

The Utility of Psychotherapy: Meaningful Treatments for Depression and Anxiety

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The Utility of Psychotherapy: What is Meaningful When Treating Depression or Anxiety

COVID-19 has exacerbated symptoms of depression and anxiety for up to a third of the world's general population (Salari et al., 2020). Opinions on mental illnesses vary significantly despite the impact of these conditions on physical well-being, and the documented benefits of improving mental health (Todor, 2013; Ohrnberger et al., 2017). Major Depressive Disorder (MAD) and Generalized Anxiety Disorder (GAD) correlate with earlier mortality rates; those affected die up to eight years earlier than populations without either affective condition (Pratt et al., 2016). In order to mitigate these consequences, anxiety and depressive disorders must be addressed with effective treatment to ensure the best outcomes. There is an increasing need for interventions as trillions of global dollars are lost yearly due to mental health complications (Chisholm et al., 2016). Leaving depressive and anxiety disorders untreated and/or delaying treatment worsens quality-of-life, increases affective disorder-related disabilities, increases the disorder's chronicity, reduces the likeliness of the remission of these disorders, and can escalate other common neurological disorders (Bukh et al., 2013; Dell'Osso et al., 2013; Dell'Osso et al., 2018; Ghio et al., 2014, Ghio et al., 2015). Depression and anxiety contribute to other serious health outcomes such as strokes, multiple sclerosis, and migraines (Dell'Osso et al., 2018).

Psychological treatments are one type of intervention that can defend against the health and economic consequences of depression and anxiety. Investing in mental health improves global health and the global economy, and execution is imperative. Clients can be harmed, and the public and professional opinions of psychotherapy can also be harmed, if psychological treatments are promoted without evidence of their efficacy. Over the past decade, a replication crisis has been identified in the field of psychology (Stanley et al., 2018). This problem refers to the finding that many experiments providing psychological knowledge cannot have their results

replicated. A lack of replication can signify a low predictive power, and thus points to low-quality research. Research quality is essential in studies addressing depression and anxiety treatments. Scientific replication is necessary in research used to inform academic curricula for clinicians-in-training, and the ongoing work of those in therapeutic practice.

Publication bias is one factor contributing to the replication crisis. Research in the field of psychology can demonstrate more bias than in other evidence-based fields like medicine (Lambert, 2017; van Aert et al., 2019). The use of psychological interventions with low replicability and high bias manifest as unresponsive clients in clinical trials or attrition without benefit in ongoing treatments (Lambert, 2017). Further, opinions regarding the helpfulness of treatments do not always align when examining a therapists' outcome estimation and the clients' self-report. When there are risks to client benefit, investigation into the effectiveness of guideline-driven interventions is warranted.

Psychotherapy aims to be an evidence-based practice (EBP). EBP is a globally influential and ethically motivated paradigm of harm reduction for the benefit of clients (Tim, 2021). However, evidence-based interventions are only as valid as the research upon which they are built. Using low-quality research to inform clinical guidelines in counselling psychology could interfere with treatment efficacy (Every-Palmer & Howick, 2014). This review evaluates the quality of evidence generated by research to inform treatments for anxiety and depression, and the outcomes of clinical guidelines informed by this research. Such a topic is expansive, and thus this review provides a broad overview, and is not comprehensive. The research question explored is: *to what extent do recent depression and anxiety treatment outcomes studies support treatment guidelines from the past decade?*

This paper explores guideline-relevant client outcomes to answer the research question

and concludes with recommendations for future evidence-based approaches to treatment for depression and anxiety. The outcomes of recent studies informed the current guidelines for treatment of depression and anxiety serve as one measure of the quality of these recommendations. The quality of evidence used to build current guidelines is approximated in view of the outcomes of recent studies, and these studies will be referred to as outcome studies. Depression is defined as the traits aligned with Major Depressive Disorder (MDD) in the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5; American Psychiatric Association, 2013). Anxiety is defined as the cluster of traits associated with Generalized Anxiety Disorder (GAD) in the DSM-5. For this paper, the term “client” is synonymous with the term “patient.” Both terms are used interchangeably depending upon the degree or nature of a care-receiver’s suffering and the nature of care provided by a practitioner (Latecki, 2017). Ultimately, this paper identifies the need to build EBP upon reliable research in order to equalize and prioritize mental and physical health treatments.

Self-Positioning Statement

I have encountered vague and conflicting viewpoints whilst completing my final year of Canadian graduate school and while working through a counselling practicum. At times, I found textbooks lacked actionable strategies, and scholarly literature was elusive or contradictory when defining concepts. For example, textbooks frequently offer anecdotes instead of counselling tools that can be implemented. In addition, I had difficulty finding a unifying, tangible definition for what constitutes Cognitive-Behavioural Therapy (CBT). Occasionally, classroom discussions, learning activities, and supervision discussions were at odds in terms of outlining the value of specific counselling orientations, the role of interventions used, and the utility of psychological findings. As is the case in any large body of content, contradictions are not impossible.

Nevertheless, the emphasis on EBP in the field of psychotherapy raised questions for me about therapeutic literature and practices. Consistent and aligned answers were not readily available. As a result of these experiences, my goal as a practitioner is to explore personal curiosity, understand psychotherapy better, and clarify decision-making regarding the most appropriate and effective interventions.

My own personal biases need to be considered alongside research bias and a resulting replication crisis I have identified within the therapeutic literature. My past academic experiences focused heavily upon empiricism and EBP and thus I recognize my potential for tunnel vision in this review. One consequence of my past experiences is that I acknowledge a bias towards the use of cognitive-behavioural approaches to therapy. Moreover, past academic experiences have caused me to be frustrated by the vagueness of some current counselling practices. This frustration increased my preference for medical models and concrete diagnosis-based interventions as I began this review.

If I unquestioningly accept personal preferences without challenging these preferences, I am not serving counselling practice or my clients well. In order to honour my goals I have worked to review literature with a sufficiently objective standard. Recognizing my capacity for bias as a researcher has motivated me to be comprehensive, fair, and transparent. Although managing this bias initially seemed nebulous, discernable steps were taken as insurance. I avoided dismissing sources based on superficial traits and considered the quality of the arguments presented. While conducting this review, I noted my rationale for article selection, tracked reflexive thoughts or feelings, and looked for patterns of one-sidedness when rationalizing arguments. In order to minimize confirmation bias I explored a variety of opposing sources and identified one-sidedness and literature gaps.

Another measure I used to manage subjective blind spots was regular peer consultation about this paper's research process. I consulted with peers and asked them to point out their perceived biases in terms of the literature review's content and supporting arguments. Engaging with peers from different psychotherapeutic orientations and perspectives offered me a stronger defence for oppositional viewpoints. In order to maintain a balanced perspective and to remain critical, I avoided constructing an all-or-nothing narrative that dismissed psychology's strengths. It was crucial to contextualize research findings in order to understand a finding's utility and to adjust my expectations when reviewing psychological literature. For example, when discussing psychological effect size statistics I avoided over or underplaying real-world implications.

This literature review is only as effective as the sources it examines. Given the review's focus on literature quality, I was mindful of data biases when selecting sources. I was critical in order to address specific biases that researchers and readers commonly overlook. Drucker et al. (2016) suggest watching for the following biases and the role they play in skewing outcome measures: selection (missing important available information such as unpublished studies); detection (altered results from a lack of blinding in experiments); performance (difference between groups creating confounds); attrition (dropouts skewing results); reporting (misrepresenting data collection); precision (around confidence intervals); and heterogeneity (variations in study design testing the same concept). I addressed Drucker et al.'s (2016) suggestions throughout this review and also sought transparency to avoid inadvertently slanting opposing views by presenting weak talking points. One example of this is my dedication of a review section to listing critiques and key statistical metrics openly.

Literature Review

Treatment formulations for depression and anxiety are documented as far back as ancient

Greece within the spheres of physicians and philosophers (Crocq, 2015; Lawlor, 2012).

Depression and anxiety continue to persist, but practices and treatments have changed considerably. One significant shift was the demand for EBP to help turn research into actionable intervention (Reynolds, 2000; Tim, 2021). Clinical guidelines outline directives for interventions, and are developed by compiling, sorting, and reviewing extensive evidence (Feder et al., 1999).

The following literature review first explores recent clinical guidelines for treating MDD and GAD from various nation's perspectives. Finding overlap between current recommendations that are therapeutically useful creates a reference point to compare with outcome studies. This review concludes by touching upon underrepresented MDD and GAD research developments in current guidelines that may influence future guidelines. The World Health Organization has deemed depressive and anxiety disorders "common mental disorders" as they affect up to 322 million and 264 million individuals worldwide, respectively (World Health Organization, 2017). MDD was chosen to best represent "depression" as it often colloquially refers to the formal MDD diagnoses (Hasin et al., 2018). GAD was chosen to represent anxiety disorders in this review as it is the form of anxiety most often comorbid with MDD and is underrecognized and undertreated (Bandelow & Michaelis, 2015).

Search Methods

The search for and review of clinical guidelines and related outcomes in the literature focused primarily on the past ten years. This paper excludes a review of research cited within clinical guidelines to avoid circular reasoning. The literature review that follows attempts to avoid affirming guideline directives by simply citing the same sources used to create these directives. Search terms included: *anxiety, depression, GAD, MDD, psychotherapy, counselling,*

pharmacological, medication, treatment, clinical guidelines, outcomes, efficacy, and various therapeutic orientations or approaches (e.g., *cognitive behavioural, psychodynamic, motivational interviewing*, etc.). Databases searched included APA PsychNet, Cambridge Core, Elsevier, the City University of Seattle library, the Public Library of Science, Pub Med, Psychiatry Online, Taylor & Francis Online, and the Wiley Online Library. Terms used in the literature that are abbreviated and referred to throughout this review are compiled in Appendix 1 for reference.

MDD Clinical Recommendations Highlights

Clinical guidelines for treating MDD examined in this review range from 2010 to 2019. Perspectives included the American Psychological Association [APA] (APA, 2019), the Canadian Network for Mood and Anxiety Treatments (Kennedy et al., 2016; Lam et al., 2016; Milev et al., 2016; Parikh et al., 2016), the American Psychiatric Society (Gelenberg et al., 2010), the Indian Psychiatric Society (Gautam et al., 2017b), and the United Kingdom's National Institute for Health and Clinical Excellence [NICE] (Clark, 2011). A non-exhaustively aggregated list of current clinical guideline recommendations for treating depression is presented in Appendix 2.

The most recent guidelines for treatment of general depressive disorder are from the APA (2019). The APA acknowledges psychotherapy as a first-line intervention without sufficient evidence to promote any one orientation over another when treating depression. There is a disparity in supporting evidence quantity between orientations. Orientations with the most evidence are primary recommendations: Behavioural Therapy [BT], CBT, Mindfulness-based Cognitive Therapy [MBCT], Interpersonal Therapy [IPT], and Psychodynamic Therapy [PDT] (APA, 2019; Gautam et al., 2017b). Guidelines distinguished which therapies were sufficient for ongoing long-term relapse prevention (CBT, IPT, and MBCT). A recurrent term is treatment-as-

usual (TAU), a widely accepted typical treatment protocol (e.g., psychotherapies or medications) established for treating mental disorders (Blais et al., 2013). Recommendations for sustained depression remission are TAU and CBT, IPT, or MBCT over medication (APA, 2019). The cognitive-behavioural analysis system of psychotherapy and brief (less than ten sessions) problem-solving therapy (PST) presently have insufficient evidence for recommendation (APA, 2019; Parikh et al., 2016).

Outside of psychological interventions, researchers recommend Mirtazapine, Venlafaxine, Escitalopram, and Sertraline for superior efficacy in terms of pharmacological treatment (APA, 2010; Gautam et al., 2017b; Gelenberg et al., 2010). Guidelines recommend combining medications and psychotherapy for moderate to severe depression and for clients with depression who are additionally experiencing relationship distress (APA, 2019; Clark, 2011; Gelenberg et al., 2010; Kennedy et al., 2016). Alternative interventions with the highest recommendation level are repetitive transcranial magnetic stimulation and electroconvulsive therapy; however, both are typically reserved for when psychological and pharmacological interventions fail (Gautam et al., 2017b; Gelenberg et al., 2010; Milev et al., 2016). Of all depression intervention types, alternative interventions have the lowest quality of supporting evidence (APA 2019; Gelenberg et al., 2010).

Guidelines also touch upon orientation-independent therapeutic factors that include common factors (e.g., empathy or therapeutic alliance), mediums (e.g., internet-based therapies), and approaches (e.g., psychoeducation). Primary recommendations for orientation-independent factors include focusing on therapeutic alliance, empathy, collecting a client's feedback, ongoing risk assessment for suicide, and acknowledging possible treatment adherence barriers to collaboratively address (Gelenberg et al., 2010; Parikh et al., 2016). Secondary recommendations

include collaboration, goal consensus, positive regard, internet or computer-assisted therapy, and psychotherapy for sub-clinical depression (Gelenberg et al., 2010; Parikh et al., 2016; APA, 2019). Finally, tertiary recommendations include using authenticity, repairing therapeutic ruptures, and managing countertransference (Gelenberg et al., 2010; Parikh et al., 2016).

Treatment Efficacy and Limitations

When depression is more intense, combining pharmacological and psychological interventions, or compounding two antidepressants for greater efficacy, is justified (APA, 2019; Clark, 2011; Parikh et al., 2016). In terms of intervention dosage, brief session counts (eight or fewer) of CBT, IPT, MBCT, and PST evidence similar effectiveness as up to double the session counts. The APA (2019) currently identified blind spots across MDD directives including: literature gaps for orientations outside of CBT, vague or variable definitions of orientations like CBT, and long-term and diverse population outcome measures.

Divergences

Primary interventions with high-quality supportive evidence generally align across countries, but guidelines vary regarding treatment specificity and preference hierarchy. Canadian guidelines are specific about what constitutes primary interventions and whether treatment is for use in an acute or long-term relapse prevention context. Indian guidelines differentiate themselves by promoting family or marital therapy for depression. This differentiation results from acknowledgment of the role of interpersonal dynamics within the home (Gautam et al., 2017). American and Indian guidelines emphasize collaborative treatment decisions to address clients' preferences for psychotherapy or medication. United Kingdom guidelines are the only ones to suggest a stepped (tiered) treatment approach.

Clinical guidelines are informed by the fields of psychiatry and psychology and these

influences impact recommendations. Psychiatric guidelines speak to neurostimulation, unlike psychological guidelines. Even amongst psychiatric organizations, there are conflicting recommendations. One example is a critique of suicide assessments as they are variously deemed have a limited capacity to predict future attempts (Lam et al., 2016) or are considered a first-line recommendation (Gelenberg et al., 2010). Another example is a difference in recommendations of PST and PDT as second or third-level treatments (APA; 2019; Parikh et al., 2016). Similarly, brief PST is presented as equal to regular PST in one guideline (Parikh et al., 2016), and declared insufficient in another (APA, 2019).

GAD Clinical Recommendations Highlights

The GAD clinical treatment guidelines reviewed range from 2010 to 2018. The following perspectives are included: the Royal Australian and New Zealand College of Psychiatrists (Andrews et al., 2018), the University of Michigan Medical School (Locke et al., 2015), the Canadian Clinical Practice Guidelines for Anxiety and Related Disorders (Katzman et al., 2014), the American Psychiatric Society (Stein et al., 2010), the Indian Psychiatric Society (Gautam et al., 2017a), and NICE (Clark, 2011). Appendix 3 is a non-exhaustive aggregate of all current GAD guideline recommendations.

All clinical guidelines point to CBT (online, in-person, long-term, or short-term) as a first-line psychological intervention due to its' vast quantity of empirical support (Andrews, 2018; Clark, 2011; Gautam et al., 2017a; Katzman et al., 2014; Locke et al., 2015). Motivational Interviewing (MI) also receives a high recommendation level when considering the quality of evidence supporting this treatment approach compared to other treatment combinations (Katzman et al., 2014). All other psychotherapeutic interventions fall under secondary or tertiary recommendations e.g., BT, Cognitive Therapy [CT], MBCT, short-term or internet-based PDT,

etc. (Andrews et al., 2018; Gautam et al., 2017a; Katzman et al., 2014). There is insufficient evidence to promote the combination of CBT and IPT.

Secondary level recommendations to treat anxiety are predominantly specific medications, including Escitalopram, Paroxetine, Duloxetine, Venlafaxine XR, and Sertraline (Andrews et al., 2018; Katzman et al., 2014). Andrews et al. (2018) suggest that primary recommendations include medications that demonstrate superiority compared to other medications in terms of: the greatest symptom benefit (Duloxetine, Sertraline); highest remissions rate (Escitalopram, Venlafaxine); and best tolerability (Sertraline, Pregabalin). Short and longer-term medication use see equal recommendations except when evidence suggests long-term usage (over a year) to prevent relapse (Locke et al., 2015; Gautam et al., 2017a).

Alternative interventions typically offer higher evidence quality levels when treating anxiety compared to depression, except for botanicals and supplements (Locke et al., 2015). Most botanicals and supplements, during testing, demonstrate insufficient evidence for use to treat anxiety. Examples used to treat disease-based (e.g., Alzheimer's induced) anxiety include: St. John's wort; S-adenosyl-L-methionine; music therapy; aromatherapy; acupuncture; and massage therapy. These treatments all need further evaluation for their efficacy in treatment of GAD (Manepalli et al., 2009; Locke et al., 2015). Researchers generally recommend alternative interventions be used to supplement more empirically supported treatments (medication and psychotherapy) or to treat those who suffer from GAD and who do not respond to first-line treatments (Locke et al., 2015).

As is the case with alternative interventions, orientation-independent factors are absent from first-line recommendations. Tertiary recommendations for treating GAD include combining orientations and customizing treatments to suit individual needs (Locke et al., 2015). General

orientation-independent recommendations include psychoeducational groups, monitoring anxiety, and distinguishing intense worrying from panic disorder (Stein et al., 2010; Clark, 2011; Gautam et al., 2017a). Researchers identify general GAD therapy targets including worry, relaxation, and looming cognitive styles such as those focused on risk and danger (Katzman et al., 2014).

Treatment Efficacy and Limitations

Guidelines deem medications to be as effective as psychological interventions and more effective than placebos when treating GAD. This is the case with the exception of treatment for GAD using CBT, which results in superior recovery rates compared to antidepressants (Andrews, 2018; Katzman et al., 2014; Locke et al., 2015). The use of selective serotonin reuptake inhibitors (SSRIs) and selective serotonin-norepinephrine reuptake inhibitors (SNRIs) is recommended at a comparable level to exercise. Psychological interventions demonstrate long-term benefits against GAD for one to three years (Katzman et al., 2014). Of note, combining CBT and medication is less effective than CBT monotherapy within less than six months (Andrews, 2018). Medication is routinely combined with CBT to treat severe GAD, but guidelines cite insufficient evidence for this recommendation (Andrews, 2018). Those with anxiety can have exaggerated placebo responses to medication, which is one possible explanation for why quality evidence is not available. An exaggerated response undermines efficacy across studies and simultaneously highlights the importance of a client's expectations in treatment.

Divergence

Guidelines have conflicting stances on whether to combine psychotherapy with medication. Although Andrews et al. (2018) suggest insufficient evidence to combine

interventions, Locke et al. (2015) encourage this approach based on client preference when treating GAD. Another conflict is evident upon a review of guidelines regarding CBT session dosing. Guideline recommendations have contradicting directives. For example, optimal CBT dosage is recommended at a minimum of eight sessions (Locke et al., 2015), at a dose of no more than eight sessions (Andrews et al., 2018), and as equally efficacious at more or less than eight sessions (Katzman et al., 2014; Gautam et al., 2017a). Discrepancies existed in relaxation research as well. Views on relaxation range from the treatment being an effective CBT adjunct (Andrews et al., 2018) to not having enough conclusive data, citing mixed evidence on physiological arousal reduction (Katzman et al., 2014).

Clinical recommendations generally align, but their interventive focus varies. For example, not all guidelines address the utility of psychotherapy delivered online, and only certain guidelines focus on alternative medical treatments in addition to alternative psychological treatments e.g., botanical supplements as well as pharmaceuticals (Andrews et al., 2018; Katzman et al., 2014; Locke et al., 2015). Indian psychiatric guidelines are the only ones to formally suggest yogic practices (as a form of mindfulness or relaxation with potentially superior efficacy to progressive muscle relaxation) and meditation (Gautam et al., 2017b).

Recommendations Addressing both MDD and GAD

Guidelines predominantly focus on treatment for either GAD or MDD, and only occasionally touch upon treatment recommendations for comorbid presentations. Dedicated comorbidity interventions are rare. Comorbidity guidelines published over 20 years ago acknowledge the severity of co-occurring depression and anxiety, and call for future guidelines to better address the management of these combined disorders (Ballenger, 1999). GAD and MDD demonstrate significant comorbidity across all developmental life stages, leading to worse

outcome measures than either diagnosis alone (Essau et al., 2018; Zbozinek et al., 2012; Zhou et al., 2017). Reviewed guidelines dedicated to addressing depression and anxiety are from 1999 and 2011, and offer psychiatric perspectives from the Medical University of South Carolina and NICE (Ballenger, 1999; Clark, 2011). Appendix 4 outlines aggregated MDD and GAD comorbidity recommendations reviewed across all guidelines.

Stepped care is defined as the use of tiers of intervention based on symptom intensity. This approach is recommended for treating clients with either MDD or GAD (without comorbidity) through a unified guideline (Clark, 2011). Guidelines propose a continuum model where steps progress from the lowest level of clinician involvement to the highest level of clinician involvement when symptoms with a diagnosis are severe. NICE (2011) recommend collaborative primary care for treating moderate to severe MDD when this diagnosis is combined with a chronic physical health problem. It is recommended that those with lower intensity MDD or GAD seek treatment with less clinician input and more self-help support. It is also recommended that those with high-intensity MDD or GAD engage in treatment that involves weekly face-to-face clinician involvement. Guidelines suggest combining medication with CBT or IPT in response to increasingly intense MDD, but recommend CBT without medication for GAD. Low-intensity treatments involve: leveraging self-help, CBT and internet-CBT for either MDD or GAD; psychoeducational groups for GAD; and physical activity for MDD.

Non-pharmacological considerations when treating comorbid GAD and MDD include choosing an appropriate setting i.e., using individual over group format (Andrews et al., 2018) and session dosing i.e., using more than eight sessions (Katzman et al., 2014; Parikh et al., 2016). Pharmacological suggestions include a recommendation of preventative protection from comorbidity through choosing interventions with dual efficacy (Ballenger, 1999). A focus on

prevention entails protection against MDD and GAD for clients with only one disorder present, especially for non-responders. An example of dual efficacy includes switching from a single serotonergic or noradrenergic pathway medication to a medication affecting both pathways simultaneously. Recommended medications for comorbidity generally include Venlafaxine XR, Risperidone, Quetiapine, and augmenting antidepressants with Aripiprazole (Ballenger, 1999; Katzman et al., 2014). Lastly, combining psychological and pharmacological interventions is recommended when comorbid diagnoses of GAD and MDD are present (Locke et al., 2015).

Recent Outcome Studies

The main clinical guidelines reviewed were written after 2014 and typically cite research before 2014. Most outcome studies selected for this review are from 2014 onwards, or as close as possible, in an effort to combat the potential six-year half-life of psychological data (Neimeyer et al., 2014). Findings are aggregated below as being MDD specific, GAD specific, MDD-GAD comorbidity specific, or as supporting MDD-GAD relevant themes. All reported Hedge's g values come from source material and can be interpreted similarly to Cohen's d . g is preferable and differences between converted values are negligible for sample sizes $> n = 20$ (Lakens, 2013).

MDD Specific Outcomes

Several meta-analytic studies dispute the efficacy of psychotherapies in improving MDD outcome measures (Carl et al., 2020; Cuijpers et al., 2016b; Cuijpers et al. 2019; Munder et al., 2019). Disputed efficacies range from $g = 0.31- 0.70$, with publication bias and trial-quality factoring differently into each study (both of these themes are common in a review of psychotherapeutic literature focused on treatments for MDD). CBT, IPT, and PST demonstrate the greatest treatment efficacy, and supportive therapy is significantly less effective than IPT

when controlling for study quality through size (Barth et al., 2013). Studies also query the efficacy of psychoanalysis for treating chronic depression (Leuzinger-Bohleber, 2019). CBT, IPT, and PST demonstrate comparable efficacy when treating MDD (Barth et al., 2013; Cuijpers et al., 2016c). Recent adjustments for psychotherapeutic effect size inflation render IPT, PST, and BA data quality insufficient for recommendation (Cuijpers et al., 2018; Cuijpers et al. 2019; Lemmens et al., 2018; Lepping et al., 2017). Although authors offer varying views regarding psychotherapy and its effectiveness, they unanimously agree that depression research quality needs to improve to inform future treatment recommendations.

Research into the use of medication to treat MDD is less hindered by bias than research into the use of psychotherapy; medications are effective in improving MDD outcome measures (Carl et al., 2020). However, practitioners and researchers should not directly compare medication and psychotherapy effect sizes as medication studies often use higher quality controls. These stricter controls create smaller effect sizes for medications and these differences can make psychotherapy seem more effective. Another consideration is that although medication is recommended clinically for treatment of more severe depression, presenting baseline MDD severity does not moderate medication efficacy (Weitz et al., 2015; Vittengl et al., 2016). Baseline severity should therefore not determine whether treatment is approached using medication over therapy.

GAD Specific Outcomes

As is the case for MDD, general psychotherapy research for GAD is hindered by bias, but still demonstrates outcome measure improvements ($g = 0.59 - 0.76$). Unlike research into treatments for MDD, fewer meta-analyses are adjusted for effect inflations when looking at treatments for GAD (Carl et al., 2020; Cuijpers et al., 2016b). Meta-analyses of CBT randomized

control trials demonstrate a range of effect sizes for post-first-year outcome improvement from $g = 0.07-0.40$ (van Dis et al., 2020). The research is mostly low-quality as a result of poor study designs failing to consider blind assessment outcomes and researchers' allegiance biases.

Moreover, CBT is a less effective intervention when treating GAD compared to other anxiety disorders (Cuijpers et al., 2016b). There is a scarcity of research focused on long-term and short-term outcomes for GAD treatments compared to research focused on other anxiety disorders, especially on relapse rates outside of twelve months (Cuijpers et al., 2014b; Dugas et al., 2010; van Dis et al., 2020).

In addition to CBT, an approach with evidence of improved GAD outcome measures is MI, especially when this treatment is paired with CBT (Constantino et al., 2019; Westra et al., 2016). Pairing the two approaches is particularly beneficial for treatment of more severe GAD as this combination improves clients' perceived empathy while reducing their resistance.

Combining CBT with mindfulness or psychoeducational groups also improves outcome measures, with groups demonstrating better adherence and outcomes than mindfulness (Wong et al., 2016). Furthermore, a study on intensive short-term dynamic psychotherapy (i.e. PDT of a more short-term and emotion-focused nature) observed measurable reduction in healthcare costs post-intervention (Lilliengren et al., 2017). As is the case for MDD, outcome measures for GAD treatment with medication demonstrate less bias than outcomes for psychotherapy due to higher quality controls (Carl et al., 2020). As a result, comparing effect sizes between studies analyzing treatments for GAD with medication and studies analyzing treatment for GAD with psychotherapy is not meaningful.

Comorbidity Outcomes

Research explicitly addressing effective treatments for those with combined MDD-GAD

diagnoses remains sparse compared to research on treatments for either disorder individually. Developments in comorbidity research include the implication of anxiety disorders (including GAD) as a causal risk factor for MDD (Kessler et al., 2015). This observation stems from the proportion of comorbid individuals who first experience anxiety disorders. Women and people previously married are at the highest risk for developing comorbidity, and comorbidity continues to be associated with higher reported impairment and suicidal ideation. Further compounding these factors are race and ethnicity (Watkins et al., 2015). Race and ethnicity play separate roles in influencing the comorbidity between MDD, GAD, and physical health complications.

In terms of cognitive-behavioural treatments, non-social comorbid anxiety disorders potentially reduce the efficacy of acute-phase CT when treating MDD (Vittengl et al., 2019). This reduction worsens short and long-term outcomes relative to depressed patients without non-social comorbid anxiety. Contrarily, a comorbid social anxiety disorder may interfere less with acute-phase CT, although there is a possible need to focus on social avoidance treatment instead. CT is preferable to IPT when countering attrition (van Bronswijk et al., 2018). CT outcome measures are better than IPT measures during treatment; however, differences disappear during after-treatment follow-ups. Current research identifies the efficacy of short-term PDT as comparable to CBT in terms of reducing depressive and anxious symptoms, lowering distress from physical pain, and improving overall life quality (Driessen et al., 2017). Preliminary small-sample outcome data suggests more deeply investigating the novel treatment called emotion regulation therapy for treating comorbidity (Mennin et al., 2015). Lastly, client outcome measures support using medications, like Venlafaxine, against MDD when this disorder is combined with anxious symptomology (Lyndon et al., 2019).

Research Quality Critiques

Cuijpers et al. (2016a) provide unadjusted effect size estimates of psychotherapy for MDD as $g = 0.75$ and for GAD as $g = 0.80$. To assess research quality the Cochrane Collaboration's Risk-of-Bias tool is used (Higgins et al., 2011). Meta-analyses using this tool conclude that psychotherapy is "probably effective" when defined as better than no treatment at all (Cuijpers et al., 2016b, p.245 and p.254). Still, practitioners and researchers should interpret effects cautiously, given that few high-quality studies remain that include post-screening assessment. The magnitude of effect size change resulting from this screening assessment warrants suspicion when interpreting psychotherapeutic efficacy; MDD adjusts to $g = 0.65$ and GAD to $g = 0.59$. The efficacy of psychotherapy for MDD drops another 25% ($g = 0.39$) when accounting for unpublished study bias (Driessen et al., 2015). Taking into this into consideration results in an overestimate of final MDD treatment efficacy as this re-adjustment study does not compensate for outcome reporting; in fact, it selectively reports pre-determined outcome measures. Wait-list control groups (WLC) may also cause overestimation and are especially troublesome given their extensive use in most MDD and GAD research (Cuijpers et al., 2016b). WLCs possibly create nocebos, an inverse placebo (Petrie & Rief, 2019). Participants' who are unable to access treatment when wait-listed can perceive harm. Cuijpers et al. (2016a) describe participants perceiving harm including differences in expectations and demoralization. This perceived harm while waitlisted may inflate effects between treatment and control.

WLCs likely overestimate psychotherapeutic efficacy as they consistently produce significantly larger effect sizes than TAU or placebo controls (Cuijpers et al., 2019). Removing WLCs while controlling for research quality, excluding studies that are likely biased and adjusting for publication bias, drops MDD psychotherapeutic effect size even lower to $g = 0.31$. The Cochrane Collaboration's Risk-of-Bias tool is used to control for research quality (Higgins et

al., 2011). Cuijpers et al. (2019) reveal that psychotherapy is not undoubtedly more effective than receiving no treatment (with potential spontaneous recovery) when one considers other biases deemed un-adjustable. These include blinding patients and therapists or selective outcome reporting. A contrary reanalysis of this data by Munder et al. (2019), which accounts for different parameters and retaining WLCs, determines an MDD psychotherapeutic effect size of $g = 0.70$ when. This effect size aligns with typical effect sizes found across previous literature in the field of general psychotherapy (Munder et al., 2019). The major conflict in this reanalysis is the definition of an appropriate control. Munder et al. (2019) argue that WLCs accurately portray real-world context when determining if psychotherapy is more effective than no treatment.

Another argument for including WLCs is the inability to empirically test WLC efficacy by unethically denying treatment to a control group (Munder et al., 2019). A lack of empirical testing means it is impossible to objectively claim WLC is inferior. Further, Munder et al. (2019) describe WLC clients experiencing inflated outcomes rather than the reduced outcomes cited by Cuijpers et al. (2016a). Munder et al. (2019) suggest wait-listed clients improve through remoralization with little evidence for the demoralization explained by a placebo. Munder et al. describe wait-listed clients having an opportunity to foster hope while awaiting treatment that experimental groups do not. This finding skews the control baseline upwards, suggesting WLC effect sizes are underestimated.

These arguments against excluding WLC studies do not address why WLC study removal drops effect size so drastically in meta-analyses. Additionally, WLC meta-analyses demonstrate worse client outcomes than studies with other controls, insignificant effects when adjusting for study design (e.g., recruitment method, number of treatment sessions, follow-up length, researcher allegiance etc.), and higher dropout rates than TAU (Khan et al., 2012; Barth et al.,

2013; Cristea, 2019). The impact of WLC groups (including disparity between placebo control usage) is apparent when observing psychotherapy's inflated effect sizes next to pharmacological studies (Carl et al., 2020).

Although medication studies generally use higher quality controls, they do not guarantee sufficient research. Meta-analyses reveal pharmacotherapy claims overestimate efficacy to the degree that antidepressants may not be deemed clinically useful (Driessen et al., 2015; Cuijpers et al., 2019). Lack of efficacy may be caused by underreporting randomization methods, insufficient blinding, and placebo responders rivalling antidepressant responders (38% and 52%, respectively). Ineffective antidepressants have an impact beyond MDD and implicate GAD treatment as antidepressants are used for individual diagnoses and their comorbidity. As discussed earlier, there are several differences in pharmacotherapy and psychotherapy trial methods, including average study size. These differences suggest comparisons between psychotherapeutic and pharmacotherapeutic effects may not be meaningful (Huhn et al., 2014; Schäfer & Schwarz, 2019). Comparison studies address these disparities as they compare psychological and medical interventions, but these studies are scarce and underfunded (Huhn et al., 2014).

Underrepresented Themes Across Reviewed Outcome-Literature

Outside of specific outcomes across the literature about MDD and GAD treatments individually, there are recurring themes relevant to both affective disorders across the literature as well. These themes are underemphasized in clinical guidelines and have become increasingly relevant today compared to during the period of initial guideline development. Future guidelines can be enhanced by exploring adjacent factors. The next section of this review outlines clinically underrepresented themes in the literature affecting guidelines developed to treat both MDD and

GAD.

Transdiagnostic Approaches for Potential or Confirmed Comorbidity

MI plays a unique psychotherapeutic role as it focuses on empathy and hope (Wampold, 2015). As a result, MI offers a common factor-targeting, transdiagnostic treatment (a treatment helpful across different diagnoses) for use against MDD and GAD. In terms of alternative treatments, mindfulness offers efficacy against anxious and depressive symptoms (Kladnitski et al., 2018; Sundquist et al., 2015; Sundquist et al., 2019; Takahashi et al., 2019; Zhang et al., 2015). Another alternative treatment beneficial to MDD and GAD outcome measures is exercise, defined minimally as 30 minutes of accumulated moderate-intensity physical activity (Carek et al., 2011; Khanzada et al., 2015). Advances in technology, like virtual reality, offer new approaches that have the potential to enhance accessibility and interest in physical fitness (Zeng et al., 2018). Higher attrition in exercise study control groups where participants did not exercise offers additional support for incorporating exercise into treatment (Stubbs et al., 2016). Exercise compares favourably to medication for mild-to-moderate depression and is less favourable, but still efficacious, for various anxiety disorders (Carek et al., 2011). This literature supports the finding that physical activity offers a cost-effective treatment.

Orientation-Independent Factors

Combining various interventions, intervention types, psychotherapeutic mediums, psychotherapeutic orientations, and counselling approaches results in superior outcomes compared to one-dimensional treatments (Carl et al., 2020; Constantino et al., 2019; Kladnitski et al., 2018; Lepping et al., 2017; Sitnikov et al., 2013; Sundquist et al., 2015; Sundquist et al., 2019; Takahashi et al., 2019; Wong et al., 2016). Combination treatments are an evidence-supported strategy for treating clients with more intense or unresponsive presentations. Specific

examples of enhanced combination treatments for superior client outcomes include: supplementing exercise with medication in MDD treatment (Carek et al., 2011) and mindfulness within a group setting for treatment efficacy comparable to CBT treatment (Sundquist et al., 2015). Moreover, therapeutic alliance, defined as the collaborative relationship between a therapist and their client to treat the client's problems, is relevant across all orientations and significant to every stage of therapy to increase treatment outcomes (Cameron et al., 2018; Coyne et al., 2018). Client expectations also play a role in treatment efficacy across orientations as expectations are significant predictors of outcome measures for treatment of mental and physical health problems (Petrie & Rief, 2019). An underlying mechanism used effectively across most therapies is the breaking apart of a client's current maladaptive, disorder-related expectations (Kube et al., 2017). Measuring how client expectations change may offer a measure for therapeutic success; expectation measures have significant correlations in treatments for both anxiety and, especially, depression.

Therapeutic Outcomes as a Function of Time

An early therapeutic alliance promotes better clinical outcome measures for treatment of GAD and has the most potent effects in later MDD therapy stages (Cameron et al., 2018; Coyne et al., 2018). A reliable and high-quality finding is that early responders have significantly better post-treatment outcomes than in cases without early response (Beard & Delgadillo, 2019). An early responder is classified as an individual with improvement in the first four weeks of psychotherapy; the positive effects of an early response are more pronounced for anxiety treatment ($g = 1.37$) than for depression treatment ($g = 0.76$). Younger age correlates with improved GAD outcomes and reduced MDD and GAD attrition; earlier therapeutic intervention could be beneficial for clients (Carl et al., 2020; Gersh et al., 2017; Zilcha-Mano et al., 2016.).

Long-term CBT RCTs demonstrate significant treatment outcomes for GAD compared to MDD (van Dis et al., 2020). Long-term data supports treatment outcomes for GAD intervention in the first year ($g = 0.07-0.40$) and in the second year ($g = 0.22$). These studies are mostly low-quality and rarely document symptoms of either disorder beyond 12 months. CBT and IPT demonstrate equal efficacy against acute MDD and for long-term (up to 24-month) relapse prevention intervention (Lemmens et al., 2018). As mentioned already, CT is superior to IPT against comorbidity during treatment, but outcome differences disappear up to five months after treatment (van Bronswijk et al., 2018). Comorbid non-social anxiety disorder demonstrates worsened outcome measures for up to 32 months after acute CT treatment (Vittengl et al., 2019). Mindfulness-based group therapies and combined MI-CBT demonstrate improvements at one-year follow-up (Constantino et al., 2019; Sundquist et al., 2019).

Therapist and Client Characteristics Relevant to Outcome Measures

When looking at outcome research, a therapists' sex, therapeutic orientation, and experience do not explain differences between the highest performing and lowest performing therapists (Chow & Miller, 2018). Clients' age, sex, symptom severity, and comorbidity do not influence GAD dropout rates, but age moderated psychotherapeutic response to GAD is noted (Carl et al., 2020; Gersh et al., 2017). MDD treatment dropout rates are influenced by age, pretreatment expectations of the therapeutic alliance (expectations of self like one's commitment, or expectations of the counsellor like their expertise), presence of vindictive tendencies in interpersonal relationships, and baseline depression symptoms (Stubbs et al., 2016; Vittengl et al., 2016; Zilcha-Mano et al., 2016). Dropout rates are approximately one in six for GAD and one in four for MDD (Gersh et al., 2017; Zilcha-Mano et al., 2016). Comorbidity increases dropout rates compared to those with non-comorbid presentations (van Bronswijk et al., 2018).

Race and ethnicity can independently moderate comorbidity between depression, anxiety, and chronic medical conditions (Watkins et al., 2015). In addition, sex, race, age, and education can moderate the likelihood of adequate treatment participation for individuals with depressive and anxious disorders (Young et al., 2001). Young et al. (2001) find that participation in adequate treatment is less likely for men, black ethnicities, those with less education, those younger than 30, and those older than 59. Researchers define adequate treatment as the alignment between participants' self-reports of their current treatment with treatment guidelines at the time of the study. Young et al. (2001) identify causes of inadequate treatment including participants' perceptions of their treatment needs, their willingness to accept care, and their access to insurance coverage. Inadequate treatment can also be a result of treatment providers' perceptions and inaccurate detections of treatment needs.

Mechanisms for Target

Activation and processing of complex emotions related to adverse attachment experiences may be significant for GAD outcome measures (Lilliengren et al., 2017). GAD treatment attrition can be prevented by early engagement in treatment, building alliance via interpersonal focus and use of MI (Gersh et al., 2017). Instead, targeting rumination may be necessary for MDD outcome measures (Cook et al., 2019). Additionally, adjusting interventions for age and pretreatment interpersonal characteristics can prevent MDD treatment attrition (Zilcha-Mano et al., 2016). Evidence supports focusing on deliberate practise by systematically breaking down performance for iterative refinements (Chow & Miller, 2018). In addition, treatment is found to be enhanced through feedback-informed therapy- compensating for therapeutic performance based on measured performance. Although more tools are needed to accomplish these two practices, interventions such as those outlined in the Taxonomy of

Deliberate Practice Activities help target therapeutic gaps (Chow & Miller, 2015; Miller et al., 2020).

Adjacent Therapeutic Mediums and Tools

Neuroscience offers novel and perceptible developments to current interventions for affective disorders. One example includes the discovery of functional connectivity in the subcallosal cingulate cortex at three locations (Dunlop et al., 2017). This discovery allows functional Magnetic Resonance Imaging (fMRI) to predict depression treatment success through CBT or medication with about 80% accuracy. Another example includes the finding that CBT produces fMRI-measurable neurological changes when used to treat various anxiety disorders (Brooks & Stein, 2015). These two examples of developments in neuroscience support the notion that psychotherapy improves prefrontal and subcortical brain structure linkage and enhances emotional regulation (Messina et al., 2016).

Teletherapy (video or telephone-based) appears an effective medium for treating anxious and depressive disorders (Berryhill et al., 2019; Castro et al., 2020; Kladnitski et al., 2018; Kleiboer et al., 2015; Mohr et al., 2012; Păsărelu et al., 2017; Trombello et al., 2017). Mohr et al. (2012) found a six-month MDD telephone-CBT follow-up evidenced dropout reduction at the cost of long-term improvements compared to face-to-face treatment. More recently, a meta-analysis and systematic review suggests teletherapy may be entirely comparable to other treatments for MDD, but heterogeneity and research scope prompt further investigation (Castro et al., 2020). Brenes et al. (2017) find long-term outcome improvements in a 15-month GAD telephone-CBT follow-up. Teletherapy may be style-dependent as CBT translates more effectively than IPT or nondirective supportive therapy over the phone (Brenes et al., 2017). Teletherapy may also be medium-dependant as client outcomes differ when comparing

smartphone delivery to a computer-based, self-guided app (Dagöö et al., 2014).

Although absent from clinical guidelines, post-modern therapies like solution-focused, narrative, and existential demonstrate efficacy compared to more traditional therapies among various populations (Gingerich & Peterson, Gong & Hsu, 2017; 2013; Lopes et al., 2014a; Lopes et al., 2014b; Maljanen et al., 2012; Vos et al., 2015). Some post-modern therapies have enough research for meta-analyses. However, these meta-analyses demonstrate a need for greater quality and quantity of research (Gong & Hsu, 2017; Wood et al., 2019; Vos et al., 2015). Lastly, preliminary studies continue to grow the body of research behind alternative pharmacological treatments. Drugs not typically associated with formal therapy, like Lysergic Acid Diethylamide, may assist psychotherapeutic treatments (Gasser et al., 2014). A growing interest in combining psychedelics with psychotherapy began in the 1950s, and continues to develop with promising preliminary findings. These therapeutic approaches are challenged by legal obstacles (Grinspoon & Bakalar, 1979). Despite this, evidence does not support sweeping generalizations declaring alternative pharmacology to be unanimously positive. One such example includes the failure of Ketamine use as an anti-depressant to assist electroconvulsive therapy. The absence of conclusive research warrants further investigation of illicit drugs and psychotherapy (Anderson et al., 2017).

Implications for Counselling Psychology

Inconsistent evidence stemming from a general lack of long-term outcome studies, heterogenous meta-analyses, and mixed research quality creates concern about the reality of psychotherapy's efficacy. Flawed research used to develop clinical recommendations or found in reviewed outcome literature means weaker evidence for MDD and GAD treatments. Weaker evidence is troubling for an EBP. It is necessary to explore the extent to which outcome studies

support guidelines and to examine the implications of all reviewed psychotherapeutic research and guidelines. The remainder of this paper discusses empirical literature implications for EBP and psychotherapy, including outcomes research quality, guideline recommendations, and how emerging research re-contextualizes current understandings of counselling. Lastly, this paper will recommend and rationalize actionable implementations for the future of research and practice of counselling.

Implications for Counselling Psychology and the Greater Context of Scientific Inquiry

Evidence-Based Practice

The reviewed literature supports, expands, or undermines current MDD and GAD guidelines. Conflicting information obscures the extent to which findings or guidelines are useful. Critical and recent therapy-effect studies undermine guideline efficacy claims by casting doubt over the extent to which well-reviewed literature reflects the reality of treatment effectiveness (Barth et al., 2013; Carl et al., 2020; Cuijpers et al., 2016b; Cuijpers et al., 2019; Driessen et al., 2015; Huhn et al., 2014; Munder et al., 2019). These observations suggest a lack of certainty in the clinical reliability behind current MDD or GAD directives. The fact that outcome literature regularly cites low-quality data is a major limitation, and low-quality evidence may point to overlooked flaws within the EBP paradigm. Considering EBP's widespread application outside of psychology (e.g., legislation, environmental design, education, etc.), examining the potential weaknesses of claims regarding EBP provides value for research outside of counselling.

There should be clear, demonstrably improved metrics to cite if the adoption of EBP is accurate when looking at mental and physical health. Globally, healthy-life expectancies and suicide rates have plateaued from the 2000s overall (World Health Organization, 2020; World

Health Organization, 2021). Although these two metrics are not all-encompassing, other data suggests EBP increases knowledge and skill temporarily without much long-term supporting evidence (Simons et al., 2019). Likewise, EBP has insufficient to non-existent data to support whether it enhances practitioners' attitudes and clinical practices or improves patients' outcomes and experiences.

Although initially concerning, these observations do not necessarily invalidate EBP. Other causal factors may explain outcome measures better than the idea of fundamentally invalid shortcomings inherent in EBP. One possible explanation for plateaued global healthy-life expectancies and suicide rates includes the increasing difficulties of addressing mental and physical health problems (Every-Palmer & Howick, 2014). Other more readily apparent explanations suggest inappropriate or incomplete implementation of EBP. Examples include a lack of standardizations, small sample sizes, various pervasive biases, and statistical manipulations for self-interest. These discernable and reoccurring shortcomings appear throughout the reviewed studies and interfere with research quality, in addition to undermining EBPs' efficacy.

Research Quality

Much of the literature reviewed includes various biases in overestimating efficacy. Causes include: underpowered sample sizes, unpublished studies, potentially inaccurate control conditions, selective outcome reporting, unaccounted for spontaneous recovery, underreported randomization methods, insufficient blinding, and generally low-quality research determined by multi-criterion bias-screening tools (Carl et al., 2020; Cuijpers, 2016a; Cuijpers et al., 2016b; Cuijpers et al., 2019; Driessen et al., 2015; Huhn et al., 2014; Munder et al., 2019; Schäfer & Schwarz, 2019). These sources of bias help keep the EBP paradigm from reaching its' proposed

potential to improve clinical outcomes. Moreover, addressing research quality in this review has implications for the greater context of research science outside of psychology. Faulty research is evident through a crisis of replicability faced by the greater scientific community (Baker, 2016). This is evident in the fields of medicine, biology, and physics, among others. Some blame replication problems on either the concept of statistical significance testing or RCTs being inherently faulty measures fundamental to EBP (Every-Palmer & Howick, 2014; Mayo, 2021). Manipulating these two factors for self-interest negatively impacts research quality.

Once thought of as a counter to the replication crisis, meta-analyses in psychology may need to be reassessed in terms of their strengths and limitations to continue improving EBP. Emerging criticisms include the existence of too many meta-analyses (overlap redundancy), meta-analyses failing replication, too much heterogeneity (responsible for 74% of effect size variation), and too little power with 8% of studies across 8000 papers from 200 meta-analyses adequately powered to Cohen's 80% convention (Sharpe & Poets, 2020; Stanley et al., 2018). Explanations for these meta-analysis criticisms include room for subjectivity in study design decisions, conflicts of interest, the inclusion of low-quality substituent studies (a "garbage in garbage out" problem), and omission of substituent studies with statistically insignificant findings (a "file drawer" problem).

In a recent international effort to examine the extent of compromised research through quality-controlled replications of observed psychological effects, about half of the attempts failed (Klein et al., 2018). Fifty percent replication aligns with past large-scale attempts to examine replicability (Open Science Collaboration, 2015). The recent effort named "Many Labs 2", attempts to replicate 28 study findings across classical and modern psychology using 15,305 participants across 36 countries or territories (Klein et al., 2018). Klein et al. saw successful

replication from 15 studies at $p < 0.05$. Although these findings are seemingly bleak, scientists still replicated half of all studies. When considering replication rates in the history of other sciences, for example 10% of cancer biology studies, psychology is not necessarily among the worst offenders (Begley & Ellis, 2012). Another valuable finding from Many Labs 2 was that psychology findings might be more cross-culturally generalizable than once thought (Klein et al., 2018). Psychology's predominantly WEIRD (western, educated, industrialized, rich and democratic) database is largely considered to limit external validity. Contrarily, the global scale of replications (while preliminary) suggests that being WEIRD may not play as large a role as once was thought.

Findings ultimately suggest shifting towards more nuanced empirical interpretations, allowing science to openly acknowledge the strengths and weaknesses of research by incentivizing greater transparency. This transparency could better emphasize replication studies instead of promoting ego-driven "discoveries." Doing so may improve the quality and expectations of research outcomes, thus enhancing EBP's ability to reflect reality. The current push for discovery over replicability hurts psychology's public trust and data quality (Wingen et al., 2020). Furthermore, continued research is needed to determine precisely how severely modern literature is affected (Tackett et al., 2019). This literature review implicates many of counselling psychology's current guidelines and outcomes as biased at worst to incomplete at best. Regardless of the EBP field, improving research is a non-negotiable for anyone on the receiving end of EBP. Patients deserve more efficient, more affordable, and less harmful treatment.

Implications for Counselling Psychology Practitioners and Organizations

Gold Standards

The significance of replication in EBP, alongside CBT's wealth of empirical evidence supports guidelines' unanimously citing CBT as a first-line MDD and GAD treatment (APA, 2019; Andrews et al., 2018; Clark, 2011; Gautam et al., 2017a; Gautam et al., 2017b; Gelenberg et al., 2010; Katzman et al., 2014; Locke et al., 2015; Parikh et al., 2016; Stein et al., 2010). David et al. (2018) argue that CBT is a gold standard when defined as the best standard we currently have instead of as the best standard possible. Arguments defending the notion of gold standards and CBT as the best current candidate include CBT remaining unsurpassed as the most heavily researched orientation (David et al., 2018). Additionally, CBT has yet to demonstrate empirical inferiority as no other orientation has the same quantity of clinical trials with active controls. An example of active controls would be using a placebo (active) instead of a WLC (passive).

David et al. (2018) further argue for gold-standard status for CBT by citing it as the only orientation to align within a greater scientific context of brain and behaviour. They suggest this while citing CBT's use of research-backed explanatory mechanisms and models (e.g., memory, attention, learning) as integral parts of therapy. David et al. (2018) continue by arguing that the ease of studying CBT empirically (evidenced by its large evidence base and overlap with other brain sciences) may indicate CBT's potential to act as an integrative platform. Such a platform would bridge other styles of counselling with natural sciences. David et al. (2018) propose that CBT keeps evolving alongside science with an adaptable enough framework to secure longevity. In contrast, they explain that many other psychotherapeutic approaches have remained essentially unchanged. Such an observation suggests that continued research will keep pushing CBT along its' developmental and scientifically integrative trajectory to an even better and more fully realized therapy. Examples of this in practice include CBT integrating with and improving

from neuroscience findings (Månsson et al., 2021).

In contrast to these arguments and examples, quantity does not equate to quality. A substantial percentage of CBT's large evidence body may be significantly exaggerated when considering Cuijpers et al.'s (2019) criticism of WLC (see Research Quality Critiques). Approximately four-fifths of anxiety studies and half of depression studies use WLC (Cuijpers et al., 2016b). Many CBT studies are plagued by a high risk of bias and insufficient power, resulting in large-scale meta-analyses declaring CBT as probably effective with definitive effects uncertain (Cuijpers et al., 2016b; Cuijpers et al., 2019; Leichsenring et al., 2018). CBT is thus not as definitively superior to other orientations as is sometimes presented. A study by Barth et al. (2013) calls for greater evidence quality in future studies as it claims some therapies are comparable (Barth et al., 2013). IPT, PDT and psychoanalysis demonstrate comparable outcomes to CBT in newer studies (Cuijpers et al., 2016c; Driessen et al., 2017; Leuzinger-Bohleber, 2019). Moreover, certain initial outcome differences between various orientations and CBT disappear long-term and even demonstrate CBT's weaknesses across therapeutic dimensions (Cuijpers et al., 2018; Lemmens et al., 2018; van Bronswijk et al., 2018). Examples of CBT's shortcomings include lower efficacy against GAD than MDD, and in treating chronic depression compared to long-term treatment with psychoanalysis (Mennin et al., 2015; Leuzinger-Bohleber, 2019; Leuzinger-Bohleber, 2021).

Although informative, authors often recognize that therapeutic moderator studies with CBT experiments (e.g., testing seasonal or teletherapeutic effects) are preliminary. Therapeutic moderator effects that are declared when studying CBT groups do not necessarily translate to other orientations. Ignoring the need for follow-up studies contributes to research disparities and is unpragmatic, as anywhere from 32% to 80% of practitioners worldwide have explicitly

claimed the efficacy of an orientation other than cognitive or behavioural. Rates are region-dependent (Jaimes et al., 2015; Liu et al., 2013; Norcross & Rogan, 2013). Accordingly, findings challenging the theoretical unity of natural sciences built upon a therapeutic gold standard of CBT could require most therapists to integrate or convert into a new orientation. Considering the evidence, CBT fails to clearly and consistently demonstrate such clinically meaningful superiority for it to merit converting a majority of therapists (Leichsenring et al., 2018). The APA acknowledges the research literature's lack of support for significant differences between therapeutic orientations (Campbell et al., 2013) and the heterogeneity in defining CBT which limits hard conclusions about CBT (APA, 2019). Further, CBT demonstrates the typical 50% response rate for MDD and GAD common to other psychotherapy forms (Cuijpers et al., 2014a; Loerinc et al., 2015).

Despite these challenges, Cuijpers et al.'s (2019) WLC-adjustment study may justify David et al. (2018) defining CBT as the current best gold standard treatment candidate. David et al. (2018) suggest this definition is appropriate while acknowledging that small effect sizes still have clinical implications (Funder & Ozer, 2019). Cuijpers et al.'s (2019) adjustment greatly drops CBT's efficacy, but CBT is still the only orientation reviewed to remain clinically significant after recalculating effect sizes. Under these strict criteria, CBT has the most enduring (albeit potentially small) effect sizes of any orientation (Cuijpers et al., 2019).

Ultimately, current comparisons between CBT and other psychotherapies could be meaningless. Aggregate analysis of several meta-analyses on the differences between psychotherapies when treating MDD determined all substituent studies to be severely underpowered and risk bias (Cuijpers, 2016a). Power calculations require 548 participants to observe a meaningful effect from orientational difference; the largest trial among the meta-

analyses had 178, and the largest comparative trial in this literature review had 341 (Driessen et al., 2017). When considering this aggregate analysis alongside WLCs effect size inflation, many comparative observations between therapies could be meaningless (including those in this literature review) and in need of further high-quality research. GAD also has a weak database of comparative literature focused on various psychotherapies (Cuijpers et al., 2014b). An ongoing lack of clarity for orientational superiority could suggest that focusing research efforts elsewhere may be more meaningful. When recognizing the effectiveness of therapy, the APA cites client characteristics and qualities of the clinician to be more influential for outcomes than receiving specific diagnoses or brands of therapy (Campbell et al., 2013). Thus, continuing to practice by diagnosis-driven, school-of-therapy dominant thinking could be deemed unscientific and counter-productive.

New Models and Approaches

Pursuing therapeutic superiority may offer diminishing returns; this literature review offers many examples of combining therapies for an enhanced outcome (Blais et al., 2013; Constantino et al., 2019; Huhn et al., 2014; Kladnitski et al., 2018; Lepping et al., 2017; Sundquist et al., 2015; Westra et al., 2016; Wong et al., 2016; Zhang et al., 2015). If the superiority of orientations becomes decreasingly relevant, then the current emphasis on this belief needs revision to enhance treatment outcomes. Up to 60% of clients do not recover with therapeutic interventions and potentially more do not recover if they experience comorbidity (Moses & Barlow, 2006). It may be more meaningful to explore a common underlying process behind all major effective therapeutic frameworks to develop more meaningful treatment targets than unity through cognitive behavioural assimilation. Accordingly, counselling psychology may need to adjust its' conceptualization and prioritization of therapeutic focus to improve

treatments.

The Contextual Model. Some have labelled a medical model of psychotherapy. This model informs the current notion that treatment involves therapeutic components tailored to individual symptomology; for example, therapy is approached with interventions for best treating depression, which are different from those that best treat anxiety (Wampold, 2015). The contextual model opposes this medical model by proposing that psychotherapy is therapeutic due to underlying factors common to social interaction across all therapy types. One example includes emphasis on therapeutic alliance as more valuable in treatment against depression than one orientation. In other words, who provides therapy is more important than what the type of therapy is (Miller et al., 2016). The current lack of evidence supporting a definitively superior therapeutic framework across reviewed literature provides merit to the idea of investigating the contextual model. When comparing several large-scale meta-analyses, effects from common factors in the contextual model (e.g., alliance, empathy, expectations etc.) play a more significant role in outcomes than specific medical model factors (e.g., differences between treatments, protocol adherence, competency ratings for therapeutic framework, etc. (Wampold, 2015, Table 9.1). Equally significant is that outcomes do not change greatly (if at all) in meta-analyses where specific and supposedly integral components of therapeutic frameworks are removed or added (Bell et al., 2013).

Competency-Based Approaches. Clinicians across different orientations often answer in common when asked what makes a therapist competent (EACLIP Task Force On "Competences of Clinical Psychologists," 2019). These answers transcend any one framework and include universal skills around prevention, rehabilitation, and the psychology of health or disease. Therapeutically valuable general factors receive a fraction of the space given to

theoretical orientations in the MDD and GAD clinical guidelines. By their nature, general factors deemphasize orientations while highlighting underlying competencies that cut across interventions. It may be necessary to reorganize current therapeutic approaches to better promote general factors. Such a shift would entail moving from the orientation-focused traditions-based treatment model to a proposed competence-based model (Rief, 2021). Competence-based psychotherapy prioritizes universal disorder mechanisms just as the contextual model prioritizes universal targets (over orientation) for guiding interventions. For example, targeting the trauma mechanism sustaining chronic depression is considered more relevant to treatment than choosing between a CBT or PDT approach (Leuzinger-Bohleber, 2019). These orientation-agnostic priorities appear yet again in evidence-based diagnoses conceptualization (Dalglish et al., 2020).

Transdiagnostic Approaches. Recent literature presents several challenges to traditional diagnostic approaches, with traditional diagnosis referring to diagnoses using the categorical taxonomies within the DSM-5 (American Psychiatric Association, 2013; Insel, 2014; Kotov et al., 2017). A fundamental challenge to traditional diagnosis begins with the biopsychosocial processes of MDD and GAD being transdiagnostic (Dalglish et al., 2020). Specifically, the challenge is that disorders arise from an interplay between physiology, behaviour, cognition, and culture, which is not reflected in traditional diagnosis. Manifestations of this challenge to traditional diagnosis include heterogeneous diagnoses (i.e., one diagnosis manifesting differently in individuals), weak differentiation between different disorders, and discounting comorbidity despite its prevalence. Additional manifestations of this challenge arise from measurement. Examples include disordered phenotypes changing across a lifetime (e.g., the inflexibility of diagnosis can cause continual fluctuation between depressive or anxious disorders, missing what

is underneath), continuous symptoms measured as being discrete (e.g., depressed or not on a scale from 0 to 100), and poor symptom standardization (e.g., different scales measure depression differently while including vaguely common symptoms like being tired).

Interventions dedicated specifically to MDD or GAD improve many disorder symptoms outside of the targeted diagnosis, further challenging current diagnostic approaches (Dalglish et al., 2020).

These problems with traditional diagnosis also become problems for treatments primarily driven by traditional diagnosis (Dalglish et al., 2020). Opposingly, transdiagnostic interventions focus on underlying principles across mental disorders rather than traditionally specific disorders. One specific intervention includes the Unified Protocol for Transdiagnostic Treatment of Emotional Disorders (UP), a treatment targeting the underlying regularities across emotional disorders. Regularities include strong emotions, negative responses to emotions, and emotional avoidance, the targeting of which demonstrates efficacy against depression and anxiety (Barlow et al., 2017; Sauer-Zavala et al., 2020). Transdiagnostic interventions show equivalent or superior preliminary efficacy against MDD and GAD (Newby et al., 2015). Future solutions to traditional diagnostic challenges may include conceptualization using the Hierarchical Taxonomy of Psychopathology [HiTOP] (Kotov et al., 2017). Using HiTOP leverages the transdiagnostic nature of disorders to provide a view that is more EBP aligned (Appendix 5). Outside of pharmaceutical and psychological interventions, therapeutic lifestyle factors (TLCs) provide another tool to improve outcomes independent of specific diagnoses (Walsh, 2011). TLCs are lifestyle changes that promote prevention, symptom reduction, and autonomy for clients to manage their well-being.

Implications for Research and Clinical Practice

Next Fundamental Research Steps

There is an excess of significant findings upon review of the average statistical power of studies, which leads to questions regarding how accurately psychotherapy research reflects reality (Flint et al., 2015). This limitation is evident in inconsistent and shrinking half-lives of knowledge across psychological subdisciplines (as mentioned earlier, possibly within six years) (Neimeyer et al., 2012; Neimeyer et al., 2014). Although these findings are discouraging, recent research efforts are starting to improve and discuss replicability issues (Tackett et al., 2019). Enhancing experimental and clinical research quality will help counsellors to better understand what works in therapy, and how effectively (Hengartner, 2018). Outcomes at the sources of EPT clinical intervention could be improved by managing low-quality MDD and GAD research limitations and addressing mechanisms sustaining the replication crisis. One general consideration underlying all research is experimental design. As WLCs may be inferior and denying clients treatment is unethical, TAU controls (or placebo where possible) could offer a more optimal design. This paper continues by addressing other specific factors perpetuating poor replicability.

Meta-Analyses. In order to improve meta-analyses moving forward, recommendations include: more systematic reviews of published meta-analyses; stricter adherence to publishing guidelines for meta-analytic data; promoting best practices through more accessible mediums (e.g., workshops, publications, etc.); creating platforms for cumulative and open analysis; promoting topics less commonly reviewed; requiring sufficient rationale when analyzing a topic already analyzed; and checking reproducibility (Sharpe & Poets, 2020). Moreover, meta-analysts are encouraged to practice a modest degree of self-doubt to keep humble about finding implications and to express limitations openly and clearly. Research recommendations detailed

below address replicability and study quality regarding the individual studies constituting meta-analyses. Accordingly, improving these substituent studies transitively improves the meta-analysis they inform (Leichsenring et al., 2017).

Effect Size. Effect sizes typically contribute to replicability issues and are unhelpful as they rely on inconsistent standards from paper to paper (Funder & Ozer, 2019; Schäfer & Schwarz, 2019). Effect sizes are also misleading due statistical manipulation; they appear more statistically significant than clinical. A corrective method against misrepresentation would be universal standardization of magnitudes and implications for effect sizes in psychological research. Universal standardization currently works for studies in the same subdiscipline and with similar research questions due to the moderation of effect size. One example is that the confidence intervals of average biopsychology and social psychology effect sizes do not overlap; another example is the significant differences noted in between-subject and within-subject designs (Schäfer & Schwarz, 2019).

Theoretically, standardization is possible, but poor-quality research and the crisis of replicability contribute to unmeaningful benchmarks. Appendix 6 details one proposed standardization of effect size benchmarks. This standardization would help interpret high-quality or intradisciplinary research with similar study designs (Funder & Ozer, 2019). Given that research quality currently makes comparison difficult, examining effect sizes by speaking to practical psychological implications may be more valuable (Schäfer & Schwarz, 2019). The standardization in Appendix 6 accounts for interpretations of practical psychological effects compounded over time and highlights that small effect sizes may still be notable as a function of time. For example, when considering a hypothetical study where exercise is shown to improve GAD clients' social interactions, small effect sizes may still be significant when factoring in a

person's potential for hundreds of social interactions within a week (Funder & Ozer, 2019).

Unstandardized effect sizes, in particular, need interpretation with consideration of the scales of variables used; statistical significance does not mean findings are practically useful (Flora, 2020). When a researcher defines what is clinically useful versus statistically useful before an experiment takes place, this makes it harder to exaggerate results (Leichsenring et al., 2017). Researchers can initially manage problems in experimental design by proposing better research questions that directly relate to effect size (Flora, 2020). This strategy means not investigating the existence of an effect but instead exploring if a phenomenon is deep enough to examine the magnitude of its' effect size. For example, questioning how much exercise impacts a GAD symptom is clinically useful, whereas exploring if exercise impacts a GAD symptom is statistically useful.

Sample Size and Power. Small sample sizes are common in reviewed studies. Small sample sizes reduce power and replicability, especially when studying neuroscience or psychopathology (Lilienfeld & Strother, 2020). Over 50 participants are required in psychological research in order to achieve a theoretically useful minimum effect size of $d = 0.4$ with 80% power when comparing two groups using a within-subject experiment design (Brysbaert, 2019). Many studies exist below this threshold. Sample sizes quickly need to be over 200 for sufficient power when considering between-subject experiment designs. Collaborative strategies for addressing this include: widespread collaboration across sites to compound data; standardizing measurements for consistency; and sharing open access data for other researchers to examine (Tackett et al., 2017; Lilienfeld & Strother, 2020). Independent researchers with small sample sizes can use multiple measurements of essential constructs, add replication data into their studies by repeating past studies, use power analysis to dictate sample sizes, and use

meta-analyses to improve power when possible (Leichsenring et al., 2017; Tackett et al., 2017). Lastly, those who review journals should push researchers to justify the strength of their conclusions by considering their study's sample size (Lilienfeld & Strother, 2020).

Reliability and Validity. One protection against poor reliability is using the most current formulas to determine statistical measures and including this in determination reports (Lilienfeld & Strother, 2020). Researchers can show accountability for reliability by offering their rationale for not using the most current formulas. Researchers should use a nomological network (a means of measuring construct validity) to ensure validity when choosing assessment measures for GAD or MDD instead of assessment names. Just because two tests state they are depression measures does not mean that they measure the same construct in the same way (the jingle fallacy). For this reason, two researchers testing for a theory of depression with different depression measures may wrongly blame outcome differences on psychological understanding rather than measurement tool differences. In order to increase researcher accountability, those who review journals should push for discriminant validity data and not just for convergent validity data for every measure used.

Bias and Self-Interest. Bias stemming from a researcher's allegiance to a specific viewpoint or philosophy becomes an allegiance bias (Munder et al., 2013). Strategies against allegiance bias include: implementing triple-blinds (subjects, investigators, data analysts); blinding reviewers while having them review before results are published; crowdsourcing data analysis; having researchers collaborate with those who are academically oppositional; and having experts of various frameworks carry out their respective interventions. For example, a study comparing CBT and PDT interventions should have a dedicated CBT or PDT proponent carry out their corresponding treatments and supervision (Leichsenring et al., 2017). Reporting

bias may be countered by registering hypotheses as they develop before data analyses (Tackett et al., 2017). Countering publication bias means upping the publication of non-significant results and accepting manuscripts before revealing study results (Leichsenring et al., 2017).

Researchers can take it upon themselves to stay educated on current issues with p-hacking and use this knowledge to avoid misrepresenting statistical significance. More standardized definitions and benchmarks for replication are required to improve the consistency of research quality across psychology subdisciplines (Tackett et al., 2017). An increase in research transparency may increase accountability for research quality. For example, open access to materials like research protocols, open access to data, registrations before concluding results, and collaboration across multiple sites may benefit both original and replication studies (Tackett et al., 2019).

Recommendations for Practice

Practitioners should adapt treatments to better support clients' needs, especially those treatments with evidence of worse-than-average outcomes. An example includes enhancing treatments outcomes by combining interventions, mediums, or approaches to target primary and comorbid symptoms (Dalglish et al., 2020). As risk factors and comorbidity all have many potential interactions, standardized treatments should not replace considerations of individuals' needs. Furthermore, investigation of depressive or anxious symptoms if one of these two diagnoses is present is warranted as a result of comorbidity. Practice recommendations stemming from implications of the literature reviewed are detailed below.

Orientational Superiority. Although CBT is valuable, researchers dispute its conclusive superiority over other frameworks. CBT is the default recommendation for treatment in many of the studies reviewed; however, these studies sometimes test therapeutic moderators (applicable

to other orientations) more than CBT efficacy. For example, the following testing moderators are present in both CBT treatment and in treatment using other therapies: teletherapy, seasonal effects, group therapy, baseline presentation severity, or neurological responses. Successful treatment in these studies focused on CBT does not disqualify other therapies so much as promote consideration of moderators (Brooks & Stein, 2015; Dunlop et al., 2017; Kladnitski et al., 2018; Mohr et al., 2012; Păsărelu et al., 2017; Sitnikov et al., 2013; Sundquist et al., 2015; Thimm & Antonsen, 2014; Vittengl et al., 2016; Weitz et al., 2015).

The ways different therapies model social dynamics, emotions, thoughts, lived experience, or the subconscious provide differentiators that may work for one client but not for others (Leichsenring et al., 2018). Therefore, managing non-responders to one form of therapy may require another form therapy. While integrating all therapies into CBT may help unify treatment approaches across guidelines, this may discourage approach variation for non-responders to CBT. Neuroscience could offer explanatory cohesion for therapeutic mechanisms while respecting a plurality of approaches common across orientations (Brooks & Stein, 2015; Dunlop et al., 2017; Månsson et al., 2021; Messina et al., 2016). Therapists might benefit from familiarizing themselves with these mechanisms to help non-responders with a more versatile tool kit, and to use this knowledge to better inform decisions before referring clients out.

Competency-Based Counselling. A therapist's interventive competency may not relate to how well they stay within a single school of psychotherapy; science from the literature reviewed does not cleanly support the superiority of one framework over another. Instead, future psychological interventions should focus on targeting mechanism modification to better reflect the emerging success of framework-agnostic treatments (Rief, 2021). Such interventions involve a focus on change processes rather than frameworks during conceptualization and treatment

(Appendix 7). For example, therapy could follow these steps: choose a relevant research-backed disorder mechanism (such as reward insensitivity in MDD), choose an appropriate intervention to modify the mechanism (regardless of framework employed), and evaluate results. This therapeutic flexibility may provide better outcomes for clients (Fonagy & Luyten, 2019). Therapists could seek to learn from various frameworks to build the underlying flexibility to approach clients' problems based upon mechanisms instead of forcing clients into a therapist's preferred therapeutic orientation.

The Contextual Model Applied. A review of the evidence base does not suggest support for a gold standard method for treatment of MDD and GAD. Nevertheless, literature supports the contextual model and reflects considerations to guide treatment decisions. The first consideration is that treatment should be a cohesive and rational catalyst to positive change. Treatments meet this requirement when clients sense their treatment is appropriate, feel control over their problem, and initiate action as a result of treatment (Wampold, 2015). The next consideration is that therapists need to take responsibility for helping clients to track progress using measurable metrics (Wampold, 2015). Therapists can only speak ethically to the effectiveness of their treatments and make quality-of-care claims by systematically tracking progress through questionnaires or verbal feedback (Goldberg et al., 2016; Miller et al., 2016; Lambert, 2017; Simons et al., 2019). Lastly, the absence of a gold standard does not permit use of an unlimited range of treatments as this would undermine consistency and cogent explanations of why an intervention is therapeutic (Wampold, 2015). Any treatment deemed acceptable should ultimately withstand questioning from a psychological basis to qualify as appropriate approach to treatment.

Orientation Independent Factors. Therapists may benefit from focusing on evidence-

based, universal therapeutic factors while awaiting future research to differentiate between the efficacy of various orientations and models. This focus may be especially beneficial in view of the disproportionate emphasis on counselling styles instead of these factors. Two major factors reviewed are therapeutic alliance and the role of expectations when treating MDD or GAD. Given potential differences between clients' and therapists' perceptions of their alliance, therapists should track and address discrepancies through the beginning, middle, and end of therapy (Cameron et al., 2018; Coyne et al., 2018). Moreover, it is important to challenge maladaptive expectations clients may have to promote positive change and improve psychological treatments, regardless of the therapeutic orientation used (Doering et al., 2018; Kube et al., 2019; Rief & Glombiewski, 2016).

One method to better challenge expectations is to expose clients to as much incongruency as possible between their expectations and their actual situations (Kube et al., 2017). This behavioural technique modifies expectations through (collaboratively and clearly agreed upon) actionable experiments for maladaptive perceptions. Tracking situation-specific expectations over time allows for measurement of treatment progress. An example includes using the Depressive Expectations Scale to track scores while clients regularly put themselves into situations of anticipated rejection, like asking for help (Kube et al., 2017).

The beliefs therapists have about treatment and their dedication to particular treatment approaches influence outcomes (Wampold, 2015). It is problematic to believe in a treatment when frameworks do not consistently evidence the superiority of one treatment approach over others. One solution is to recommend that therapists choose specific treatments for clients based on the belief that this treatment approach is the best currently available match for themselves and their clients. Approaching therapy in this way permits contextual flexibility and encourages

therapists to change treatments with faith and dedication when a client rejects or is unresponsive to proposed treatments. Therapists also needs to manage their expectations of themselves.

Therapists who demonstrate more self-doubt have better outcome measures, whereas those rating themselves more highly perform worse (Brosan et al., 2008; McManus et al., 2012; Nissen-Lie et al., 2013; Ziem & Hoyer, 2020).

The Transdiagnostic Approach Applied. Much of real-world work is already transdiagnostic. Dalgleish et al. (2020) outline that the real world does not adhere to strict clinical protocols for specific treatments, but instead draws from guiding frameworks, combines treatments and emphasizes client fit across presentations. The HiTOP model encapsulates this approach (Conway & Simms, 2020; Kotov et al., 2017; Ruggero et al., 2019). This model is supported by encouraging research, and it simultaneously begins addressing the need for better comorbidity conceptualization and treatment. HiTOP uses multilevel spectra to cluster traits in a meaningful way for practitioners that better account for disorders than traditional diagnoses. This taxonomic diagnosis clustering is analogous to the grouping of factor analysis-derived traits that create dimensions of personality, as in the two taxonomies of personality: HEXACO and the Big 5 (Lee & Ashton, 2004; Zillig et al., 2002). HiTOP spectra and their subfactors (Appendix 5) can guide treatment by offering transdiagnostic targets for transdiagnostic interventions that demonstrate efficacy (Newby et al., 2015). MI, mindfulness, exercise, and the UP may likewise serve as transdiagnostic treatments to better manage comorbidity while awaiting further research (Constantino et al., 2019; Khanzada et al., 2015; Kladnitski et al., 2018; Sundquist et al., 2015; Sundquist et al., 2019; Takahashi et al., 2019; Wampold, 2015; Westra et al., 2016; Zeng et al., 2018; Zhang et al., 2015). These treatments offer simultaneous benefits for MDD and GAD, which can protect against the missing diagnoses when managing a singular MDD or GAD

presentation.

The Role of Non-Pharmaceutical Interventions. Clients generally prefer psychological interventions over pharmaceuticals (Carl et al., 2020). Practitioners can thus feel some reassurance when offering psychological interventions as outcomes are generally comparable between medication and psychotherapy (Blais et al., 2013; Carl et al., 2020; Huhn et al., 2014; Vittengl et al., 2016; Weitz et al., 2015). The constant privileging of treatment with medication over psychotherapy may worsen client outcomes. Less than a tenth of clients diagnosed with MDD may be receiving mono-psychotherapy (i.e., without medication), which is at odds with the first-line status of reviewed psychological treatments (Blais et al., 2013). Furthermore, pharmacological interventions correlate with greater attrition than psychotherapy and with clinicians overestimating client improvement (Vittengl et al., 2016).

The absence of TLCs in guidelines represents a missed opportunity to provide clients with extra tools to improve therapeutic outcomes. Significant TLCs known to improve mental health include: relationships, exercise, nutrition, sleep hygiene, nature, time away from electronics, recreation, purposeful relaxation, communal involvement, and spirituality (Walsh, 2011). TLCs offer a means to manage mental and physical health holistically, and would benefit from greater systemic support as a preventative measure (Lake, 2017). APA guidelines are scarce or non-existent regarding TLCs, and give little attention to therapeutic factors like spirituality or managing obesity in the treatment of MDD or GAD (APA, 2019). When clinicians avoid these conversations with clients they may fail to serve those who face many potential barriers due to adversity. TLCs are cost-effective, have fewer complications than pharmaceuticals, and do not carry the same stigma that conventional treatments have (Walsh, 2011). Failing to leverage TLCs is also detrimental to society as TLCs are economically

advantageous; healthy behaviours can spread socially through relationships clients have.

Therapists who adopt several TLCs into their own lives may compensate for the missing clinical promotion of TLCs. Therapists with therapeutic lifestyles are more likely to promote these to clients (Walsh, 2011); compounding TLCs may be especially beneficial for adoption or recommendation (Tessier et al., 2017; Walsh, 2011). Challenges for therapists who promote TLCs can arise when interdisciplinary knowledge is integrated into practice. For example, understanding how nutrition and exercise translate into psychotherapy entails monitoring the literature from all three fields, understanding interactions between each, and translating such information into clinical practice with a compelling and compassionate approach.

Reflexive Self-Statement

I was able to identify my biases by paying attention to patterns in my reactions and rationales while shaping this review content. One example included me noting personal indifference towards alternative interventions. I compensated for this noted bias by replacing redundant pharmacological and psychological studies with alternative studies. When I experienced indifference throughout the process of conducting this research, this typically signalled to me that a topic needed more research. I looked for this reflexive theme as it underscored where I could improve my efforts. Areas of indifference included teletherapy and mindfulness. There was potential for bias observed when I examined topics I prefer, such as CBT and pharmacological interventions. In order to manage my tendency towards preferred topics I deliberately explored disconfirming evidence e.g. criticisms of CBT as a gold standard treatment approach and challenges to the interventive efficacy of medications. I was frustrated by study limitations and a lack of hard conclusiveness from many outcome studies, and this frustration motivated me to approach the second half of the paper as I did. I was better able to

explain and clarify what I perceive to be the literature's shortcomings by digging more deeply into context. I was able to contextualize my findings by exploring why research studies may conflict across disciplines, and by considering what this implies for general scientific literature and for the counselling field.

I identified blindspots by collaborating with peers based on reflexive notes I took during the research process to identify. Peers noted my content-heavy areas and reflected back to me my positive reaction to deliberate practice and transdiagnostic models. Their reactions facilitated conversation about this paper's content gaps, including actionable therapeutic targets, tangible tools for deliberate practice, and post-modern therapies. By addressing Drucker et al.'s (2016) suggestions (minding unpublished studies, blinding, attrition, heterogeneity, etc.) I further managed my blind spots throughout the review. Appendices intentionally include findings in aggregation tables to avoid misrepresenting clinical guidelines. In order to be transparent about outcome studies I addressed sample sizes, study types, effect sizes, and limitations while citing relevant key statistics.

Preconceptions and Bias

Our worst biases seem to evade personal management, despite our best intentions. Reflections and self-statements are also subject to biases. As such, I recognize that including a self-positioning and reflexive statement does not protect against bias in the same ways as external and oppositional collaboration can (Leichsenring et al., 2017; Lilienfeld & Strother, 2020; Tackett et al., 2017; Tackett et al., 2019). Whilst I did use collaborators to the extent expressed in both these statements, it is worth noting that virtually all of this paper came from my viewpoint.

It was frustrating to me that I was unable to draw clear conclusions around orientational

superiority. Under closer investigation, my preconceived notions regarding CBT's superiority saw more support in semantics than in reality. My initial expectation was that CBT would prove to be clearly superior in outcomes and secure the title of gold standard, rather than simply being the best survivor of pervasively inadequate research practices. After I accepted the lack of a clear winner, I used my curiosity and emerging research to focus my efforts on how orientations might best work together to improve outcomes instead of competing.

My personal bias regarding psychology's lack of scientific rigour was not only justified throughout the process of this research, but was in some regards further affirmed. Regardless, the literature review offered me surprising insights into the widespread nature of this problem in other scientific fields. My faith in empiricism was supported by investigating sources of low replicability but this same research increased my cynicism around how negligence or researchers' self-interest impact research outcomes. My frustration was especially high when I noted the role of journals in promoting the "file drawer" problem, and the failure of research studies to enforce straightforward standards of practice like stronger minimum power or pre-registration. Although these problems were discouraging, the research literature provided me with context and solutions to readjust my expectations in a meaningful way.

Personal Impact

Therapy may only contribute to 13.8% of outcomes (Wampold, 2015, Table 9.1). Seeing this figure was initially disheartening, but was consequently reassuring. Measuring the impact of psychotherapy in this way points to some realizable change; medications are not panaceas. Just as I discovered that orientations can complement each other instead of compete against each other, I discovered that medical and psychological interventions can also complement rather than compete against each other. Further, my initial personal bias legitimizing medicine over

psychotherapy changed; I now prefer counselling when all else is equal. This change in perspective occurred due to the lack of data I was able to find to support medicine over psychotherapy and as a result of weighing medication efficacy and side effects.

I am optimistic about the future of psychology after learning about the contextual model (orientations), transdiagnostic approaches (diagnosis), and competency-focused perspectives (interventions). These three findings helped me to reconcile my disappointment at discovering a lack of evidence to support claims about treatments that are clearly superior. Instead of collecting fractured observations, I now view psychotherapy from the perspective of its underlying mechanisms, and appreciate and am comforted by the idea of borrowing therapeutic interventions from unfamiliar frameworks. Moreover, this research supports my personal conviction that psychotherapy needs greater interdisciplinary involvement to encourage top-down and bottom-up thinking for enhanced outcomes. It is important that practitioners in this field think about the big picture and not just isolated research findings. Writing this paper changed my views on therapy, session-to-session priorities, and conceptualization of generally accepted psychotherapeutic literature.

Conclusions

Psychotherapy is not responsible for 86% of the variation in outcome studies (see Table 9.1 in Wampold, 2015). In the 14% outcome-influence of psychotherapy, research quality obstructs a conclusive answer to the question of how well outcome measures support current clinical recommendations for treating depression and anxiety. Even if current recommendations are high-quality, and this literature review simply reflects outcomes from practitioners failing to adopt guidelines, improving research quality needs to be a priority in future MDD and GAD studies. Improving research quality offers clarity by reducing weak studies that go on to build

weak meta-analyses; research can and should enhance psychotherapeutic outcomes (Leichsenring et al., 2017). Managing bias is a start; however, there is a need for more replicability studies as the results of these studies lay a direct path to improving evidence quality. Failure to replicate does not mean a lack of rigour and transparency, but failing to prioritize predictive power is inherently unscientific (National Academies of Sciences, Engineering, and Medicine, 2019).

Researchers cannot ignore how much uncertainty still exists in science (Open Science Collaboration, 2015). Replication problems are widespread and extend to the higher orders of research like meta-science (Sharpe & Poets, 2020). Replication is a valuable pursuit as it strengthens what is known and reveals where innovation is needed. Investigating the current extent of compromised generalizability enhances the utility of MDD-GAD intervention data to date (Tackett et al., 2019). More large-scale, long-term research on EBP outcomes is needed to determine if replication problems improve (Simons et al., 2019). Poor generalizability is caused by poor research practices and a common failure to adjust outcomes for therapist effects (Leichsenring et al., 2017; Tackett et al., 2019). Outcome measures for treatment of MDD or GAD are comparable using psychotherapy and medication, although fair efficacy comparisons are difficult and not necessarily productive (Huhn et al., 2014; Carl et al., 2020). Inferior research designs in the field of psychotherapy and high dropout rates in research using pharmaceuticals skew effect sizes (Huhn et al., 2014; Carl et al., 2020).

In addition to questionable research quality, literature gaps limit knowledge regarding which treatments best serve clients. There is a notable lack of literature regarding treating MDD, and GAD together, which is at odds with past recommendations for more comorbidity research (Ballenger, 1999). Similarly, there is much to explore regarding differences between various

orientational efficacies across diverse contexts with large-scale studies. For example, it would be valuable to research differences between therapies offered online versus in person.

Emerging research suggests it is not useful to obsess over which orientation is best (Dalglish et al., 2020; Leichsenring et al., 2018; Rief, 2021; Ruggero et al., 2019; Wampold, 2015). There is not evidence of a need for a “best” therapy but rather a need to offer more nuanced conclusions on the gold standard debate to optimize therapy guidelines. The proposed frameworks discussed in the implications section, including contextual and HiTOP models and transdiagnostic and competency-based approaches, have promising futures that may offer better explanatory power than current frameworks. Future research may examine best practices to combine treatments rather focus on the benefits of one treatment approach over another. Patients often benefit from different forms and orientations of therapy (Huhn et al., 2014).

Therapy would be enhanced by future research into how to augment psychotherapy with neuroscience. Neuroscience may offer deeper integrative capabilities than CBT and bridge frameworks and techniques within the larger scientific context. Neuroscience runs parallel to psychotherapy and does not invalidate a plurality of orientations and approaches (David et al., 2018; Leichsenring et al., 2018). Psychotherapy may also be advanced by future research focused on improving the knowledge of "super shrinks" (Chow & Miller, 2018). Therapists who consistently achieve above-average outcomes arguably provide a direct path to examine what is meaningful in therapy. By examining outcomes through feedback-informed therapy improvements may occur without needing to determine if medical models or contextual models are superior (Miller et al., 2016). Finally, avenues for future research to expand therapists' toolkits may be discovered in the comparably small database on treatments outside psychotherapy and pharmacology.

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Appendix 1

Abbreviations List

APA – American Psychological Association

BT – Behavioural Therapy

BA – Behavioural Activation

CBT – Cognitive-Behavioural Therapy

CT – Cognitive Therapy

DSM-5 – Diagnostic and Statistical Manual of Mental Disorders, 5th edition

EBP – Evidence-based Practice

GAD – Generalized Anxiety Disorder

HiTOP – Hierarchical Taxonomy of Psychopathology

IPT – Interpersonal Therapy

MDD – Major Depressive Disorder

MI – Motivational Interviewing

NICE – National Institute for Health and Clinical Excellence (NICE)

MBCT – Mindfulness-based Cognitive Therapy

PDT – Psychodynamic Therapy

PST – Problem-solving Therapy

RCT – Randomized Control Trial

SSRI – Selective Serotonin Reuptake Inhibitors

SNRI – Selective Serotonin-norepinephrine Reuptake Inhibitors

TAU – Treatment-as-usual

TLC – Therapeutic Lifestyle Factors

UP – Unified Protocol for Transdiagnostic Treatment of Emotional Disorders

WEIRD – Western, Educated, Industrialized, Rich and Democratic

WLC – Wait-list Control

Appendix 2

Aggregate Clinical Guideline Recommendations for Treating Depression

Primary Recommendations		
Psychotherapeutic Interventions	Pharmacological Interventions	Alternative Interventions
<ul style="list-style-type: none"> • CBT^{2,3,4,7} [I][*] • IPT^{2,3,4,7} [I][*] • Ongoing CBT for relapse prevention^{1,7} [I] • BT, CBT, MBCT, IPT, PDT (short or long-term) and supportive therapy demonstrate equivalent outcome measures^{1,3} [I][*] • Non or partial responders switch from antidepressant monotherapy to CT monotherapy^{1,4} [I] • Those with relationship distress wanting combined therapies receiving CT and antidepressants¹ [I] • BA^{2,7} [I][*] • Ongoing MBCT for relapse prevention^{1,7} [I] • Combining CBT, IPT, and a second generation anti-depressant^{1,4} [I] • Psychotherapy for clinical depression (no particular therapy)¹ [I] • Ongoing IPT for relapse prevention¹ [I] • Brief (eight or fewer) CBT, IPT, MBCT, and PST evidence significant symptom reduction and similar effectiveness of up to 16 sessions⁷ [I] 	<ul style="list-style-type: none"> • Second generation anti-depressants^{1,3,4} [I][*] • Combining CBT, IPT, and a second generation anti-depressant (moderate to severe depression)^{1,2,4} [I][*] • Non or partial responders switch from antidepressant monotherapy to another antidepressant^{1,4,5} [I] • Mirtazapine superior efficacy^{3,5} [I][*] • Venlafaxine superior efficacy (SNRI)^{3,5} [I][*] • Those with relationship distress wanting combined therapies receiving CT and antidepressants¹ [I] • Escitalopram superior efficacy (SSRI)⁵ [I] • Sertraline superior efficacy (SSRI)⁵ [I] • Being mindful of St. John's Wort drug-on-drug interactions⁴ [I] • SSRI³ [I] 	<ul style="list-style-type: none"> • Repetitive transcranial magnetic stimulation^{3,4,6} [I][*] • Electroconvulsive therapy^{3,4,6} [I/II]^a [I][*]
Secondary Recommendations		
Psychotherapeutic Interventions	Pharmacological Interventions	Alternative Interventions
<ul style="list-style-type: none"> • Non or partial responders to antidepressant monotherapy add IPT, CBT, PDT, or another antidepressant^{1,4} [II] • MBCT⁷ [II] • Short-term psychodynamic psychotherapy⁷ [II] • Telephone-delivered CBT and IPT⁷ [III] • PST^{4,7} [II][III] 	<ul style="list-style-type: none"> • Non or partial responders to antidepressant monotherapy add IPT, CBT, PDT, or another antidepressant^{1,3,4} [II][*] • Citalopram superior efficacy⁵ [II] • Agomelatine superior efficacy⁵ [II] 	<ul style="list-style-type: none"> • Exercise monotherapy^{1,2} [II][*] • St. John's Wort monotherapy^{1,4} [II][III] • St. John's Wort monotherapy^{1,4} [II][III]
Tertiary Recommendations		
Psychotherapeutic Interventions	Pharmacological Interventions	Alternative Interventions
<ul style="list-style-type: none"> • PDT^{4,7} [III][II] • Acceptance and commitment therapy⁷ [III] • Videoconferenced psychotherapy⁷ [III] • MI⁷ [III] 	<ul style="list-style-type: none"> • Acupuncture and antidepressants¹ [III] 	<ul style="list-style-type: none"> • Vagus nerve stimulation, acutely or for maintenance^{4,5} [III] • Transcranial direct current stimulation⁵ [III] • Electroconvulsive therapy for maintenance⁴ [III] • Acupuncture and first-generation antidepressants¹ [III] • Light therapy^{1,4} [III] • Yoga^{1,3} [III][*]
General Recommendations		
Psychotherapeutic Interventions	Pharmacological Interventions	Alternative Interventions
<ul style="list-style-type: none"> • Marital and family therapy³ [I][*] • Partial responders needing optimization may increase dosage/frequency or go from mono to combined therapy between psychotherapeutic and pharmacological³ [I][*] 	<ul style="list-style-type: none"> • Non responders may switch from psychotherapeutic to pharmacological or vice versa³ [I][*] • Partial responders needing optimization may increase dosage/frequency or go from mono to combined therapy between psychotherapeutic and pharmacological³ [I][*] 	<ul style="list-style-type: none"> • Meditation³ [I][*]

Insufficient for Recommendation		
Psychotherapeutic Interventions	Pharmacological Interventions	Alternative Interventions
<ul style="list-style-type: none"> • Cognitive-behavioural analysis system of psychotherapy^{1,7} [INS][II] • Brief (<10 sessions) PST¹ [INS] 	<ul style="list-style-type: none"> • Acupuncture combined with second-generation antidepressant¹ [INS] • Omega-3 Fatty Acids combined with second-generation antidepressant¹ [INS] • Combining second-generation antidepressant and exercise¹ [INS] 	<ul style="list-style-type: none"> • S-Adenosyl Methionine Monotherapy^{1,4} [INS][III] • Tai Chi¹ [INS] • Acupuncture Monotherapy¹ [INS] • Omega-3 Fatty Acids Monotherapy¹ [INS] • Combining second-generation antidepressant and exercise¹ [INS] • Acupuncture combined with second-generation antidepressant¹ [INS] • Omega-3 Fatty Acids combined with second-generation antidepressant¹ [INS]

Note. Sources: 1, American Psychological Association, 2019; 2, Clark, 2011; 3, Gautam et al., 2017b; 4, Gelenberg et al., 2010; 5,

Kennedy et al., 2016; 6, Milev et al., 2016; 7, Parikh et al., 2016. Square brackets include guidelines' outcome evidence ratings and accordingly determine an intervention's degree of recommendation. Although different systems were used across guidelines, evidence ratings are typically divided by level I, II, III, and insufficient which correspond to primary, secondary, tertiary, and insufficient in this table. Lower numbers indicate a higher level of intervention recommendation as they have higher quality outcomes data and are accordingly recommended before higher numbers (e.g., level I is recommended before level III). Reviews that explicate the definition of "first-line" (initial) treatments typically include level I and II; if a superior level of recommendation does not work, or if a client requires augmenting their primary treatments, lower-level options can be used. General recommendations [*] are interventions without an attached evidence level that do not indicate a degree of recommendation other than being superior to interventions with insufficient evidence. Abbreviations: See Appendix 1. Conflicting level recommendations are ordered by recency of recommendation guidelines and recommendations between levels are shown with a slash. Level I only for acute suicidal ideation, psychotic features, or treatment-resistant depression

Appendix 3

Aggregate Clinical Guideline Recommendations for Anxiety

Primary Recommendations		
Psychotherapeutic Interventions	Pharmacological Interventions	Alternative Interventions
<ul style="list-style-type: none"> • CBT^{1,2,3,4,5} [I][*] • Internet-based CBT short and longterm^{1,4} [I][*] • Five-eight CBT sessions may have better outcome than nine plus¹ [I] • Limited response to CBT can switch to pharmacological interventions and vice-versa⁴ [I] • Psychotherapy demonstrating equal efficacy to medications⁵ [I] • Combining CBT and MI⁴ [I][*] • CBT potentially has higher recovery rates than antidepressants in treating GAD¹ [I] • Psychotherapy can be used alone or combined with medication based on client preference⁵ [I] • Individual CBT may be superior against worry symptoms and have higher adherence than group CBT¹ [I] 	<ul style="list-style-type: none"> • Pharmacological treatments are superior to placebo^{1,4} [I] • Duloxetine (SNRI) and Sertraline (SSRI) greatest benefits for symptom¹ [I] • Escitalopram (SSRI) and Venlafaxine have the highest remission rates¹ [I] • Sertraline and Pregabalin demonstrated the best tolerability¹ [I] • Psychotherapy demonstrating equal efficacy to medications⁵ [I] • Pregabalin superior to placebo^{1,4} [I] • CBT potentially has higher recovery rates than antidepressants in treating GAD¹ [I] • Psychotherapy can be used alone or combined with medication based on client preference⁵ [I] 	
Secondary Recommendations		
Psychotherapeutic Interventions	Pharmacological Interventions	Alternative Interventions
<ul style="list-style-type: none"> • CT¹ [II] • Cognitive bias modification¹ [II] • Peer-to-peer cognitive self-therapy¹ [II] • Meta-cognitive therapy^{1,4} [II][*] • CBT targeting intolerance of uncertainty^{1,4} [II][*] • Short-term psychodynamic psychotherapy for anxiety (but CBT superior for worry and depression)^{1,4} [II][*] • Internet-based PDT¹ [II] 	<ul style="list-style-type: none"> • Escitalopram (SSRI)^{1,4} [II][I] • Paroxetine (SSRI)^{1,4} [II][I] • Duloxetine (SNRI)^{1,4} [II][I] • Venlafaxine XR (SNRI)^{1,4} [II][I] • Sertraline (SSRI)^{1,4} [II][I] • Agomelatine (short term studies)^{1,4} [II][I] • SSRIs⁵ [II] • Combining antidepressants and benzodiazepines for acute, short term improvement in crisis⁵ [II] • Combining CBT and pharmacological interventions demonstrates greater efficacy for less than six-months^{1,4} [II][*] 	<ul style="list-style-type: none"> • Physical exercise^{1,5} [II] • Applied relaxation (studies demonstrating limited efficacy)^{1,4} [II][*] • Acceptance-based interventions^{1,4} [II][*] • Mindfulness interventions¹ [II]
Tertiary Recommendations		
Psychotherapeutic Interventions	Pharmacological Interventions	Alternative Interventions
	<ul style="list-style-type: none"> • Continue medications for a year after improvement to prevent relapse^{3,5} [*][III] 	
General Recommendations		
Psychotherapeutic Interventions	Pharmacological Interventions	Alternative Interventions
<ul style="list-style-type: none"> • CBT combined with supportive listening or supportive Psychotherapy^{3,4} [*] • Cognitive restructuring³ [*] • Insight oriented Psychotherapy³ [*] • Greater CBT efficacy with chronically anxious clients versus acutely anxious clients³ [*] • BT³ [*] • MBCT⁴ [*] • Eight-ten sessions of CBT³ [*] • Less than eight CBT sessions are as effective as more than eight sessions for anxiety symptoms⁴ [*] 	<ul style="list-style-type: none"> • Limited response to CBT can switch to pharmacological interventions and vice-versa⁴ [*] • Tapering off of medications may be more difficult in panic disorders than GAD⁶ [*] • Long-term outcome improves from combining psychotherapy and pharmacological interventions³ [*] 	<ul style="list-style-type: none"> • Mindfulness groups⁶ [*] • Balneotherapy⁴ [*] • Yogic techniques demonstrate greater motivation for use than progressive muscle relaxation³ [*] • Meditation (possibly comparable to pharmacological intervention with time and effort)³ [*]

Insufficient for Recommendation		
Psychotherapeutic Interventions	Pharmacological Interventions	Alternative Interventions
<ul style="list-style-type: none"> • CBT and pharmacological interventions can be routinely combined⁴ [INS] • IPT combined with CBT⁴ [INS] 	<ul style="list-style-type: none"> • CBT and pharmacological interventions can be routinely combined⁴ [INS] 	<ul style="list-style-type: none"> • Most botanicals and supplements evidencing efficacy for depression⁵ [INS]

Note. Sources: 1, Andrews et al., 2018; 2, Clark, 2011; 3, Gautam et al., 2017a; 4, Katzman et al., 2014; 5, Locke et al., 2015; 6, Stein et

al., 2010. Square brackets include guidelines' outcome evidence ratings and accordingly determines an intervention's degree of recommendation. Although different systems were used across guidelines, evidence ratings were typically divided by level I, II, III, and insufficient which correspond to primary, secondary, tertiary, and insufficient in this table). Lower numbers indicate a higher level of intervention recommendation as they have higher quality outcomes data and are accordingly recommended before higher numbers (e.g., level I is recommended before level III). Reviews that explicated the definition of "first-line" (initial) treatments typically included level I and II; if a superior level of recommended treatment does not work, or if a client requires augmentation of primary treatments, lower-level options can be used. General recommendations [*] are interventions without an attached evidence level that do not indicate a degree of recommendation other than being superior to interventions with insufficient evidence. Abbreviations: See Appendix 1. Conflicting level recommendations are ordered by recency of recommendation guidelines.

Appendix 4

Aggregate Clinical Guideline Recommendations for Treating

Comorbid Depression and Anxiety

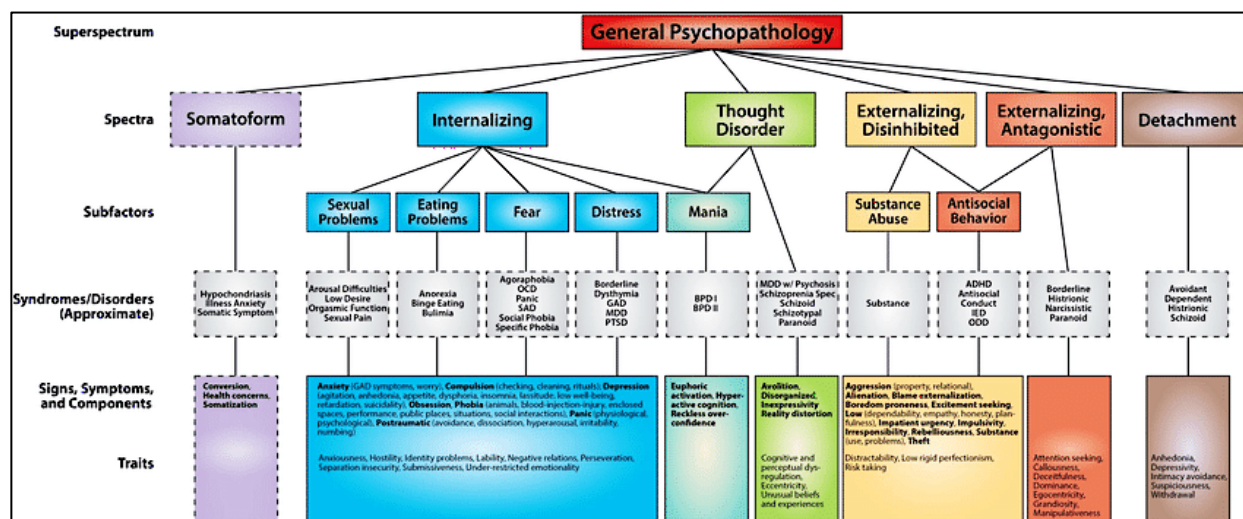
Primary Recommendations		
Psychological Interventions	Pharmacological Interventions	Alternative Interventions
<ul style="list-style-type: none"> • CBT for comorbidity^{4,7} [I] • Individual CBT may achieve earlier improvement in comorbid depression symptoms and have higher adherence than group CBT¹ [I] 	<ul style="list-style-type: none"> • SNRIs for comorbidity⁴ [I] • SSRIs for comorbidity⁴ [I] 	
Tertiary Recommendations		
Psychological Interventions	Pharmacological Interventions	Alternative Interventions
	<ul style="list-style-type: none"> • Using antidepressants with efficacy for GAD⁵ [III] 	
General Recommendations		
Psychological Interventions	Pharmacological Interventions	Alternative Interventions
<ul style="list-style-type: none"> • Internet-based CBT or self-help CBT for low-intensity treatments of depression or anxiety³ [*] 	<ul style="list-style-type: none"> • Combining serotonergic and noradrenergic effects may be superior, switching from single pathway medication to the dual pathway for non-responders² [*] • Venlafaxine XR for comorbidity² [*] • Quetiapine for comorbidity⁴ [*] • Augmenting antidepressants with aripiprazole for comorbidity⁴ [*] • Risperidone monotherapy for comorbidity⁴ [*] • High comorbidity rates implicate ideal pharmacological treatments should protect against both depression and anxiety² [*] 	<ul style="list-style-type: none"> • Kava effective against depression and anxiety but demonstrates possible hepatotoxicity, sedation, and P450 substrate interference (seeing decreased clinical use as a result)⁶ [*]

Note. Sources: 1, Andrews et al., 2018; 2, Ballenger, 1999; 3, Clark, 2011; 4, Katzman et al., 2014; 5, Kennedy et al., 2016; 6, Locke

et al., 2015; 7, Parikh et al., 2016. Square brackets include guidelines' outcome evidence ratings and accordingly determine an intervention's degree of recommendation. Although different systems were used across guidelines, evidence ratings are typically divided by level I, II, III, and insufficient which correspond to primary, secondary, tertiary, and insufficient in this table. Lower numbers indicate a higher level of intervention recommendation as they have higher quality outcomes data and are accordingly recommended before higher numbers (e.g., level I is recommended before level III). Reviews that explicate the definition of "first-line" (initial) treatments typically include level I and II; if a superior level of recommendation does not work, or if a client requires augmentation of their primary treatments, lower-level options can be used. General recommendations [*] are interventions without an attached evidence level that do not indicate a degree of recommendation other than being superior to interventions with insufficient evidence. Abbreviations: See Appendix 1. Conflicting level recommendations are ordered by recency of recommendation guidelines.

Appendix 5

A Current Hierarchical Taxonomy of Psychopathology Consortium Working Model



Note. Taken with permission from Conway & Simms (2020). The Syndromes and Disorders illustrate where current diagnostic pathologies sit in the context of transdiagnostic approaches. Dashed lines indicate preliminary findings needing further research. Abbreviations: ADHD, attention-deficit/hyperactivity disorder; GAD, generalized anxiety disorder; IED, intermittent explosive disorder; MDD, major depressive disorder; OCD, obsessive-compulsive disorder; ODD, oppositional defiant disorder; SAD, separation anxiety disorder; PD, personality disorder; PTSD, post-traumatic stress disorder

Appendix 6

Proposed Standards for Effect Size Benchmarks in Psychological Research

Effect Size (r)	Single-Event Interpretation	Multi-Event Interpretation ^a
0.05	Very small	Possibly consequential short-term ^b
0.10	Small	More consequential short-term ^b
0.20	Medium	Explanatory and actionable use short-term and longer-term
0.30	Large	Possibly strong effect size short and long-term
0.40	Very Large	Likely overestimation within psychological research ^c

Note. Adapted from Funder and Ozer, 2019. A caveat to these standardizations is accurate effect size calculation defined as being bias-free or, between meaningfully comparable studies, defined as intradisciplinary or having a similar study design

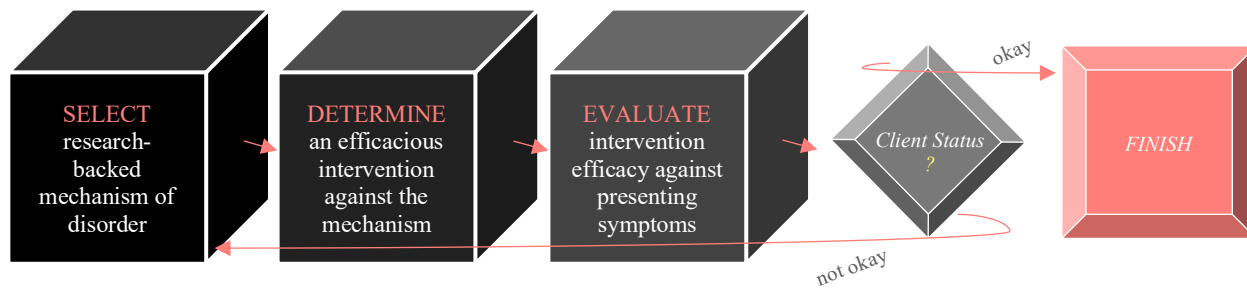
^aMulti-Event refers to when the measured psychological phenomenon effect occurs many times over (as opposed to once) and accumulates, either from an individual repeating actions or many individuals performing an action once.

^bShort-term refers to a span of time with consideration for how often the phenomena occurs, generally seen within a few weeks.

^cUnlikely to be found in large sample sizes or replication studies.

Appendix 7

Viewing Psychotherapy as a Collection of Processes



Note. Adapted from Rief (2021), Mechanisms and Processes.