional milieus in which they operate. Therapist characteristics are those which are innate to therapists, such as emotional reactivity, or are characteristics that have been acquired by therapists, such as education, theoretical orientation, or attitudes to research. Therapist characteristics stand in contrast with organizational factors, such as the support received by psychologists to implement ESTs or dissemination processes that facilitate adoption of ESTs. In this review, however, we have focused on therapist characteristics, as the identification of such factors may assist in improving training of therapists and may facilitate dissemination of ESTs through the presentation of materials (e.g., therapy manuals) in ways that resonate with

therapists' understanding of the evidence base. Thus, the aim of the current study was to identify potential correlates of therapist drift across psychologists, focusing on therapist characteristics.

## Method

### Search Strategy

Searches were conducted of the following databases: CINAHL (excluding Medline results); Embase; Medline; ProQuest Psychology; Psychology & Behavioral Sciences Collection; and PsycINFO. The primary search term was 'therapist drift'. Search strings were also constructed as follows: 'empirically supported treatment' OR 'empirically validated treatment' OR 'evidence based practice' OR 'evidence based treatment' OR 'manualized treatment' AND 'therapist characteristics' OR 'fidelity' OR 'adherence'. Exclusion criteria were applied to each of the above (e.g., NOT 'occupational therapists' OR 'speech therapists'). Synonyms were also employed as appropriate (e.g., 'psychologist' OR 'therapist') as were alternative spellings (e.g., manualised/manualized). The systematic review was registered with the PROSPERO international prospective register of systematic reviews (Registration ID: CRD42018099634) and the final review was conducted on April 2, 2021.

### Study Selection

To be included in the systematic review, studies were required to be: (1) published after January 1995; (2) published in English; (3) focused on psychologists or psychology interns (studies that included social workers, counsellors or other mental health workers *and* psychologists were included, but research not including psychologists was excluded); and (4) experimental or quasi-experimental studies. We included studies published since 1995 because our interest lay in the *correlates* of therapist drift, rather than the development of ESTs per se. While attention to the development of EBPP has extended over many decades

(e.g., Eysenck, 1952; Meehl, 1986), efforts were not directed to formalizing and promoting ESTs until the early- to mid-1990s. The American Psychological Association (APA) *Task Force on Promotion and Dissemination of Psychological Procedures* stated in 1995, for example, that “we believe no treatment will work for all problems, and it is essential to verify which treatments work for which types of problems” (APA, 1995, p.8). Accordingly, the *Taskforce* proposed that treatments be designated as “well established” or “probably efficacious” and that accreditors of tertiary institutions providing training to psychologists make incorporation of training in empirically validated treatments a “high priority issue” (p.7, APA, 1995). Because our interest lay in factors that might be associated with therapists’ tendency to drift from the evidence base, we believed that the point at which treatments were formally designated as “empirically validated” (later “empirically supported”) was an appropriate cut off point for our research.

Exclusion criteria included: (1) reviews or commentaries; (2) research concerned with patient adherence to protocols rather than therapist adherence; (3) research concerning the efficacy or effectiveness of therapies, not therapists; (4) descriptions of manualized treatments, not factors influencing therapist drift; and (5) descriptions of prospective research. Unpublished studies (e.g., studies from grey literature such as PhD theses) were not included. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA-P; Moher et al., 2015) flowchart is outlined in Figure 1. Table 1 summarizes the characteristics of the included studies.

### **Quality Assessment**

A mixed-methods approach to quality assessment utilizing the Mixed Methods Appraisal Tool (MMAT; Hong et al., 2018) was employed to assess the quality of studies included in this review. The MMAT facilitates quality appraisal of randomized control trials, non-randomized control trials and quantitative descriptive reviews. The first author (AS) assessed



the quality of all papers. The papers were also independently assessed by other study co-authors (BW assessed 50% of the studies, NB assessed 25% and SC assessed the remaining 25%). Discrepancies in ratings were discussed and resolved between the raters and formal inter-rater reliability calculations were not conducted in this study. Hong et al. (2018) recommended against calculating an overall score for each study and suggested that a detailed description be provided of each study's performance against the assessment criteria. This is the approach we have taken in the current study. A summary of results of the quality assessment are outlined in Table 1.

### **Results**

The initial search yielded 1081 articles after duplicates were removed. The abstract of each article was reviewed by the first author resulting in the exclusion of 483 articles not meeting the inclusion criteria. The full texts of the remaining 448 articles were reviewed by the first author, resulting in the exclusion of a further 381 articles. Sixty-six studies were included in the systematic review. These studies were all independently assessed by the other authors using a comprehensive coding sheet to ensure the study met the inclusion criteria and did not violate the exclusion criteria.

#### **Therapist Knowledge**

A total of 20 studies were identified that demonstrated a relationship between therapist knowledge and therapist drift. At the broadest level Boisvert and Faust (2006) suggested that, as a group, therapists did not display the familiarity with general psychology research findings that one would expect (e.g., the relative advantage of treatment groups over non-treatment groups) calling into question therapists' capacity to integrate research with practice. More specifically, Aarons (2004) reported that clinical supervisors from 51 mental health services in the USA were generally not familiar with the term "evidence-based practice" (mean familiarity rating = 1.4 ( $SD = 1.39$ ) on a 4-point Likert scale, where 0 = *not at all* and

4 = *to a very great extent*), a result that was not significantly improved by the additional descriptor “empirically supported treatment”.

Allen et al. (2012) reported that therapists could not usually identify empirically supported approaches for use with traumatized children and that therapists commonly used interventions that were not empirically supported. Several researchers have also noted that knowledge about exposure therapy – one of the best evidenced treatments for many anxiety disorders (Deacon et al., 2013) – is commonly low (e.g., Becker Zayfert, & Anderson, 2004; van Minnen, Hendriks, & Olf, 2010) and that even those therapists who regularly worked with patients who would likely benefit from exposure asked for additional training in the technique (Sars & van Minnen, 2015; van Minnen et al., 2010). Similarly, Mussell et al. (2000) reported that while a CBT orientation was reported by most therapists in their study of treatment for patients with eating disorders, evidence-based interventions were rarely used. Respondents cited a lack of training for this failure to implement these ESTs.

Nakamura, Higa-McMillan, Okamura, and Shimabukuro (2011) reported that while Master- and Doctoral-level therapists in their study achieved significantly higher scores on the Knowledge of Evidence Based Services Questionnaire (KEBSQ; Stumpf, Higa-McMillan, & Chorpita, 2009) than therapists with less training, even those more qualified therapists only achieved scores on the KEBSQ of 56% and 61% respectively, indicating much room for improvement. Importantly, compared with therapists with lower caseloads, therapists with higher caseloads tended to believe that learning about new ESTs would be burdensome (Aarons, Cafri, Lugo, & Sawitzky, 2012), which may suggest that learning may not be prioritized by therapists who are seeing a large number of patients each day. Brown and Perry (2018) reported that therapist knowledge was positively associated with fidelity to ESTs in practice and Campbell et al. (2013) reported that years of education was positively associated with greater fidelity to ESTs (see also Patterson Silver Wolf, van den Berk-Clark,

Williams, and Dulmus (2018) for findings concerning the relationship between education and willingness to adopt ESTs).

Lack of knowledge of ESTs may also be associated with uncertainty in therapists' choice of treatments. For example, Wallace and von Ranson (2012) reported that while therapists could identify the best supported treatments for patients with eating disorders, they had difficulty separating treatments that were less well validated from those for which there was no empirical evidence. These researchers suggested that when an intervention is perceived as being empirically supported (whether it is or not), its use tends to increase. Thus, if therapists are uncertain as to the empirical status of a treatment, there is an increased likelihood that treatments for which there *is* evidence will not be used, and vice versa. Alternatively, as Wallace and von Ranson (2012) speculated, more frequent use of an intervention might increase the likelihood that therapists will perceive it as being empirically supported, whether evidence supports this perception or not. Such a contention is reinforced by a finding that the greater the divergence between ESTs and therapists' current practices, the more likely that therapists would identify treatments lacking an evidence base as empirically supported (Allen et al., 2012).

It is also interesting that in a proof-of-concept analysis by Becker-Haimes, Lushin, Creed, and Beidas (2019) evidence emerged that therapists may tend to include in their practice the approaches they were trained in, even if subsequent research had suggested that other approaches were more effective. This contention might be supported by a further finding that doctoral level therapists, while using a greater number of ESTs than those with fewer years of training, also used a larger number of non-ESTs than their less well-educated colleagues (Becker-Haimes, et al., 2019). Broadly similar findings were reported by Allen et al. (2012) who found, for example, that the number of non-ESTs identified by therapists as being empirically supported was predicted by the number of non-ESTs in which therapists

were trained. These authors also reported that therapists who believed that ESTs would diverge from their clinical beliefs tended to have been trained in a greater number of non-ESTs, suggesting again that initial training may affect the uptake of ESTs in practice.

Awareness of treatment manuals – methodized approaches to treatment based on empirical evidence which are intended to guide therapists in the delivery of validated interventions – is also low. For example, Addis and Krasnow (2000) reported that 77% of their sample of clinical psychologists had heard of treatment manuals, but also that 38% had a “totally unclear” or “somewhat unclear” idea of what a treatment manual was and only 7% used them in clinical practice “often” or “almost exclusively”. Data from a recent replication of this research by Waller et al. (2013) reported higher levels of awareness. For example, only 16% had a “totally unclear” or “somewhat unclear” idea of what a treatment manual was, and 51% used treatment manuals “often” or “almost exclusively”. However, psychologists in the Addis and Krasnow (2000) study were US-based, whereas the sample in the Waller et al. (2013) study was drawn from the UK. Differences in the two samples may be cultural or temporal or may stem from the earlier adoption of ESTs by regulators in the UK.

There appears to be a relationship between knowledge and attitudes toward ESTs, and their subsequent use. For example, Addis and Krasnow (2000) noted that misconceptions about the content of treatment manuals tended to be associated with higher “negative process” scores (i.e., beliefs that use of treatment manuals would inhibit therapeutic freedom and the therapeutic relationship) and lower “positive outcome” scores (beliefs that manuals would enhance therapeutic outcomes). Similarly, Beidas et al. (2015) reported that therapists who obtained low scores on the KEBSQ (Stumpf et al., 2009), indicating poor knowledge about ESTs, and therapists who obtained high scores on the Divergence subscale of the Evidence-Based Practice Attitudes Scale (EBPAS; Aarons, 2004), indicating skepticism

about the utility of ESTs in clinical practice, tended to use interventions that lacked empirical support. Likewise, Nakamura et al. (2011) found that therapists with an overly restrictive view of what constitutes an EST (i.e., who failed to identify ESTs as ESTs) found ESTs less intuitively appealing (i.e., had low scores on the EPBAS Appeal subscale), were more skeptical about their use in clinical situations (i.e., had higher Divergence subscale scores) and achieved low scores on total EPBAS and on the Modified Practice Attitude Scale (Borntrager, Chorpita, Higa-McMillan, & Weisz, 2009) which measures therapists' attitudes to evidence based practice (EBP) without making reference to therapy manuals. It is not clear, however, whether lack of knowledge predicts attitudes, or the reverse.

Research into therapist knowledge of ESTs and their use tends to be better developed and of higher quality than research into other correlates. Almost all papers reviewed for this correlate were of high quality according to the criteria established by Hong et al. (2018). While some researchers used novel instruments for which reliability and validity data were not available (or were not reported; e.g., Boisvert, & Faust, 2006) several studies resulted in the refinement of instruments that are now widely used (e.g., Aarons, 2004; Aarons, Cafri, Lugo, & Sawitzky, 2012; Addis & Krasnow, 2000). Overall, the findings reported above suggest that therapists generally have low awareness of ESTs, have difficulty in differentiating between ESTs and non-ESTs, ignore recent treatment developments in favor of the treatments in which they may have been trained, and are skeptical about the use of therapy manuals, believing that they inhibit the therapeutic relationship. Future research should investigate how to improve therapist knowledge in order to improve subsequent use of ESTs.

### **Attitudes Toward Research**

A total of 17 studies examined whether therapists' attitudes toward research (and the empirically supported treatment manuals derived from such research) are associated with

EST use in practice. There is evidence to suggest that attitudes to research correlate with delivery of ESTs. For example, Beidas et al. (2015) suggested that therapists in their study who were more open to use of ESTs were more likely to deliver cognitive behavioral interventions, which had a strong evidence-base for the treatment included in the study, while therapists who were more skeptical about the extent to which ESTs are clinically useful were more likely to deliver psychodynamic treatments, which have a weaker evidence base for the specific patient group being studied. Jensen-Doss, Hawley, Lopez, and Osterburg (2009) also reported that positive attitudes toward ESTs were associated with greater EST use in practice compared to those with less positive attitudes, a finding akin to that reported by Nelson and Steele (2007), although the latter study used a novel instrument, and the psychometric properties of this tool are not known. Similarly, Cho et al. (2019) found that therapists who held more positive attitudes toward innovation and evidence tended to utilize ESTs more often than those who were more skeptical. However, Sijercic, Lane, Gutner, Monson, and Stirman (2020) reported that in a study of factors impacting the delivery of cognitive processing therapy for PTSD, the Openness subscale of the EBPAS-50 (measuring therapists' willingness to accept innovations; Aarons et al. 2012) was not associated with greater adherence or competence by therapists. However, it should be noted that this study suffered from several methodological limitations (e.g., lack of clarity regarding the comparability of groups and lack of adherence by participants, among others) which may have affected results.

It is important to highlight however that positive and negative attitudes toward ESTs are not mutually exclusive; the presence of negative attitudes is not merely the absence of positive attitudes, and vice versa. For example, in a study of therapist self-reported use of ESTs, Nelson and Steele (2007) found that negative attitudes toward ESTs and positive attitudes toward ESTs each predicted unique variance in the likelihood that therapists would use ESTs in their practice. In this study, negative attitudes to research were significantly

negatively correlated with EST use and positive attitudes were the strongest predictor of EST use, after controlling for therapist theoretical orientation and clinical setting.

Extensive research suggests that a range of factors may correlate with therapists' attitudes toward research or may mediate the relationship between attitudes and use of ESTs. For example, attitudes toward the evidence base appear partly to reflect beliefs about the generalizability of research to clinical practice. Jensen-Doss et al. (2009) reported that in a healthcare system in which EST use was mandated, 57% of respondents reported that they had negative attitudes about ESTs. Participants reported that the use of ESTs made it difficult to individualize treatment and that it was necessary to deviate from treatment protocols to meet the needs of clients (Jensen-Doss et al., 2009). Relatedly, D'Souza Walsh, Davies, Pluckwell, Huffinley and Waller (2019) reported that relied less on evidence-based therapeutic techniques and more on the value of the therapeutic alliance if they were less tolerant of uncertainty (i.e. were more anxious), and vice versa if they were more tolerant of uncertainty.

In a study of factors affecting use of ESTs for eating disorders, 55% of participants reported that they did not use treatment manuals due to a perception that they are “too constraining”, a further 16% reported that treatment manuals were “not useful”, and 10% reported that they were not consistent with their clinical orientation (Simmons, Milnes, & Anderson, 2008), although as with some other studies on this topic, a novel instrument was used to measure attitudes and psychometric properties were not reported. Addis and Krasnow (2000) reported that therapists describing the *content* of treatment manuals negatively (“[manuals are] cookbooks of techniques”; “manuals are imposed by third-party payers”) were likely to believe that manual use inhibits therapist flexibility in patient work and impairs therapeutic relationships. Those who viewed the content of manuals positively (“manuals emphasize individual case conceptualization”) tended to believe that they would enhance

therapeutic outcomes. Waller et al. (2013) found similar results in their replication of this research.

Despite treatment manuals being a product of efficacy trials, attitudes toward manuals appear to be firmer and more negative than attitudes to research. For example, Borntrager, et al. (2009) found that therapists attained different scores on two measures of attitudes toward EBP depending on how questions were phrased; attitudes toward EBP were not negative unless therapists' attention was drawn to treatment manuals. This result was broadly replicated by Brookman-Frazer, Garland, Taylor, and Zoffness, (2009) and Farrell, Deacon, Kemp, Dixon, and Sy (2013). Consistent with this, research by Allen et al. (2012) suggested that positive attitudes towards ESTs predicted therapists' ability to identify ESTs accurately. Notably, Bearman, Wadkins, Bailin and Doctoroff (2015) reported that introduction of pre-practicum, doctoral level training in EBPP significantly improved trainees' attitudes toward the use of ESTs and, relatedly, intention to implement an EST for psychotherapeutic treatment of oncology patients was associated with fidelity to that treatment over time (Ryba, Lo, & Andersen, 2021). The role of knowledge vis-à-vis attitudes in fostering therapist drift requires clarification in future research.

The literature also appears to suggest that therapists are reluctant to shift from the approaches in which they were trained initially. That is, training and subsequent experience fosters allegiance to certain approaches in a form of cognitive bias, notwithstanding that evidence may emerge to challenge their effectiveness. Such a finding is suggested by Allen et al. (2012) and Becker-Haimes et al. (2019) and may affect attitudes to evidence and the subsequent acquisition of new knowledge. This is problematic as the evidence base may change over the course of a clinician's career, and it is important to be able to adapt to this over time.



As with therapist knowledge of ESTs, research on therapist attitudes is quite mature. Unsurprisingly, the research in this field consistently demonstrates that positive attitudes towards research, innovation, and evidence result in increased use of EST. This finding is particularly robust as most of the 18 studies in this section of the review were of high quality according to the quality criteria established by Hong, et al. (2018). However, frequently insufficient data were provided concerning the representativeness of the sample and the response rate of participants, and these issues could be addressed in future research.

### **Therapist Anxiety**

Six studies suggest that therapist anxiety may lead clinicians to avoid or minimize the use of treatments that may cause anxiety in patients and vicariously in therapists themselves. For example, in a well-designed study about therapists' concerns about delivering CBT with patients who have an eating disorder, therapists' prospective anxiety correlated positively with fears about delivery of elements of CBT (including the use of exposure interventions; Turner, Tatham, Lant, Mountford, & Waller, 2014). Similarly, Hernandez Hernandez and Waller (2021) reported that greater prospective anxiety among CBT therapists was associated with less willingness to engage patients in behavioral experiments, behavioral activation, and exposure therapy.

Waller et al. (2012) reported that more anxious therapists were less likely to ask patients to complete food diaries, engage in structured eating, or undertake behavioral experiments, when working with patients with eating disorders, although this study used a novel measure and psychometric properties were not described. This result was consistent with findings by Mulkens, de Vos, de Graaff, and Waller (2018), who also found that therapists with high anxiety scores were less likely to deliver exposure therapy and behavioral experiments when treating patients with eating disorders. Scherr, Herbert, and Forman (2015) found that greater experiential avoidance in the therapist was associated with less use of exposure therapy in

treatment of obsessive-compulsive disorder (OCD), although Daghish and Waller (2019) found no relationship between therapist anxiety and the tendency to openly weigh patients with an eating disorder (a further empirically supported intervention for disorders of this type).

Additionally, in 11 studies, researchers explored whether therapists' approaches to delivery of exposure therapy reflect a view that exposure therapy is risky. For example, therapists who deliver exposure therapy for panic disorder in incremental doses, or in combination with relaxation or controlled breathing exercises, are more likely than therapists who deliver exposure therapy as recommended to believe that the technique will produce negative patient outcomes (Deacon, Lickel et al., 2013), although this study had some limitations as the representativeness of the sample was not clear, and the response rate appeared to be low.

Expanding on this research, Deacon, Farrell et al. (2013) reported that higher scores on the Therapist Beliefs about Exposure Scale (TBES; representing more negative attitudes toward exposure therapy) were associated with selection of fewer anxiety-provoking exposure therapy tasks, more frequent efforts to reduce patient distress, and a higher likelihood of compliance with requests from patients to reduce exposure or compensate for it. Relatedly, in a study of therapists' perceptions of barriers to the delivery of exposure therapy, Pittig, Kotter, and Hoyer (2019) reported that negative beliefs about exposure therapy were generally associated with a reduction in use of exposure as a treatment, and that some specific negative beliefs (e.g., that use of exposure must be accompanied by stress reduction techniques; that the patient will decompensate or be re-traumatized) were commonly held. Pittig et al. (2019) noted that these findings were similar to those of Deacon, Farrell et al. (2013) notwithstanding that the two studies were carried out in distinctively different health care systems (Germany and the United States, respectively).

Comparably, in another German study, therapists who reported that they feared side-effects arising from the use of exposure and response prevention (ERP) with patients being treated for OCD, were less likely to provide ERP than those without such fears, an effect that was elevated when therapists encountered actual fear or resentment by patients at being asked to undertake ERP (Moritz, et al., 2019), although the representativeness of the sample and the response rate in this study were unclear. Furthermore, de Jong, Lommen, van Hout, de Jong and Nauta (2020) reported that therapists were less likely to use exposure therapy if they believed that exposure therapy was riskier than other psychotherapies, or that patients would refuse it. Therapists in this study also strongly endorsed the notion that patients would find exposure intolerable unless it is delivered in conjunction with relaxation strategies (de Jong et al., 2020).

Specifically for PTSD, in one of the few randomized control trials available in the field, van Minnen et al. (2010) found that therapists' fear of the negative outcomes of imaginal exposure for patients was negatively associated with the perceived suitability of the treatment when patients had suffered multiple traumas in childhood. This is despite an absence of evidence that exposure therapy worsens symptoms even in complex (e.g., co-morbid) or severe cases (Becker, et al., 2004). Becker et al. (2004) also found that only 17% of therapists treating patients experiencing PTSD utilized exposure therapy, with therapists often citing concerns that exposure therapy would lead to worsening of patient symptoms.

Finally, anxiety sensitivity was positively associated with therapists' exclusion of patients from exposure therapy, notwithstanding that exposure therapy is well tolerated by anxious patients (Meyer, Farrell, Kemp, Blakey, & Deacon, 2014). Levita, Duhne, Girling, and Waller (2016) examined facets of junior therapists' anxiety, and their impact on therapists' adherence to CBT, reporting that different facets correlated with use, or avoidance of, specific psychological interventions. For example, therapists higher in physiological

reactivity were less likely to use exposure-based therapies and those less prone to taking risks were more likely to use talk-based therapies (i.e., cognitive restructuring, schema therapy, goal setting and problem solving).

The effect of therapist anxiety on adherence to ESTs and treatment manuals is well documented and one of the best-known correlates of therapist drift. Waller et al. (2012), Deacon, Farrell, et al. (2013), and Farrell et al. (2013) among others have each demonstrated a relationship between therapist anxiety and fidelity to ESTs. Use of exposure therapy especially appears to be compromised by therapists' anxious responses, with more anxious therapists tending to use exposure interventions less frequently, if at all, although de Jong et al. (2020) did not find an association between therapist anxiety and willingness to deploy exposure therapy. Waller and Turner (2016) have suggested that therapists should themselves utilize CBT interventions to challenge their own maladaptive cognitions, emotions and behaviors that facilitate and sustain infidelity to ESTs and there may be merit in this suggestion. Additionally, the literature demonstrating patient acceptability of exposure interventions (Deacon, Lickel et al., 2013) could also be more widely disseminated to alleviate therapists' concerns about providing this intervention.

That said, further research is required to determine whether therapist "anxiety" can be differentiated into trait anxiety (i.e., the non-transitory, enduring characteristic of anxiety that is related to personality) and negative beliefs about therapies, which represent a fear that certain therapies will harm patients. For example, while Pittig et al. (2019) found that participants in their study commonly endorsed the notions that exposure therapy would lead to unmanageable distress by patients unless they were provided with compensatory self-calming techniques, or that they would decompensate or be re-traumatized (echoing Deacon, Farrell et al., 2013), they did not strongly endorse their own distress as a reason for not delivering exposure therapy.

Across studies there appears to be a relationship between therapist anxiety and the delivery of some EST, in particular those that are behavioral in nature. There is also a relationship between negative beliefs about exposure and reduced use of this EST. However it is important for future research to study whether therapist trait anxiety and therapist fear of harming patients are separate constructs, as different approaches to their amelioration may be required. Addressing these constructs early in a therapist's development may assist in the reduction of therapist drift seen in clinicians over time.

### **Clinical Experience**

Twenty-four studies in the present review examined the relationship between clinical experience and the use of ESTs in practice. Patterson Silver Wolf, et al. (2018) suggested that more clinical experience (and more time spent in the same job) was negatively associated with willingness to adopt ESTs when required to do so by administrators. Aarons (2004) reported that being on internship (i.e., therapists early in their careers) correlated positively with the Appeal subscale, Openness subscale, and total EBPAS scores suggesting, respectively, that interns tended to find ESTs intuitively appealing and that they were open to the adoption of new interventions. The study also found that interns' scores on the Divergence subscale were lower than those who were not interns, indicating lower levels of skepticism about research by interns (Aarons, 2004). Each of these studies were high quality, meeting all the quality criteria established by Hong, et al. (2018).

Cho et al. (2019) also found positive relationship between recency of training and use of ESTs in their study of treatment strategies used in youth mental health services, a finding supported by Hamill and Wiener (2018) in a study of Australian psychologists, although the latter study suffers from a lack of clarity with respect to the representativeness of the sample and an unknown response rate, and the study design suffered from methodological flaws. More years of clinical practice was also associated with less favorable attitudes toward the

use of treatment manuals (Barry et al., 2008), more frequent use of non-ESTs (Allen et al., 2012), poorer adherence to ESTs (Beidas et al., 2014), less frequent use of treatment manuals (Simmons et al., 2008) and a tendency to believe that research is not applicable to clinical decision-making (Addis & Krasnow, 2000). Notably, in an extension of the EBPAS, Aarons et al. (2012) reported that therapists with more clinical experience were more likely to perceive psychological practice as an art rather than a science, and to be confident in their skills as therapists.

Fewer years of clinical experience appears also to be correlated with greater fidelity to ESTs. Campbell et al. (2013) reported that having fewer than five years of drug and alcohol treatment experience was associated with greater fidelity to an EST for substance use disorders. Less clinical experience also predicted use of ESTs in a study examining factors affecting treatment decision-making among therapists working with patients with PTSD (Hundt, Harik, Barrera, Cully, & Stanley, 2016), although this study used a novel measure which may not have been replicable, and the response rate was unknown. Ruzek et al. (2014) found that therapists with less general practice experience were less concerned about distressing patients by administering prolonged imaginal exposure to patients with PTSD (suggesting they may be more inclined to use it) than were therapists with more clinical experience.

Most of the studies that did not support the contention that a relationship might exist between years of practice and respect for evidence found no relationship at all, rather than a relationship in the reverse direction (Becker-Haimes, et al. 2019; de Jong, et al. 2020; Harned, Dimeff, Woodcock, & Contreras, 2013; Jensen-Doss et al., 2009; Nakamura et al., 2011; Nelson & Steele, 2007; Nelson & Steele, 2008; Sijercic et al., 2020; Waller et al., 2012). Just two studies in this review hinted at a positive relationship between clinical experience and the use of ESTs. One of these suggested a positive association between

clinical experience and greater use of, or positive attitude towards, treatment manuals (Ashcraft et al., 2011). The second found a positive relationship between experience and use of dialectical behavioral therapy (DBT) in the treatment of eating disorders (Wisniewski, Hernandez, & Waller, 2018), although the representativeness of the sample in this study was unclear, and the measures used were novel with psychometric data unreported.

Overall, the findings of this review indicated that there is a negative relationship between length of clinical practice and attitudes towards research and use of ESTs. Clinical experience may be more accessible and more personally relevant for busy clinicians than research evidence and may thus be relied upon more heavily. However, it is not clear what length of time post-training a clinician may start to drift from the EST that they were trained in. This important research question requires further examination in future research.

### **Therapist Age**

Ten studies examined the relationship between therapist age and use of ESTs. Of these, 6 studies suggested that therapist age may be negatively related to adherence to ESTs. As examples, younger age predicted use of ESTs in a study of treatment decision-making among therapists working with patients with PTSD (Hundt et al., 2016) and similar results were found for therapists working with patients with eating disorders (Mulkens et al., 2018), although the study by Hundt et al (2016) employed a novel approach the reliability of which was uncertain. Wallace and von Ranson (2011) found that therapists younger than 45 years were more likely than older therapists to use a treatment manual when working with patients with bulimia nervosa. Compared with younger therapists, older therapists were also more likely to obtain high scores on the Therapist Beliefs About Exposure Scale (indicating negative beliefs about exposure therapy) than were younger therapists (Deacon, Farrell et al. 2013). In a related study, age was positively correlated with a tendency to exclude anxious patients from exposure therapy (Meyer, et al., 2014) and in a study of Dutch therapists, de

Jong et al. (2020) reported that older therapists who reported using exposure therapy in the treatment of anxiety disorders in youth used exposure less frequently than younger therapists. Two studies included in this review suggested, however, that age was positively associated with fidelity to ESTs. The first reported that younger age correlated with some, but not all, components of an EST for addiction (Kraan, Dijkstra, & Markus, 2018) and the second that older therapists were more likely to endorse the use of CBT techniques over other techniques with a poorer evidence base (Beidas et al., 2015). Both of these studies met all the quality criteria established by Hong, et al., (2018). Several studies found no significant relationship between age and adherence (e.g., Kosmerly, Waller, & Robinson, 2015; Waller et al., 2012).

Overall, the results indicated contradictory evidence on the link between age and therapist drift. It is possible that therapist's age co-varies with clinical experience (i.e., that they are the same constructs), but age and reliance on clinical experience have been shown to be separable influences (e.g., Ashcraft et al., 2011). As there is no specific reason that therapists' age should be associated with drift from ESTs, research is required to determine whether age is associated with therapists' tendency to drift, or whether the period during which therapists received their training (see, for example, Becker-Haimes, et al., 2019), requirements (or absence thereof) to remain up to date with research developments, or other factors, provide better explanations.

### **Theoretical Orientation**

The relationship between theoretical orientation and attitudes towards research and EST use was examined in 16 studies. Most of these studies demonstrated a relationship between a cognitive-behavioral orientation and EST use. For example, Brookman-Frazer, Haine, Baker-Ericzén, Zoffness, and Garland (2010) found that therapists in their study who reported a cognitive-behavioral orientation were more likely than those with different orientations to use ESTs. In a study of evidence-based practices provided for youth, a self-reported cognitive-



behavioral orientation predicted significantly greater use of ESTs compared to therapists who described their orientation as eclectic (Higa-McMillan, Nakamura, Morris, Jackson, & Slavin, 2015) and similar results were reported by Cho et al. (2019). A cognitive-behavioral orientation was also positively correlated with greater self-reported EST use in clinical settings (Nelson & Steele, 2007). In a study of therapists treating military veterans with PTSD, those with a cognitive-behavioral orientation tended to deliver most (but not all) ESTs recommended for this disorder by the United States' Veterans Affairs significantly more often than those with other orientations (Garcia et al., 2020). de Jong et al. (2020) reported that therapists with a CBT orientation used exposure therapy, an EST for the treatment of anxiety disorders among youth, significantly more often than those with a different orientation. While overall the quality of the research examining orientation and EST use above was high, most ESTs are CBT-based which likely produces a bias in reporting.

Research exploring the factors that influence treatment selection suggested that cognitive-behavioral or behavioral therapists rated evidence from controlled studies (e.g., randomized control trials) significantly more highly than did therapists with other orientations (Nelson & Steele, 2008) and Addis and Krasnow (2000) reported that psychodynamic/analytic-oriented therapists were significantly more likely to be skeptical about the value of treatment manuals compared to those with other orientations. Related research also supports the contention that a cognitive-behavioral orientation is positively correlated with use of ESTs and reliance on research, and attitudes to research (Allen et al., 2012; Reding, Chopita, Lau, & Innes-Gomberg, 2014; Stewart & Chambless, 2007; von Ranson & Robinson, 2006).

While a cognitive-behavioral orientation was also associated with increased use of treatment manuals, use remained low, with only 47% of cognitive-behavioral therapists in a recent study confirming that they used treatment manuals (Wallace & von Ranson, 2011),

although the instrument used in this study was novel and its psychometric properties were not reported. Similar results were reported by Simmons et al. (2008) and Waller et al. (2012) however. In contrast to attitudes to research, an eclectic orientation was associated with decreased treatment manual use, which Wallace and von Ranson (2011) suggested might indicate a need to modularize treatment manuals so that they become more suited to an eclectic orientation. This may make sense in the light of research by Borntrager et al. (2009) suggesting that modularization fosters acceptance of manuals by therapists generally.

It is unsurprising that theoretical orientation should be associated with adherence to ESTs. Cognitive-behavioral therapy (CBT) is the best evidenced therapeutic approach and training in CBT follows the scientist-practitioner model. Other orientations appear to be negatively associated with attitudes to research and fidelity to ESTs (Addis & Krasnow, 2000; Allen, et al., 2012; Reding et al., 2014; Nelson & Steele, 2008; Stewart & Chambless, 2007; von Ranson & Robinson, 2006), and it also appears also that clinicians who practice eclecticism may be less likely to be adherent to treatment manuals (Wallace & von Ranson, 2011), possibly because treatment manuals define a particular therapeutic approach. Further research concerning these relationships and their implications for therapist drift is required, especially given the poorer quality of some studies included in this section.

### **Critical Thinking**

There was evidence in four studies that therapists' ability to engage in critical thinking may affect attitudes to research and choice of treatment. For example, using a theoretically derived 28-item scale intended to tap critical thinking ability in psychologists, Sharp, Herbert and Redding (2008) suggested that selection of cognitive-behavioral techniques was associated with stronger critical thinking skills whereas selection of therapies with limited to non-existent evidence bases was associated with poorer critical thinking skills. These researchers speculated that those with stronger abilities in deduction and interpretation may

be drawn to ESTs and may be more likely to view novel treatments with skepticism. That said, the reliability of this study is somewhat compromised by the lack of data concerning the psychometric properties of the novel instruments used, although their theoretical basis was well described.

Gaudiano, Brown, and Miller (2011a) reported that those with stronger critical thinking abilities were less likely than those with weaker abilities to look favorably on alternative therapeutic interventions and to endorse unsupported health beliefs. In a separate analysis, these researchers also explored the relationship between attitudes to evidence-based practice, intuitive thinking style, attitudes to alternative therapies and erroneous health beliefs (Gaudiano, Brown, & Miller, 2011b). Findings suggested that an intuitive thinking style was associated with negative attitudes toward the use of research in clinical practice (a result supported by Scherr, et al., 2015), less openness to research-based treatments, and greater resistance to the use of ESTs when such use is required.

Overall, the literature indicates that those with higher critical thinking skills are more likely to use ESTs. Waller and Turner (2016) have suggested that students should be screened for attitudes toward evidence before being offered postgraduate opportunities. While this may be beneficial, it would involve risk as it suggests that critical thinking ability cannot be enhanced. Future research may wish to investigate critical thinking ability and its impacts on clinical decision-making in trainees in order to potentially reduce the likelihood of therapist drift.

### **Personality Traits**

Only two studies identified in this review examined the relationship between personality traits and with adherence to ESTs. Firstly, Peters-Scheffer, Didden, Korzilius, and Sturmey (2013) reported that therapists' openness to experience was significantly negatively associated with treatment fidelity when working with children with autism spectrum disorder,

although the representativeness of the sample in this study was unclear. Secondly, in a recent study of therapist fidelity to ESTs when working with patients with eating disorders, Brown and Perry (2018), reported that therapists' self-efficacy and therapeutic optimism each significantly predicted adherence. Again, however, it was not possible to tell if the sample used in this study was representative and the measures used appropriate, and it is possible that non-response bias was present. Overall, research in this area is not yet well developed. Considerably more work to explore correlations between personality traits and therapist drift, is warranted.

### **Cultural Competency**

In two studies, ethnic match between therapist and patient caregiver was found to be associated with greater adherence to an EST for treatment of youth exhibiting antisocial behaviors and substance use problems (Chapman & Schoenwald, 2011; Schoenwald, Halliday-Boykins & Henggeler, 2003). Schoenwald et al. (2003) speculated that the greater EST fidelity demonstrated when therapists and patient-caregivers were ethnically matched may indicate either that therapists were not as culturally or clinically responsive to patients of dissimilar ethnicities, or that patients prefer ethnically similar therapists and rate their adherence to evidence-based protocols more highly. That said, Cho et al. (2019) found no relationship between therapist adherence to ESTs and the percent of ethnic or racial minority clients seen by therapists, and research in this area can only be considered preliminary.

The finding that that ethnic similarity between therapists and patients appeared to be associated with greater adherence to ESTs by therapists was unexpected. There has been increasing emphasis placed on cultural competency in therapy over the past several decades (Sue, 2006) and it is possible that the benefits of ethnic similarity reflect the importance of cultural competency, rather than any benefit that comes from ethnic similarity per se. It is possible that therapists who are ethnically matched with patients strive to capitalize on that

connection by adhering to ESTs, or that they are unconsciously more liberal in their delivery of therapy with patients with whom they are not so connected. Alternatively, therapists may deliberately modify interventions to accommodate the needs of culturally diverse clients but in doing so deviate from protocols that have been empirically supported. It would be worth expanding research in this area to investigate whether greater cultural competency on behalf of therapists is similarly associated with greater EST fidelity (or poorer cultural competency is associated with poorer delivery).

### **Discussion**

The aim of the present study was to assess and synthesize existing literature to ascertain therapist characteristics that may be associated with therapist drift in psychologists. The results indicated that: (1) therapist knowledge; (2) attitudes toward research; (3) therapist anxiety; (4) clinical experience; (5) therapist age; (6) theoretical orientation; (7) critical thinking; (8) personality traits; and (9) cultural competency may be factors related to therapist drift in psychologists. While these correlates provide preliminary evidence to explain why therapists may drift from ESTs, it is important to highlight that much of the research that has been conducted to date requires replication and often, supplementation and as the literature grows, further work is required to examine the strength of the relationships of these correlates with therapist drift.

Waller and Turner (2016) have suggested steps that might be taken to curtail therapist drift, and these tend to focus on improving therapist competence and adherence. For example, the suggestion is made that prospective higher degree psychology students might be screened on the basis of personality correlates of drift or other factors that are known to be associated with a tendency to drift (e.g., gender; Waller & Turner, 2016). These authors also suggest that there be increased monitoring of therapists' adherence to ESTs throughout their professional careers. Broadly speaking, however, these suggestions appear to be less directed

toward creating the conditions in which therapists might thrive in the delivery of ESTs and more likely to be perceived as punitive. Screening on the basis of personality, for example, may be premature given that the association between personality and drift is a weak and under-researched. Conversely, forcing adherence post-training through regular monitoring of therapist performance is costly and might result in a process-oriented approach that merely encourages therapists to display endorsed skills when they are being monitored rather than internalizing evidence-based practices. Thus, in addition to the commitment of research attention to the causes of drift it may be better to focus on improving the quality of therapist learning across the professional lifespan. If, after all, therapists lack knowledge of ESTs (e.g., Allen et al., 2012; Nakamura et al., 2011), misunderstand their relevance to clinical practice (e.g. Addis and Krasnow, 2000; Jensen-Doss et al., 2009; Shafran et al., 2009), are biased toward use of the practices in which they were initially trained (Becker-Haimes et al., 2019; Cho et al, 2019), or that they use consistently in practice (e.g. Lilienfeld et al., 2013; Walfish, et al., 2012), and are uncertain about the impact on clients of confronting interventions such as exposure therapy (e.g. Deacon, Lickel et al., 2013; Deacon, Farrell et al., 2013; Schmidt et al., 2000), the key to reducing drift may be to provide therapists with training that fills these gaps in understanding and continues throughout therapists' clinical careers.

In respect to the above, two key areas require attention. First, as noted by McHugh and Barlow (2010) didactic training, which these authors define as the transfer of information through mechanisms such as printed materials and workshops, must be complemented by competence training, or processes to facilitate the acquisition of the skills necessary to deliver a treatment competently and with fidelity. This would suggest that recognition of the centrality of clinical supervision in the promotion of fidelity to empirically supported treatments is necessary. Falender, Shafranskea and Ofek (2014), have suggested a range of competencies that both supervisors and supervisees would be expected to develop that would

support ethical practice and the delivery of appropriate clinical interventions. These would include: (1) supervisor/supervisee attitudes (e.g. assigning importance to self-reflective practice, valuing efforts to enhance clinical competence, and adopting a stance welcoming of lifelong learning); and (2) supervisor skills (e.g. evaluating, reviewing, reflecting on, and developing the competencies of the supervisee; confirming that the supervisee demonstrates fidelity to ESTs). Notably, Ryba, Lo, and Andersen (2021) found, for example, that supervisor attitudes toward an EST for psychotherapeutic support for oncology patients predicted uptake and sustainment of that EST by supervisees at three and six months, and 12 months post-implementation.

While these efforts are laudable, however, the quality of supervision available to trainees and practicing psychologists is patchy. Falender (2018) notes, for example, that clinical supervision is often not treated as a distinct competency and that notwithstanding attempts by the APA and other organizations to codify supervision practice requirements (APA, 2015), clinical supervision is often poorly delivered. Relatedly, Waller and Turner (2016) note that “supervisory drift” may occur, which may result in supervisors being insufficiently challenging of their supervisees. Pugh and Margetts (2020) reported, for example, that supervisors often resorted to verbal descriptions of therapeutic techniques rather than demonstration of techniques and that this circumstance was related to lack of confidence by supervisors and poor understanding of experiential techniques. As effective supervision is likely to promote fidelity to ESTs, research attention should be directed to developing or enhancing core supervision competencies and disseminating supervision skills.

Similarly, State regulatory agencies or members’ organizations in many countries require psychologists to engage in continuing professional development (CPD) programs in order to maintain their registration as psychologists. Continuing professional development activities may include formal courses, as well as activities such as peer learning, supervision

responsibilities, literature reviewing and other less formal learning mechanisms (Neimeyer, Taylor, & Wear, 2009). While several member organizations (e.g., APA) endorse some continuing education courses, the content of most courses is only loosely regulated, if at all, and assessment against the learning outcomes for such courses is patchy (Neimeyer, Taylor, & Cox, 2012). Less formal activities are, largely, unregulated. Where content and learning activities are not regulated there exists the risk that CPD courses will reflect the biases, privileging of clinical experience, skepticism about evidence and the like that occurs in clinical practice, replicating misconceptions about ESTs and therapist uncertainty. In this respect it is notable that Becker-Haimes et al. (2019) suggested that therapists tend to integrate new information alongside the concepts they learned as graduates, rather than replace these concepts with new approaches that have a more solid evidence base. There may consequently be value in exploring the rigorousness with which CPD activities are controlled and delivered as well as therapist learning processes and therapist attitudes to continuing education, as effectively implemented approaches may reduce therapists' tendency to drift.

### **Limitations**

While the current study provides an important systematic review of the correlates of therapist drift, there are several important limitations that must be acknowledged. First, the focus of this review on clinician characteristics potentially curtailed discovery of some relevant findings that were embedded in research dealing with factors that are specific to the setting in which therapists' practice or that are relevant to training, supervision or dissemination practices. Similarly, a much wider range of studies that could be included in this review examined the use of particular interventions with target diagnoses. It is possible that such studies tangentially reported findings that would have been relevant to this review but were not featured in abstracts or keywords and were therefore not identified in our database searches.



Second, we opted to conduct a narrative systematic review rather than a meta-analysis as the aim of our study was to identify *potential* correlates of drift, which may then serve as a basis for further exploration in future research. Presently, data supporting some of the identified correlates is scant and limiting the literature to only those with data amenable to meta-analysis would result in the elimination of many correlates from consideration. This was contrary to our intent, which was to identify those factors which may increase the likelihood that therapists would drift from ESTs as a basis for further investigation. As the field progresses it will be important for meta-analyses to be conducted, and future researchers are encouraged to consider how the operationalization of variables within their studies will facilitate such analysis.

Much attention has been paid to some correlates of drift, such as therapists' attitudes and therapist anxiety. In these areas reliable and valid measures have been developed (e.g., the EBPAS; Aarons, 2004; Aarons et al., 2012) and findings replicated (e.g., replication by Waller et al., 2013 of work by Addis & Krasnow, 2000). However, other potential correlates are under-researched (e.g. personality, critical thinking ability and cultural competency) and scales to measure fidelity to ESTs in these areas are under-developed. Furthermore, operationalization of some studies lacks sophistication (e.g. Hamill & Wiener, 2018) or more sophisticated approaches are only just emerging (Becker-Haimes et al., 2019).

Finally, the quality assessment carried out on research included in this review, identified that a number of studies were of uncertain quality and many were conducted more than 10 years ago. With respect to quality, a common deficiency was the reporting of psychometric properties of the instruments used in research. Possibly because research into therapist drift is relatively new, novel approaches to identification have been deployed. However, while these instruments may be novel, their theoretical basis needs to be explained, and psychometric properties reported. Many studies also suffered from a lack of clarity with respect to the

representativeness of samples use and the influence of non-response bias. Authors of future systematic reviews and/or meta-analyses in this area may wish to contact individual authors to obtain such detail when the information cannot be ascertained from the published manuscript, as this approach was not conducted in the present study due to large number of included studies.

### **Conclusion**

The tendency by therapists to drift from evidence-based practice and not to deploy ESTs with fidelity is a widely recognized phenomenon. While its importance is debated, the increasingly strong base of evidence suggesting that science improves practice suggests that therapist drift should be addressed lest patients receive poorer service than they otherwise would. This review has been the first to examine the therapist characteristics that are associated with drift in a systematic way and has allowed relationships between causes and research gaps to be identified. This work is intended to stimulate further research into therapist drift in recognition of these relationships and research gaps. It is also intended to widen the research remit such that attention is paid not only to drift from therapies directed to help patients manage particular disorders, but also from evidence-based practice when working with specific patient groups.

### References

\* indicates articles included in the present systematic review

\*Aarons, G. A. (2004). Mental health provider attitudes toward adoption of evidence-based practice: The Evidence-Based Practice Attitude Scale (EBPAS). *Mental Health Services Research, 6*, 61-74. doi:10.1023/B:MHSR.0000024351.12294.65

\*Aarons, G. A., Cafri, G., Lugo, L., & Sawitzky, A. (2012). Expanding the domains of attitudes towards evidence-based practice: The Evidence Based Practice Attitude Scale-50. *Administration and Policy in Mental Health and Mental Health Services Research, 39*, 331-340. doi:10.1007/s10488-010-0302-3

\*Addis, M. E., & Krasnow, A. D. (2000). A national survey of practicing psychologists' attitudes toward psychotherapy treatment manuals. *Journal of Consulting and Clinical Psychology, 68*, 331-339. doi:10.1037/0022-006X.68.2.331

Addis, M. E., Hatgis, C., Krasnow, A. D., Jacob, K., Bourne, L., & Mansfield, A. (2004). Effectiveness of cognitive-behavioral treatment for panic disorder versus treatment as usual in a managed care setting. *Journal of Consulting and Clinical Psychology, 72*, 625-635. doi:10.1037/0022-006X.72.4.625

\*Allen, B., Gharagozloo, L., & Johnson, J. C. (2012). Clinician knowledge and utilization of empirically supported treatments for maltreated children. *Child Maltreatment, 17*, 11-21. doi:10.1177/1077559511426333

American Psychological Association. (1995). Task force on promotion and dissemination of psychological procedures, division of clinical psychology, training in and dissemination of empirically-validated psychological treatments: Report and recommendations. *The Clinical Psychologist, 48*, 3-23.

<http://www.div12.org/sites/default/files/InitialReportOfTheChamblessTaskForce.pdf>

American Psychological Association. (2015). Guidelines for clinical supervision in health service psychology. *The American Psychologist*, *70*, 33-46. doi:10.1037/a0038112.

APA Presidential Task Force on Evidence-Based Practice. (2006). Evidence-based practice in psychology. *The American Psychologist*, *61*, 271-285. doi:10.1037/0003-066X.61.4.271

\*Ashcraft, R. G., Foster, S. L., Lowery, A. E., Henggeler, S. W., Chapman, J. E., & Rowland, M. D. (2011). Measuring practitioner attitudes toward evidence-based treatments: A validation study. *Journal of Child & Adolescent Substance Abuse*, *20*, 166-183. doi:10.1080/1067828X.2011.555276

\*Barry, D. T., Fulgieri, M. D., Lavery, M. E., Chawarski, M. C., Najavits, L. M., Schottenfeld, R. S., & Pantalon, M. V. (2008). Research-and community-based clinicians' attitudes on treatment manuals. *The American Journal on Addictions*, *17*, 145-148. doi:10.1080/10550490701860880

\*Bearman, S. K., Wadkins, M., Bailin, A., & Doctoroff, G. (2015). Pre-practicum training in professional psychology to close the research–practice gap: Changing attitudes toward evidence-based practice. *Training and Education in Professional Psychology*, *9*, 13-20. doi:10.1037/tep0000052

\*Becker, C. B., Zayfert, C., & Anderson, E. (2004). A survey of psychologists' attitudes towards and utilization of exposure therapy for PTSD. *Behaviour Research and Therapy*, *42*, 277-292. doi:10.1016/S0005-7967(03)00138-4

\*Becker-Haimes, E. M., Lushin, V., Creed, T. A., & Beidas, R. S. (2019). Characterizing the heterogeneity of clinician practice use in community mental health using latent profile analysis. *BMC Psychiatry*, *19*, 257-268. doi:10.1186/s12888-019-2234-0

\*Beidas, R. S., Edmunds, J., Ditty, M., Watkins, J., Walsh, L., Marcus, S., & Kendall, P. (2014). Are inner context factors related to implementation outcomes in cognitive-

behavioral therapy for youth anxiety? *Administration and Policy in Mental Health and Mental Health Services Research*, 41, 788-799. doi:10.1007/s10488-013-0529-x

\*Beidas, R. S., Marcus, S., Aarons, G. A., Hoagwood, K. E., Schoenwald, S., Evans, A. C., ... & Adams, D. R. (2015). Predictors of community therapists' use of therapy techniques in a large public mental health system. *JAMA Pediatrics*, 169, 374-382.  
doi:10.1001/jamapediatrics.2014.3736

Berry, K., & Haddock, G. (2008). The implementation of the NICE guidelines for schizophrenia: Barriers to the implementation of psychological interventions and recommendations for the future. *Psychology and Psychotherapy: Theory, Research and Practice*, 81, 419-436. doi:10.1348/147608308X329540

\*Boisvert, C. M., & Faust, D. (2006). Practicing psychologists' knowledge of general psychotherapy research findings: Implications for science-practice relations. *Professional Psychology: Research and Practice*, 37, 708-716.  
doi:10.1037/0735-7028.37.6.708

\*Borntreger, C. F., Chorpita, B. F., Higa-McMillan, C., & Weisz, J. R. (2009). Provider attitudes toward evidence-based practices: Are the concerns with the evidence or with the manuals? *Psychiatric Services*, 60, 677-681. doi:10.1176/ps.2009.60.5.677

Borntreger, C., Chorpita, B. F., Higa-McMillan, C. K., Daleiden, E. L., & Starace, N. (2013). Usual care for trauma-exposed youth: Are clinician-reported therapy techniques evidence-based? *Children and Youth Services Review*, 35, 133-141.  
doi:10.1016/j.chilyouth.2012.09.018

\*Brookman-Frazer, L., Garland, A. F., Taylor, R., & Zoffness, R. (2009). Therapists' attitudes towards psychotherapeutic strategies in community-based psychotherapy with children with disruptive behavior problems. *Administration and Policy in Mental*

*Health and Mental Health Services Research*, 36, 1-12. doi:10.1007/s10488-008-0195-6

- \*Brookman-Frazee, L., Haine, R. A., Baker-Ericzén, M., Zoffness, R., & Garland, A. F. (2010). Factors associated with use of evidence-based practice strategies in usual care youth psychotherapy. *Administration and Policy in Mental Health and Mental Health Services Research*, 37, 254-269. doi:10.1007/s10488-009-0244-9
- \*Brown, C. E., & Perry, K. N. (2018). Cognitive behavioral therapy for eating disorders: How do clinician characteristics impact on treatment fidelity? *Journal of Eating Disorders*, 6, 1-10. doi:10.1186/s40337-018-0208-0
- Brujniks, S. J., Franx, G., & Huibers, M. J. (2018). The implementation and adherence to evidence-based protocols for psychotherapy for depression: The perspective of therapists in Dutch specialized mental healthcare. *BMC Psychiatry*, 18, 190-200. doi:10.1186/s12888-018-1768-x
- \*Campbell, B., Buti, A., Fussell, H., Srikanth, P., Mccarty, D., & Guydish, J. (2013). Therapist predictors of treatment delivery fidelity in a community-based trial of 12-step facilitation. *The American Journal of Drug and Alcohol Abuse*, 39, 304-311. doi:10.3109/00952990.2013.799175
- \*Chapman, J. E., & Schoenwald, S. K. (2011). Ethnic similarity, therapist adherence, and long-term multisystemic therapy outcomes. *Journal of Emotional and Behavioral Disorders*, 19, 3-16. doi:10.1177/1063426610376773
- \*Cho, E., Wood, P. K., Taylor, E. K., Hausman, E. M., Andrews, J. H., & Hawley, K. M. (2019). Evidence-based treatment strategies in youth mental health services: Results from a national survey of providers. *Administration and Policy in Mental Health and Mental Health Services Research*, 46, 71-81. doi:10.1007/s10488-018-0896-4

- Craske, M. G., Rowe, M., Lewin, M., & Noriega-Dimitri, R. (1997). Interoceptive exposure versus breathing retraining within cognitive-behavioral therapy for panic disorder with agoraphobia. *British Journal of Clinical Psychology, 36*, 85-99. doi:10.1111/j.2044-8260.1997.tb01233.x
- Cukrowicz, K. C., White, B. A., Reitzel, L. R., Burns, A. B., Driscoll, K. A., Kemper, T. S., & Joiner, T. E. (2005). Improved treatment outcome associated with the shift to empirically supported treatments in a graduate training clinic. *Professional Psychology: Research and Practice, 36*, 330-337. doi:10.1037/0735-7028.36.3.330
- \*Daglish, A., & Waller, G. (2019). Clinician and patient characteristics and cognitions that influence weighing practice in cognitive-behavioral therapy for eating disorders. *International Journal of Eating Disorders, 52*, 977-986. doi:10.1002/eat.23096
- \*Deacon, B. J., Farrell, N. R., Kemp, J. J., Dixon, L. J., Sy, J. T., Zhang, A. R., & McGrath, P. B. (2013). Assessing therapist reservations about exposure therapy for anxiety disorders: The Therapist Beliefs about Exposure Scale. *Journal of Anxiety Disorders, 27*, 772-780. doi:10.1016/j.janxdis.2013.04.006
- \*Deacon, B. J., Lickel, J. J., Farrell, N. R., Kemp, J. J., & Hipol, L. J. (2013). Therapist perceptions and delivery of interoceptive exposure for panic disorder. *Journal of Anxiety Disorders, 27*, 259-264. doi:10.1016/j.janxdis.2013.02.004
- \*de Jong, R., Lommen, M. J., van Hout, W. J., de Jong, P. J., & Nauta, M. H. (2020). Therapists' characteristics associated with the (non-) use of exposure in the treatment of anxiety disorders in youth: A survey among Dutch-speaking mental health practitioners. *Journal of Anxiety Disorders, 73*, 1-8. doi: 10.1016/j.janxdis.2020.102230
- \*D'Souza Walsh, K., Davies, L., Pluckwell, H., Huffinley, H., & Waller, G. (2019). Alliance, technique, both, or more? Clinicians' views on what works in cognitive-behavioral

therapy for eating disorders. *International Journal of Eating Disorders*, 52, 278-282.

doi:10.1002/eat.23033

Eysenck, H. J. (1952). The effects of psychotherapy: An evaluation. *Journal of Consulting Psychology*, 16, 319-324. doi:10.1037/h0063633

Falender, C. A. (2018). Clinical supervision – the missing ingredient. *American Psychologist*, 73, 1240-1250. doi:10.1037/amp0000385

Falender, C. A., Shafranske, E. P., & Ofek, A. (2014). Competent clinical supervision: Emerging effective practices. *Counselling Psychology Quarterly*, 27, 393-408. doi:10.1080/09515070.2014.934785

\*Farrell, N. R., Deacon, B. J., Kemp, J. J., Dixon, L. J., & Sy, J. T. (2013). Do negative beliefs about exposure therapy cause its suboptimal delivery? An experimental investigation. *Journal of Anxiety Disorders*, 27, 763-771. doi:10.1016/j.janxdis.2013.03.007

\*Garcia, H. A., Mignogna, J., DeBeer, B. R., Song, J., Haro, E. K., & Finley, E. P. (2020). Provider factors predict use of evidence-based psychotherapies in Veterans Affairs posttraumatic stress disorder specialty programs: The role of profession, theoretical orientation, and training. *Traumatology*, 26, 227–234. doi:10.1037/trm0000220

\*Gaudiano, B. A., Brown, L. A., & Miller, I. W. (2011a). Factors associated with critical thinking abilities in psychotherapists. *Cognitive Behaviour Therapy*, 40, 137-146. doi:10.1080/16506073.2010.550632

\*Gaudiano, B. A., Brown, L. A., & Miller, I. W. (2011b). Let your intuition be your guide? Individual differences in the evidence-based practice attitudes of psychotherapists. *Journal of Evaluation in Clinical Practice*, 17, 628-634. doi:10.1111/j.1365-2753.2010.01508.x



- \*Hamill, N. R., & Wiener, K. K. K. (2018). Attitudes of psychologists in Australia towards evidence-based practice in psychology. *Australian Psychologist*, *53*, 477-485.  
doi:10.1111/ap.12342
- \*Harned, M. S., Dimeff, L. A., Woodcock, E. A., & Contreras, I. (2013). Predicting adoption of exposure therapy in a randomized controlled dissemination trial. *Journal of Anxiety Disorders*, *27*, 754-762. doi:10.1016/j.janxdis.2013.02.006
- \*Hernandez Hernandez, M. E., & Waller, G. (2021). Are we on the same page? A comparison of patients' and clinicians' opinions about the importance of CBT techniques. *Cognitive Behaviour Therapy*, 1-13. Advance online publication.  
doi:10.1080/16506073.2020.1862292
- \*Higa-McMillan, C. K., Nakamura, B. J., Morris, A., Jackson, D. S., & Slavin, L. (2015). Predictors of use of evidence-based practices for children and adolescents in usual care. *Administration and Policy in Mental Health and Mental Health Services Research*, *42*, 373-383. doi:10.1007/s10488-014-0578-9
- Hong, Q.N., Pluye P., Fàbregues, S., Bartlett, G., Boardman, F., Cargo, M., Dagenais, P., Gagnon, M-P., Griffiths, F., Nicolau, B., O'Cathain, A., Rousseau, M-C., Vedel, I. (2018). *Mixed Methods Appraisal Tool (MMAT), version 2018*. Registration of Copyright (#1148552), Canadian Intellectual Property Office, Industry Canada.
- \*Hundt, N. E., Harik, J. M., Barrera, T. L., Cully, J. A., & Stanley, M. A. (2016). Treatment decision-making for posttraumatic stress disorder: The impact of patient and therapist characteristics. *Psychological Trauma: Theory, Research, Practice, and Policy*, *8*, 728-735. doi:10.1037/tra0000102
- \*Jensen-Doss, A., Hawley, K. M., Lopez, M., & Osterberg, L. D. (2009). Using evidence-based treatments: The experiences of youth providers working under a

mandate. *Professional Psychology: Research and Practice*, 40, 417-424.

doi:10.1037/a0014690

Kazantzis, N., Deane, F. P., & Ronan, K. R. (2000). Homework assignments in cognitive and behavioral therapy: A meta-analysis. *Clinical Psychology: Science and Practice*, 7, 189-202. doi:10.1093/clipsy.7.2.189

\*Kosmerly, S., Waller, G., & Robinson, A. L. (2015). Clinician adherence to guidelines in the delivery of family-based therapy for eating disorders. *International Journal of Eating Disorders*, 48, 223-229. doi:10.1002/eat.22276

\*Kraan, A. E., Dijkstra, B. A., & Markus, W. (2018). Treatment delivery of the community reinforcement approach in outpatient addiction treatment. *Evaluation and Program Planning*, 70, 61-66. doi:10.1016/j.evalprogplan.2018.05.004

\*Levita, L., Duhne, P. G. S., Girling, C., & Waller, G. (2016). Facets of clinicians' anxiety and the delivery of cognitive behavioral therapy. *Behaviour Research and Therapy*, 77, 157-161. doi:10.1016/j.brat.2015.12.015

Lilienfeld, S. O., Ritschel, L. A., Lynn, S. J., Cautin, R. L., & Lutzman, R. D. (2013). Why many clinical psychologists are resistant to evidence-based practice: Root causes and constructive remedies. *Clinical Psychology Review*, 33, 883-900.

doi:10.1016/j.cpr.2012.09.008

McHugh, R. K., & Barlow, D. H. (2010). The dissemination and implementation of evidence-based psychological treatments: A review of current efforts. *American Psychologist*, 65, 73-84. doi: 10.1037/a0018121

Meehl, P. E. (1986). Causes and effects of my disturbing little book. *Journal of Personality Assessment*, 50, 370-375. doi:10.1207/s15327752jpa5003\_6

- \*Meyer, J. M., Farrell, N. R., Kemp, J. J., Blakey, S. M., & Deacon, B. J. (2014). Why do clinicians exclude anxious clients from exposure therapy? *Behaviour Research and Therapy*, *54*, 49-53. doi:10.1016/j.brat.2014.01.004
- Moher, D., Shamseer, L., Clarke, M., Ghersi, D., Liberati, A., Petticrew, M., . . . Stewart, L. A. (2015). Preferred reporting items for systematic review and meta-analysis protocols (PRISMA-P) 2015 statement. *Systematic Reviews*, *4*, 1. doi: 10.1186/2046-4053-4-1
- \*Moritz, S., Külz, A., Voderholzer, U., Hillebrand, T., McKay, D., & Jelinek, L. (2019). “Phobie à deux” and other reasons why clinicians do not apply exposure with response prevention in patients with obsessive–compulsive disorder. *Cognitive Behaviour Therapy*, *48*, 162-176. doi:10.1080/16506073.2018.1494750
- \*Mulkens, S., de Vos, C., de Graaff, A., & Waller, G. (2018). To deliver or not to deliver cognitive behavioral therapy for eating disorders: Replication and extension of our understanding of why therapists fail to do what they should do. *Behaviour Research and Therapy*, *106*, 57-63. doi:10.1016/j.brat.2018.05.004
- \*Mussell, M. P., Crosby, R. D., Crow, S. J., Knopke, A. J., Peterson, C. B., Wonderlich, S. A., & Mitchell, J. E. (2000). Utilization of empirically supported psychotherapy treatments for individuals with eating disorders: A survey of psychologists. *International Journal of Eating Disorders*, *27*, 230-237. doi: 10.1002/(SICI)1098-108X(200003)27:2<230::AID-EAT11>3.0.CO;2-0
- \*Nakamura, B. J., Higa-McMillan, C. K., Okamura, K. H., & Shimabukuro, S. (2011). Knowledge of and attitudes towards evidence-based practices in community child mental health practitioners. *Administration and Policy in Mental Health and Mental Health Services Research*, *38*, 287-300. doi:10.1007/s10488-011-0351-2
- Neimeyer, G. J., Taylor, J. M., & Cox, D. R. (2012). On hope and possibility: Does continuing professional development contribute to ongoing professional

competence? *Professional Psychology: Research and Practice*, 43, 476-486.

doi:10.1037/a0029613

Neimeyer, G. J., Taylor, J. M., & Wear, D. M. (2009). Continuing education in psychology:

Outcomes, evaluations, and mandates. *Professional Psychology: Research and Practice*, 40, 617-624. doi:10.1037/a0016655

\*Nelson, T. D., & Steele, R. G. (2007). Predictors of practitioner self-reported use of evidence-based practices: Practitioner training, clinical setting, and attitudes toward research. *Administration and Policy in Mental Health and Mental Health Services Research*, 34, 319-330. doi:10.1007/s10488-006-0111-x

\*Nelson, T. D., & Steele, R. G. (2008). Influences on practitioner treatment selection: Best research evidence and other considerations. *The Journal of Behavioral Health Services & Research*, 35, 170-178. doi:10.1007/s11414-007-9089-8

\*Patterson Silver Wolf, D. A., van den Berk-Clark, C., Williams, S. L., & Dulmus, C. N. (2018). Are therapists likely to use a new empirically supported treatment if required?. *Journal of Social Work*, 18, 666-678. doi: 10.1177/1468017317743138

\*Peters-Scheffer, N., Didden, R., Korzilius, H., & Sturmey, P. (2013). Therapist characteristics predict discrete trial teaching procedural fidelity. *Intellectual and Developmental Disabilities*, 51, 263-272. doi:10.1352/1934-9556-51.4.263

\*Pittig, A., Kotter, R., & Hoyer, J. (2019). The struggle of behavioral therapists with exposure: Self-reported practicability, negative beliefs, and therapist distress about exposure-based interventions. *Behavior Therapy*, 50, 353-366.

doi:10.1016/j.beth.2018.07.003

Pugh, M., & Margetts, A. (2020). Are you sitting (un)comfortably? Action-based supervision and supervisory drift. *Cognitive Behaviour Therapist*, 13, e17. doi:

10.1017/S1754470X20000185

- \*Ryba, M. M., Lo, S. B., & Andersen, B. L. (2021). Sustainability of a biobehavioral intervention implemented by therapists and sustainment in community settings. *Translational Behavioral Medicine, 11*, 96–103. doi: 10.1093/tbm/ibz175
- \*Reding, M. E., Chorpita, B. F., Lau, A. S., & Innes-Gomberg, D. (2014). Providers' attitudes toward evidence-based practices: Is it just about providers, or do practices matter, too? *Administration and Policy in Mental Health and Mental Health Services Research, 41*, 767-776. doi:10.1007/s10488-013-0525-1
- \*Ruzek, J., Eftekhari, A., Rosen, C., Crowley, J., Kuhn, E., Foa, E., . . . Karlin, B. (2014). Factors related to clinician attitudes toward prolonged exposure therapy for PTSD. *Journal of Traumatic Stress, 27*, 423-429. doi:10.1002/jts.21945
- Salkovskis, P. (1991). The importance of behaviour in the maintenance of anxiety and panic: A cognitive account. *Behavioral Psychotherapy, 19*, 6-19.  
doi:10.1017/S0141347300011472
- \*Sars, D., & van Minnen, A. (2015). On the use of exposure therapy in the treatment of anxiety disorders: A survey among cognitive behavioral therapists in the Netherlands. *BMC Psychology, 3*, 1-10. doi:10.1186/s40359-015-0083-2
- \*Scherr, S. R., Herbert, J. D., & Forman, E. M. (2015). The role of therapist experiential avoidance in predicting therapist preference for exposure treatment for OCD. *Journal of Contextual Behavioral Science, 4*, 21-29. doi:10.1016/j.jcbs.2014.12.002
- Schmidt, N. B., Woolaway-Bickel, K., Trakowski, J., Santiago, H., Storey, J., Koselka, M., & Cook, J. (2000). Dismantling cognitive-behavioral treatment for panic disorder: Questioning the utility of breathing retraining. *Journal of Consulting and Clinical Psychology, 68*, 417-424. doi:10.1037/0022-006X.68.3.417

- \*Schoenwald, S. K., Halliday-Boykins, C. A., & Henggeler, S. W. (2003). Client-level predictors of adherence to MST in community service settings. *Family Process, 42*, 345-359. doi:10.1111/j.1545-5300.2003.00345.x
- Shafran, R., Clark, D. M., Fairburn, C. G., Arntz, A., Barlow, D. H., Ehlers, A., . . . Wilson, G. T. (2009). Mind the gap: Improving the dissemination of CBT. *Behaviour Research and Therapy, 47*, 902-909. doi:10.1016/j.brat.2009.07.003
- \*Sharp, L. R., Herbert, J. D., & Redding, R. E. (2008). The role of critical thinking skills in practicing clinical psychologists' choice of intervention techniques. *Scientific Review of Mental Health Practice, 6*, 21-30. Retrieved from <https://www.srmhp.org>
- \*Sijercic, I., Lane, J. E., Gutner, C. A., Monson, C. M., & Stirman, S. W. (2020). The association between clinician and perceived organizational factors with early fidelity to cognitive processing therapy for posttraumatic stress disorder in a randomized controlled implementation trial. *Administration and Policy in Mental Health and Mental Health Services Research, 47*, 8-18. doi:10.1007/s10488-019-00966-7
- \*Simmons, A. M., Milnes, S. M., & Anderson, D. A. (2008). Factors influencing the utilization of empirically supported treatments for eating disorders. *Eating Disorders, 16*, 342-354. doi:10.1080/10640260802116017
- \*Stewart, R. E., & Chambless, D. L. (2007). Does psychotherapy research inform treatment decisions in private practice? *Journal of Clinical Psychology, 63*, 267-281. doi:10.1002/jclp.20347
- \*Stumpf, R. E., Higa-McMillan, C. K., & Chorpita, B. F. (2009). Implementation of evidence-based services for youth: Assessing provider knowledge. *Behavior Modification, 33*, 48-65. doi:10.1177/0145445508322625
- Sue, S. (2006). Cultural competency: From philosophy to research and practice. *Journal of Community Psychology, 34*, 237-245. doi:10.1002/jcop.20095

- \*Turner, H., Tatham, M., Lant, M., Mountford, V. A., & Waller, G. (2014). Clinicians' concerns about delivering cognitive-behavioral therapy for eating disorders. *Behaviour Research and Therapy*, *57*, 38-42. doi:10.1016/j.brat.2014.04.003
- \*van Minnen, A., Hendriks, L., & Olf, M. (2010). When do trauma experts choose exposure therapy for PTSD patients? A controlled study of therapist and patient factors. *Behaviour Research and Therapy*, *48*, 312-320. doi:10.1016/j.brat.2009.12.003
- \*von Ranson, K. M., & Robinson, K. E. (2006). Who is providing what type of psychotherapy to eating disorder clients? A survey. *International Journal of Eating Disorders*, *39*, 27-34. doi:10.1002/eat.20201
- Walfish, S., McAlister, B., O'Donnell, P., & Lambert, M. (2012). An investigation of self-assessment bias in mental health providers. *Psychological Reports*, *110*, 639-644. doi:10.2455/02.07.17.PRO.110.2
- \*Wallace, L. M., & von Ranson, K. M. (2011). Treatment manuals: Use in the treatment of bulimia nervosa. *Behaviour Research and Therapy*, *49*, 815-820. doi:10.1016/j.brat.2011.09.002
- \*Wallace, L. M., & von Ranson, K. M. (2012). Perceptions and use of empirically supported psychotherapies among eating disorder professionals. *Behaviour Research and Therapy*, *50*, 215-222. doi:10.1016/j.brat.2011.12.006
- Waller, G. (2009). Evidence-based treatment and therapist drift. *Behaviour Research and Therapy*, *47*, 119-127. doi:10.1016/j.brat.2008.10.018
- Waller, G., & Turner, H. (2016). Therapist drift redux: Why well-meaning clinicians fail to deliver evidence-based therapy, and how to get back on track. *Behaviour Research and Therapy*, *77*, 129-137. doi:10.1016/j.brat.2015.12.005
- \*Waller, G., Mountford, V. A., Tatham, M., Turner, H., Gabriel, C., & Webber, R. (2013). Attitudes towards psychotherapy manuals among clinicians treating eating

disorders. *Behaviour Research and Therapy*, 51, 840-844.

doi:10.1016/j.brat.2013.10.004

\*Waller, G., Stringer, H., & Meyer, C. (2012). What cognitive behavioral techniques do therapists report using when delivering cognitive behavioral therapy for the eating disorders? *Journal of Consulting and Clinical Psychology*, 80, 171-175.

doi:10.1037/a0026559

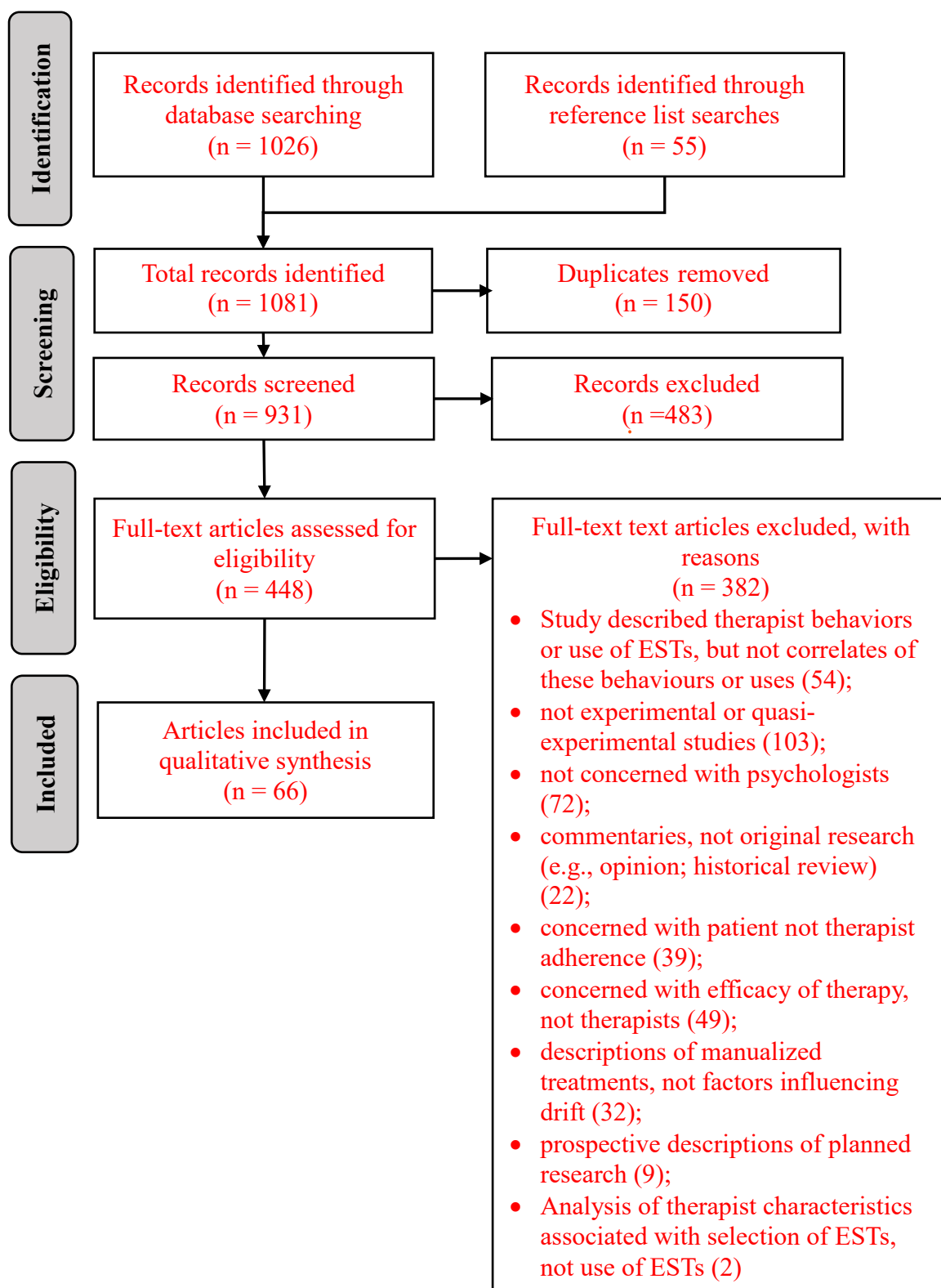
Whiteside, S. P., Sim, L. A., Morrow, A. S., Farah, W. H., Hilliker, D. R., Murad, M. H., & Wang, Z. (2020). A meta-analysis to guide the enhancement of CBT for childhood anxiety: Exposure over anxiety management. *Clinical Child and Family Psychology Review*, 23, 102-121. doi:10.1007/s10567-019-00303-2

\*Wisniewski, L., Hernandez, M. E. H., & Waller, G. (2018). Therapists' self-reported drift from dialectical behavior therapy techniques for eating disorders. *Eating Behaviors*, 28, 20-24. doi:10.1016/j.eatbeh.2017.12.001

Wootton, B. M., Bragdon, L., Worden, B., Diefenbach, G. J., Stevens, M. C., & Tolin, D. (2020). Measuring within-session and between-session compliance in hoarding disorder: A preliminary investigation of the psychometric properties of the CBT Compliance Measure (CCM) and Patient Exposure/Response Prevention Adherence Scale for Hoarding (PEAS-H). *Assessment*, 1-14. doi:10.1177/1073191120918024



Figure 1. Study flow chart



**Table 1***Study Characteristics and Quality Assessment*

Study	Country	Correlate examined									Study type	Quality assessment				
		Therapist knowledge	Attitudes towards	Therapist anxiety	Clinical experience	Therapist age	Theoretical orientation	Critical thinking	Personality traits	Cultural competency		Criterion 1	Criterion 2	Criterion 3	Criterion 4	Criterion 5
Aarons (2004)	USA	+			+						QD	+	+	+	+	+
Aarons, Cafri, Lugo, & Sawitzky (2012)	USA	+	+		+						QD	+	+	+	+	+
Addis & Krasnow (2000)	USA	+	+		+		+				QD	+	+	+	+	+
Allen, Gharagozloo, & Johnson (2012)	USA	+	+		+		+				QD	+	?	+	-	+
Ashcraft, Foster, Lowery, Henggeler, Chapman & Rowland (2011)	USA				+						QD	+	+	+	+	+
Barry et al. (2008)	USA				+						QD	+	?	-	?	+
Bearman, Wadkins, Bailin & Doctoroff (2015)	USA		+								QD	+	+	+	+	+
Becker, Zayfert, & Anderson (2004)	USA	+		+							QD	+	+	+	-	+
Becker-Haimes, Lushin, Creed & Beidas (2019)	USA	+	+		+						QD	+	+	+	+	+
Beidas et al. (2014)	USA				+						QD	+	+	+	?	+
Beidas et al. (2015)	USA	+	+			+					QD	+	+	+	+	+
Boisvert & Faust (2006)	USA	+									QD	+	+	?	+	-

Borntrager, Chorpita, Higa-McMillan & Weisz (2009)	USA	+	+			+			QD	+	+	+	?	+
Brookman-Frazee, Garland, Taylor & Zoffness (2009)	USA		+						QD	+	+	+	+	+
Brookman-Frazee, Haine, Baker-Ericzén, Zoffness & Garland (2010)	USA					+			QD	+	+	+	+	+
Brown & Perry (2018)	AUS	+					+		QD	+	?	?	?	+
Campbell, Buti, Fussell, Srikanth, McCarty & Guydish (2013)	USA	+			+				QD	+	?	+	+	?
Chapman & Schoenwald (2011)	USA/CA							+	QD	+	?	+	?	+
Cho, Wood, Taylor, Hausman, Andrews, & Hawley (2019)	USA		+		+	+			QD	+	?	+	+	+
Daglish & Waller (2019)	INTL				+				QD	+	?	+	?	+
Deacon, Farrell et al. (2013)	USA	+		+		+			QD	+	?	+	?	+
Deacon, Lickel, Farrell, Kemp, & Hipol (2013)	USA				+				QD	+	?	?	-	+
de Jong, Lommen, van Hout, de Jong & Nauta (2020)	NL/BE				+	+	+	+	QD	+	+	+	?	+
D'Souza Walsh, Davies, Pluckwell, Huffinley & Waller (2019)	UK		+						QD	+	?	+	?	+
Farrell, Deacon, Kemp, Dixon & Sy (2013)	USA		+	+					RAND	+	+	+	+	?
Garcia, Mignogna, DeBeer, Song, Haro & Finley (2020)	USA						+		QD	+	?	-	-	+
Gaudiano, Brown & Miller (2011a)	USA						+		QD	+	?	+	?	+
Gaudiano, Brown & Miller (2011b)	USA						+		QD	+	?	+	?	+
Hamill & Wiener (2018)	AUS				+				QD	+	?	-	?	?
Harned, Dimeff, Woodcock, & Contreras (2013)	USA				+				RAND	+	?	+	-	?
Hernandez Hernandez, & Waller (2021)	UK				+				QD	+	+	+	?	+
Higa-McMillan, Nakamura, Morris, Jason & Slavin (2015)	USA								QD	+	?	+	+	+
Hundt, Harik, Barrera, Cully & Stanley (2016)	USA/UK				+	+			QD	+	?	?	?	+

Jensen-Doss, Hawley, Lopez & Osterberg (2009)	USA		+	+				QD	+	?	+	+	+
Kosmerly, Waller & Robinson (2015)	CA/USA				+			QD	+	?	+	?	+
Kraan, Dijkstrab & Markus (2018)	NL				+			QD	+	?	+	+	+
Levita, Duhne, Girling & Waller (2016)	UK			+				QD	+	?	+	?	+
Meyer, Farrell, Kemp, Blakey & Deacon (2014)	USA			+	+			QD	+	?	+	?	+
Moritz, Külz, Voderholzer, Hillebrand, McKay & Jelinek (2019)	DE			+				QD	+	?	?	?	+
Mulkens, de Vos, de Graaf & Waller (2018)	NL			+	+			QD	+	?	+	?	+
Mussell et al. (2000)	USA	+						QD	+	+	?	?	+
Nakamura, Higa-McMillan, Okamura & Shimabukuro (2011)	USA	+			+			QD	+	?	+	+	+
Nelson & Steele (2007)	USA		+		+	+		QD	+	+	?	?	+
Nelson & Steele (2008)	USA				+	+		QD	+	?	?	?	+
Patterson Silver Wolf, van den Berk-Clark, Williams & Dulmus (2018)	USA	+			+			QD	+	+	+	?	+
Peters-Scheffer, Didden, Korzilius & Sturmey (2013)	NL					+		QD	+	?	+	+	+
Pittig, Kotter & Hoyer (2019)	DE			+				QD	+	?	+	-	+
Reding, Chorpita, Lau & Innes-Gomberg (2014)	USA					+		QD	+	?	+	+	+
Ruzek et al. (2014)	USA				+			QD	+	+	+	+	+
Ryba, Lo & Andersen (2021)	USA		+					QD	+	+	+	?	+
Sars & van Minnen (2015)	NL	+						QD	+	+	+	-	+
Scherr, Herbert & Forman (2015)	USA			+		+		QD	+	?	+	?	+
Schoenwald, Halliday-Boykins & Henggeler (2003)	USA						+	QD	+	+	+	?	+
Sharp, Herbert & Reding (2008)	USA					+		QD	+	+	?	-	+
Sijercic, Lane, Gutner, Monson & Stirman (2020)	CA	+		+				RAND	+	?	?	?	-
Simmons, Milnes & Anderson (2008)	USA	+		+		+		QD	+	?	?	+	+

