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President Column

J. Kim Penberthy, PhD, ABPP

Dear Society of Clinical Psychology Members,

I hope you are as excited as I am about all that is happening in our division! We have so much going on - APA conference in August 2023, work on our 3-year strategic planning, as well as planning for our first ever Society of Clinical Psychology Conference in Atlanta in February 2024! So many initiatives and projects to help strengthen and promote the Society of Clinical Psychology!

I am writing this month to provide additional information and updates regarding the multiple priorities for my presidency: 1) Updates on our offerings at APA conference; 2) Developing a strategic plan for SCP for the next three years; 3) Establishment of taskforce to define psychological treatments; and 4) Our inaugural Society of Clinical Psychology Conference in Atlanta in February of 2024.

1) We are excited for our annual APA conference in the nations' capital, Washington, DC August 3-5, 2023 and have an amazing line up of posters, presentations, discussions, CE offerings, symposia, and social events! I am thrilled to have the opportunity to see everyone in person (still with some remote options for those who choose) and look forward to a productive and interesting conference for sure!

Our theme is on innovation and the future of clinical and health psychology and all that comes with looking ahead in our profession! We have innovative, forward thinking programming exploring what is now and what is next in the field of clinical psychology and how we can best prepare ourselves, our students, our clients, and our patients!

I want to thank all of you who submitted programming and let you know that we had a record number of very high quality submissions, which made it especially challenging to select programming.

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Our amazing co-chairs, Dr. Heather Bruschwein and Dr. Joey Yost, have worked incredibly hard to put together outstanding programming and I want to give them a special thank you for their diligence and dedication. If you see them at convention, please give them a word of thanks!

The selections for offerings are top-notch and forward thinking and include luminaries, innovators, disruptors, in addition to early career psychologists, students, clinicians, researchers, consultants, entrepreneurs, and academicians! There are many incredible presentations, symposia, critical conversations, and skill building workshops –too many to name. Some cutting-edge Symposia such as "The Future of Clinical and Health Psychology: Views from the Lab and the Field," "Guidelines for Psychological Practice with Older Adults 2023: Clinical and Research Implications," 'Integrating Cultural Information into Clinical Work-Wright-Constantine Structured Clinical Interview," and "It's Time to Address Spirituality and Religion in Psychological Practice." We have Critical Conversations including "Beyond a Damage-Centered LGBTQ+ Psychology: A Critical Discussion," Linguistic Equity in Psychological Assessment," and skill building sessions including "Culturally Responsive Implementation of Problem Solving Therapy for Suicide Prevention." Additional programming from SCP members includes "Psychological Assessment: Recent Progress and Future Directions," "Repercussions of COVID on Women: Challenges and Implications," and "My Journey as a Psychologist in an Academic Health Center: Leadership Lessons Learned." I will be delivering the Presidential Address, "Persistent Depressive Disorder: An Illustration of the Evolution of Clinical Psychology." And you will find there are plenty more amazing offerings!

Perhaps one of the most rewarding parts of attending APA is the opportunity to network with like-minded psychologists, engage in career building and developing and maintaining relationships. As such, we have several social events lined up, including our annual Awards Ceremony and Reception as well as a Reception for SCP Fellows, during which will welcome and celebrate our new Fellows as well as our existing SCP Fellows! Also, for ECPs and graduate students, we will again have our annual Speed Mentoring Event. We have a lovely and large Division Suite at the Renaissance Hotel and welcome you to stop by any time!

2) We will hold a strategic planning meeting on August 2, 2023 prior to APA. Our workgroups have made enormous progress on their tasks of helping to identify issues and set priorities for our division and their work will be presented to the strategic planning committee prior to the important work of developing a plan for SCP for the next three years. Again, our committee will use the workgroup information to help

Clarify our purpose, identify values, and define long-term goals and objectives

Identify strengths, weaknesses, opportunities, and threats: we can assess our internal and external environment, identifying threats and opportunities

Set priorities and allocate resources: identify our most important goals and allocate resources to achieve them. We need to look at the future for our field and not just keep up, but get ahead and be leaders!

Monitor progress and adjust course: track progress toward goals, identify areas where progress is lagging, and make corrective adjustments

Foster collaboration and engagement: provide a shared understanding of the organizations' mission and goals and encourage participation from all sections, members, affiliates, advocates, and supporters!

3) The SCP board has commissioned a Task Force to define psychological treatments. In the service of evaluating potential empirically supported psychological treatments under the 2015 criteria, a clear definition of a psychological treatment seems to be a necessary precursor. Accordingly, the Task Force is being asked to define psychological treatment, to make recommendations for changes needed to our procedures to evaluate empirically supported treatments, and to determine whether past and pending applications meet the definition of psychological treatment.

Wait – there is more!

4) I am happy to announce that we are moving forward with our plans to have an inaugural Society of Clinical Psychology Conference in Atlanta, Georgia in conjunction with our midwinter board meeting in February, 2024. The SCP conference will be held February 1-3, 2024 and will be held at the Emory Conference Center in Atlanta, Georgia. Please save the date! This venue is amazing and Atlanta is easy to get to by land and air, and has lovely weather in February! We are excited to host a conference for clinical and health psychologists where we can focus on exploring culturally-competent, science-backed, and evidence-based psychological assessment and psychological practice and enjoy being with our colleagues and students of SCP!

This will be our first division wide conference and we are thrilled with the idea of us all being together and

celebrating all of our sections and the entire division and all of our sections!

Co-chairs Dr. Lily Brown and Dr. Richard LeBeau are working hard to assemble committees to help with the conference and have developed an amazing agenda including events for early and mid-career psychologists and social activities. More details will be forthcoming and we hope that if you have ideas and suggestions, you will reach out!

As always, your feedback, support, and participation is important to keep our division moving forward and for the work we are doing in our workgroups, the strategic planning and the proposed SCP conference!

I want to keep our members informed and involved. If you wish to get involved in anything you read about in this letter and if you have any thoughts, ideas, feedback, please feel free to reach out to me at jkp2n@uvahealth.org!

Thank you for all you do,
Sincerely,

J. Kim Penberthy, Ph.D., ABPP
President, The Society of Clinical Psychology

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CLINICAL PSYCHOLOGY

DIVISION 12
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Roadmap toward a neuro-modulatory treatment for PTSD and anxiety

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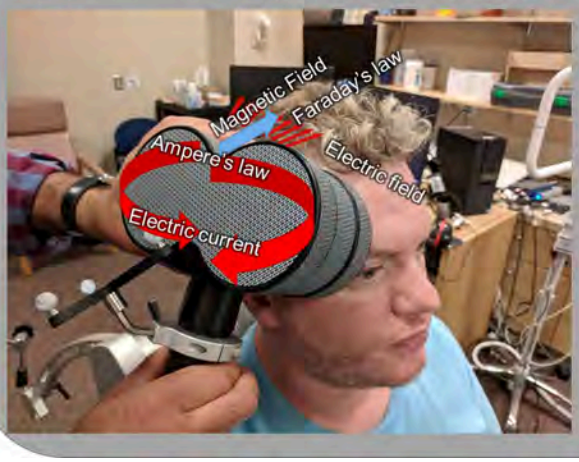
Nicholas L Balderston, PhD

Anxiety disorders are among the most diagnosed classes of mental disorders with 1 in 5 individuals meeting criteria for an anxiety disorder within a given year in the US (Kessler & Chiu, 2005). Critically, nearly 2/3 of anxiety patients rate their anxiety as moderate to severe, and less than half of anxiety patients receive minimally adequate treatment (Ginsburg et al., 2011). While anxiety alone can cause significant distress and dysfunction, anxiety and depression symptoms are highly comorbid, and those suffering from anxious depression are often much sicker and more difficult to treat than individuals with either depression or anxiety alone (Ionescu et al., 2014). For these reasons and others, anxiety disorders cost the US economy billions of dollars per year (Vos et al., 2020). Accordingly, it is critical that we develop novel treatments for anxiety.

Neuromodulation is rapidly emerging as a novel avenue for the treatment of psychiatric conditions, and transcranial magnetic stimulation (TMS), a noninvasive neuromodulation technique, has been shown to be a versatile tool in the arsenal (Lefaucheur et al., 2014). TMS works by creating a magnetic field that penetrates the skull and depolarizes neurons directly below the TMS coil (Box 1), leading to action potentials and plasticity in local circuits (Suppa et al., 2016). Critically, distinct patterns of TMS can be administered to either up- or down-regulate neural activity at the site of stimulation (Di Lazzaro et al., 2011), allowing researchers to target both hyper and hypo active circuits associated with a particular symptom or disorder. Additionally, TMS can be paired with cognitive tasks or behavioral cues meant to prime the circuits through Hebbian-like plasticity (Deng et al., 2020).

This flexibility has allowed researchers to develop several FDA-approved TMS treatments for depression (O'Reardon et al., 2007a), obsessive compulsive disorder (Carmi et al., 2019), and smoking cessation (Zangen et al., 2021), with several other applications currently in development. For depression there are 3 basic TMS treatments approved by the FDA. The first is the standard 10 Hz protocol targeting the left dorsolateral prefrontal cortex (dlPFC) (O'Reardon et al., 2007a). In this protocol, TMS is administered for ~40 min per day, 5 days per week, for roughly 4-6 weeks. This treatment has been shown to significantly reduce depression symptoms compared to sham (O'Reardon et al., 2007a). More recently, intermittent theta burst stimulation (iTBS) has been shown to be non-inferior to 10 Hz when given at the same intervals (Blumberger et al., 2018). The benefit to iTBS is that the stimulation sessions can be shortened from ~40 minutes to ~3.5 minutes without a drop in efficacy (Suppa et al., 2016). Finally, the

Box 1: Maxwell's equations as they apply to TMS.



Amphere's Law: $\nabla \times \vec{B} = \mu_0 \left(\vec{J} + \varepsilon_0 \frac{\partial \vec{E}}{\partial t} \right)$

The strength of the magnetic field is proportional to the change in the electric field. In other words, changing currents or electric fields create corresponding magnetic fields.

Faraday's Law: $\nabla \times \vec{E} = \frac{\partial \vec{B}}{\partial t}$

The strength of the electric field is proportional to the change in the magnetic field. In other words, changing magnetic fields induce electrical currents.

most recently approved protocol the Stanford Neuromodulation Therapy (SNT) uses repeated daily sessions of iTBS (10 per day) to shorten the course of treatment from 4-6 weeks to 5 days with favorable outcomes (Cole et al., 2020, 2022).

Critically, all these treatment protocols target the left dlPFC. Mechanistically, it is thought that hypoconnectivity between the left dlPFC and the subgenual anterior cingulate cortex (sgACC) is thought to mediate the dysthymia experienced by those with depression (Sheline et al., 2009). Given the success of these treatments and the high comorbidity between depression and anxiety, researchers have begun to extend the use cases of these protocols to individuals with post-traumatic stress disorder (PTSD) (Kozel et al., 2018) and anxiety (Diefenbach, Bragdon, et al., 2016). While this approach has resulted in some limited success, it could be argued that decreases in anxiety following such treatments are secondary to the improvements in mood. According to this argument, treatments that target anxiety directly might be more effective at relieving anxiety symptoms. While there have been protocols developed to treat anxiety (Huang et al., 2018) and PTSD (Philip et al., 2019) symptoms, there is currently not sufficient clinical trial data to support widespread adoption of these protocols. Therefore, it is the purpose of this perspective to define a roadmap toward the FDA-approval and widespread adoption of a novel TMS treatment for anxiety/PTSD. In doing so, I will summarize the current support for existing protocols, as well as the additional support that would be needed to move these treatments forward.

For a medication or device to obtain approval from the FDA for a given indication, there needs to be sufficient scientific evidence that it is safe and effective for that indication. This evidence is typically the product of a yearslong series of increasingly large and well-controlled clinical trials that build upon the existing preclinical work identifying the mechanism of action. These trials are typically grouped into 1 of 4 phases based on their size and complexity.

Clinical trials for PTSD and anxiety

Discovery and preclinical work

In general, preclinical work aims to discover novel therapeutics, and elucidate their mechanisms of action (Umscheid et al., 2011). Depending on the route, this may involve developments in chemistry, physics, genomics, computational biology, and biomedical engineering. These studies are often conducted in vitro, in silico, or in model organisms to minimize the risk to human subjects. For TMS, these data include studies of the effects of the strong magnetic pulses on the neurophysiology of neurons in the dish or the slice. These data also include work in humans targeting the motor system to understand how various experimental parameters affect cortical excitability.

Preclinically, much is known about the networks involved in anxiety and PTSD. Much of this work has been derived from studies of standard laboratory fear conditioning and extinction. In fear acquisition, an initially neutral stimulus like a picture or tone is repeatedly paired with an aversive stimulus like an electric shock (Kim & Jung, 2006; Lonsdorf et al., 2017). After repeated pairings, the previously neutral stimulus comes to elicit a fear response (Kim & Jung, 2006; Lonsdorf et al., 2017). In fear extinction, the pairing of the neutral and aversive stimulus is discontinued and the fear response to the previously neutral stimulus gradually diminishes (Fullana et al., 2018; Milad & Quirk, 2012). In addition to learning cue-outcome associations, the subject also learns that specific contexts or environments can become associated with a shock, which can lead to sustained anxiety responses in that context/environment (Maren et al., 2013).

Indeed, one of the benefits to studying anxiety is that the elevated physiological arousal that cuts across anxiety disorders is dimensional, experienced at varying levels in healthy individuals and patients alike, and readily studied using thoroughly researched and validated model systems (Grillon et al., 1994; Grillon, 2008a; Morgan et al., 1995; Robinson et al., 2012). Laboratory threat paradigms can also trigger mild anxiety symptoms not associated with arousal, like elevated subjective anxiety (Dunning et al., 2013; Hansen et al., 2009; Robinson, Vytal, et al., 2013; Vytal et al., 2014), worry (Grillon, 2002, 2008b), and attention control deficits. (Balderston et al., 2015; Clarke & Johnstone, 2013; Lavric et al., 2003; Robinson et al., 2011; Robinson, Krimsky, et al., 2013). It is therefore possible to use threat, with the substantial existing knowledge base of its underlying circuitry, to bridge the gap between pre-clinical work in non-human animals and anxiety patients and speed the discovery of new treatments.

Combined work in humans and non-human animals has led to the identification of a network of regions important for fear and anxiety. Critically, the amygdala is thought to be the key region where associations between events (neutral and aversive) are formed (Fanselow & Gale, 2003), leading to acute activation of downstream regions associated with behavioral outputs (hypothalamus, locus coeruleus, reticular formation, central grey, etc.) (Helmstetter et al., 2008; Ross & Van Bockstaele, 2021). In contrast, the bed nucleus of the stria terminalis (BNST) is

thought to coordinate with the amygdala during sustained threats to prolong these behavioral responses (Davis et al., 2010). For more complex learning tasks, the hippocampus becomes important for linking temporally disconnected events (i.e. trace conditioning) or discriminating/generalizing details of an overall pattern that becomes associated with an aversive pattern (Gilmartin et al., 2014). The insula and primary sensory cortices all contribute to the experience of learned fear, while the dorsal anterior cingulate and motor cortices help coordinate defensive behaviors to learned threats (Fullana et al., 2015, 2018). Finally, the ventromedial anterior cingulate cortex (vmPFC; also known as sgACC) and the lateral prefrontal cortices are thought to be critical for learning extinction and for regulating fear and anxiety (Fullana et al., 2018; Milad & Quirk, 2012).

It is known that the hippocampus plays a critical role in episodic memory, spatial navigation, and pattern separation. For PTSD, there seems to be a direct link between symptom expression hippocampal function. It is known that chronic stress (Gurvits et al., 1996), sexual trauma (Bremner et al., 1997), and combat exposure ("MRI-Based Measurement of Hippocampal Volume in Patients with Combat- Related Posttraumatic Stress Disorder," 1995) can reduce hippocampus volume and hippocampus neurogenesis in individuals with PTSD (Anacker & Hen, 2017). Individuals exposed with chronic stress are less able to recruit the hippocampus during memory retrieval (Carrion et al., 2010). Patients with PTSD show abnormal hippocampal functional connectivity, with disruptions in connections between the posterior hippocampus and default mode network (DMN) (Chen & Etkin, 2013). Together these results suggest that the hippocampus may be a critical target for intervention for PTSD.

Although there have been criticisms regarding the degree to which fear and anxiety translate to clinical anxiety symptoms, there is evidence that these paradigms relate to clinical phenotypes. First, patients with anxiety disorders have been shown to have elevated startle responses relative to control subjects (Grillon et al., 1994; Morgan et al., 1995), and this native startle potentiation increases as anxiety symptoms increase (Grillon, 2008b). Second, mirroring the increased prevalence of anxiety disorders in women, startle responses during unpredictable threat are also larger in women (Grillon, 2008a). Finally, these same startle responses are sensitive to the same anxiolytic drugs (e.g. benzodiazepines) as anxiety symptoms (Baas et al., 2002; Grillon et al., 2006; Rodríguez-Fornells et al., 1999; Scaife et al., 2005).

In addition to delineating potential targets and networks for TMS intervention, preclinical work with TMS has shed light on the mechanism of action of TMS generally (See Box 1), and rTMS/TBS specifically. Work examining the effect of repetitive TMS (rTMS) on cortical excitability suggests that patterns below 5 Hz tend to decrease excitability at the site of stimulation, while patterns greater than 5 Hz tend to increase excitability at the site of stimulation (Di Lazzaro et al., 2011). However, these effects are likely dependent upon several factors including the strength of stimulation, number of pulses, and others (Di Lazzaro et al., 2011). Theta burst stimulation mimics natural rhythms of the brain to efficiently modulate synaptic plasticity (Suppa et al., 2016), inducing behavioral changes in targeted circuits in a fraction of time as traditional rTMS. Distinct patterns of TBS can lead to distinct effects on plasticity. For most common protocols, iTBS tends to strengthen synaptic connections, while continuous TBS (cTBS) tends to weaken synaptic connections. Additionally, there is evidence that administering repeated sessions daily can further facilitate behavioral effects of TBS (Goldsworthy et al., 2015; Thomson & Sack, 2020).

Phase I trials

These tend to be small (20-80 participants and are aimed at first-in-human tests of safety for a drug or device (Umscheid et al., 2011). They are also intended to identify any potential side effects of a drug or device. For TMS the safety and side effect profile has been well-established (Rossi et al., 2020). The primary side effects tend to involve discomfort at the site of stimulation and an elevated risk of seizure (Rossi et al., 2020). With new applications of TMS, there are typically several smaller trials typically conducted aimed at understanding how TMS might target a specific mechanism related to a disease or symptom. These trials typically also investigate approaches to optimize and individualize the targeting of such mechanisms using techniques like fMRI (Balderston, Roberts, et al., 2020) or connectivity (Balderston et al., 2022; Oathes et al., 2021) based TMS targeting.

The initial work examining the effect of TMS on anxiety stemmed from studies in individuals with a primary diagnosis of depression. In these individuals, evidence began to mount that 1 Hz stimulation to the right dlPFC could be anxiolytic (Mantovani et al., 2013; O'Reardon et al., 2007b; D. White & Tavakoli, 2015). Soon, groups began piloting 1 Hz stimulation protocols in generalized anxiety disorder (GAD) patients with some success. However, there have yet to be large-scale well-controlled trials targeting anxiety with this approach. Perhaps one reason for this lack of RCTs is the fact that the mechanism underlying this anxiolytic effect is largely unknown, making it difficult to identify the optimal right prefrontal target.

Other mechanistic work has used TMS as a causal intervention to probe frontal and parietal circuits and

determine their involvement in anxiety expression and regulation. There is evidence from structural connectivity that the amygdala can be targeted via its functional connections with the ventrolateral prefrontal cortex (vlPFC) (Sydnor et al., 2022). TMS/EEG has shown that spider phobic individuals have reduced inhibition in the dlPFC when exposed to spider images, suggesting that fear and fear-relevant stimuli capture attention and attentional resources (Pokorny et al., 2022). There is evidence to suggest that 20 Hz stimulation to the left dlPFC, an area important for regulation, during extinction can enhance extinction retention (Raij et al., 2018) during standard laboratory delay fear conditioning. In contrast, low frequency stimulation to the dorsal anterior cingulate cortex (dACC), an area important for expression, reduced spontaneous recovery during trace fear conditioning (Klavir et al., 2012).

Work from my own lab uses threat of unpredictable shock to experimentally elevate state anxiety and arousal, along with concurrent anxiety ratings and anxiety potentiated startle (APS) to measure state anxiety and arousal in the laboratory (Grillon, 2008b). Using this approach, we have shown that both excitatory (10 Hz (Balderston, Beydler, Roberts, et al., 2020) and iTBS [unpublished]) and inhibitory (Teferi et al., 2022) (cTBS) protocols lead to increased anxiety (rather than decreased anxiety) when applied to the right dlPFC in healthy volunteers. This is true whether we measure changes in anxiety/arousal acutely (Balderston, Beydler, Roberts, et al., 2020) or after a 24-hour delay (Teferi et al., 2022), suggesting the effects are related to changes in plasticity. These effects have been replicated in studies targeting heart rate variability with dlPFC and frontotemporal iTBS (Notzon et al., 2015; Poppa et al., 2020). While it may be tempting to use these findings to argue against right dlPFC stimulation for anxiety, it is unclear whether our findings generalize to patients (L. K. White et al., 2023). Despite this limitation, our results confirm a mechanistic link between right dlPFC function and elevated arousal and provide an objective measure (APS) to study this link in patients.

A small study using deep TMS paired with exposure to a brief traumatic event showed that this paradigm can potentially lead to decreased PTSD symptoms (Isserles et al., 2013). 1 Hz rTMS to the right dlPFC reduced hyperarousal symptoms in a small crossover pilot with 9 subjects (Osuch et al., 2009). In a series of case studies, researchers were able to show that bilateral iTBS given once daily for 4 weeks (5 days per week) can reduce both depression and PTSD symptoms (Nursey et al., 2020). Retrospective analysis of medical records of PTSD patients treated with TMS suggests that TMS is effective in individuals with and without traumatic brain injury (Philip et al., 2023). Finally, TMS/EEG can predict clinical outcomes for PTSD patients who receive TMS, suggesting that there are electrophysiological signals associated with TMS treatment outcomes (Zandvakili et al., 2019).

Phase II trials

These are typically conducted in a somewhat larger group of individuals (100-300 participants) and are aimed at further examining the safety and effectiveness of a given drug or device (Umscheid et al., 2011). With novel applications of TMS, these Phase II trials are also designed to optimize the parameters of the TMS protocol to deliver a treatment that safe, efficacious, and efficient. These trials tend to investigate the effect of TMS pattern (i.e. rTMS vs. theta burst), intended effect (excitatory vs. inhibitory), dose, timing, number of pulses, and number of sessions. These trials also give researchers an opportunity to identify and validate potential outcome measures for larger Phase III trials. For PTSD and anxiety, there have been several small to medium sized trials conducted examining the effect of lf-rTMS, hf-rTMS, and iTBS on PTSD and anxiety symptoms.

GAD. For GAD, there was a small trial aimed at right dlPFC with 13 active and 12 sham patients (Diefenbach, Bragdon, et al., 2016) showing that 30 sessions of active 1 Hz stimulation improves response and remission rates compared to sham. Active subjects also showed improved emotion regulation (Diefenbach, Assaf, et al., 2016). Another small trial with 28 subjects showed that bilateral 1 Hz stimulation can reduce anxiety ratings, but this trial lacked a sham control condition (Lu et al., 2018). Finally, one study targeting the right parietal cortex with 1 Hz stimulation showed decreased anxiety and insomnia symptoms in active compared to sham subjects (Huang et al., 2018). This is similar to our findings in healthy subjects that 1 Hz stimulation to the parietal cortex can reduce anxiety potentiated startle during threat of unpredictable shock (Balderston, Beydler, Goodwin, et al., 2020).

In terms of hf-rTMS, a small trial where 15 active subjects received 25 sessions of 20 Hz stimulation to the right dlPFC. This trial showed reduced Hamilton anxiety rating scores in the active group compared to the sham group, and these scores were stable at 1 month (Dilkov et al., 2017). A pair of retrospective trials looked at the effect of hf-rTMS administered via either a figure 8 coil to the left dlPFC (Caulfield & Stern, 2020) or via the H1 deep TMS coil (Pell et al., 2022) reduced anxiety ratings in GAD and GAD/MDD patients. Finally, there was an additional trial in GAD/MDD patients using 10 sessions of hf-rTMS to the left dlPFC showing a reduction in both depression and anxiety ratings. However, this trial lacked a sham comparison (Diefenbach et al., 2013).

PTSD. For PTSD, the largest lf-rTMS clinical trial I was able to find had 54 active and 49 sham

subjects receiving 12-15 sessions of 1 Hz stimulation to the right dlPFC. They showed greater CAPS and PCL reductions in the active group compared to the sham, and these reductions were stable at a 6-month follow-up (Kozel et al., 2018). These results are consistent with 3 other small trials with between 10 and 20 subjects per group receiving similar courses of stimulation to the right dlPFC (Kozel et al., 2019; Leong et al., 2020; Nam et al., 2013). 5 Hz stimulation to the left dlPFC seems to also reduce MDD and PTSD symptoms, however it is unclear whether this treatment outperforms sham (Carpenter et al., 2018).

For hf-rTMS and PTSD, the results are mixed. There's some evidence to suggest that either 10 Hz to the left (Wilkes et al., 2020) and 20 Hz to the left or right dlPFC (Boggio et al., 2010) could reduce PTSD symptoms. However, the trials showing the effect with 10 Hz stimulation was retrospective and lacked a sham control (Wilkes et al., 2020). In contrast, a recent moderately powered (125 total participants) trial examining the effect of 18 Hz dTMS found that the sham stimulation outperformed the active stimulation (Isserles et al., 2021). Like hf-rTMS, iTBS is thought to be excitatory. There is evidence from 2 recent iTBS trials suggesting that 10 session of iTBS reduces anger (van 't Wout-Frank et al., 2021) and marginally improves PTSD symptoms compared to sham (Philip et al., 2019), and 20 sessions can lead to stable reductions in PTSD symptoms lasting up to 1 year (Petrosino et al., 2020). Additionally, machine learning work with TMS-evoked EEG responses suggests that these responses carry important information about who will benefit from treatment and who will not (Zandvakili et al., 2021).

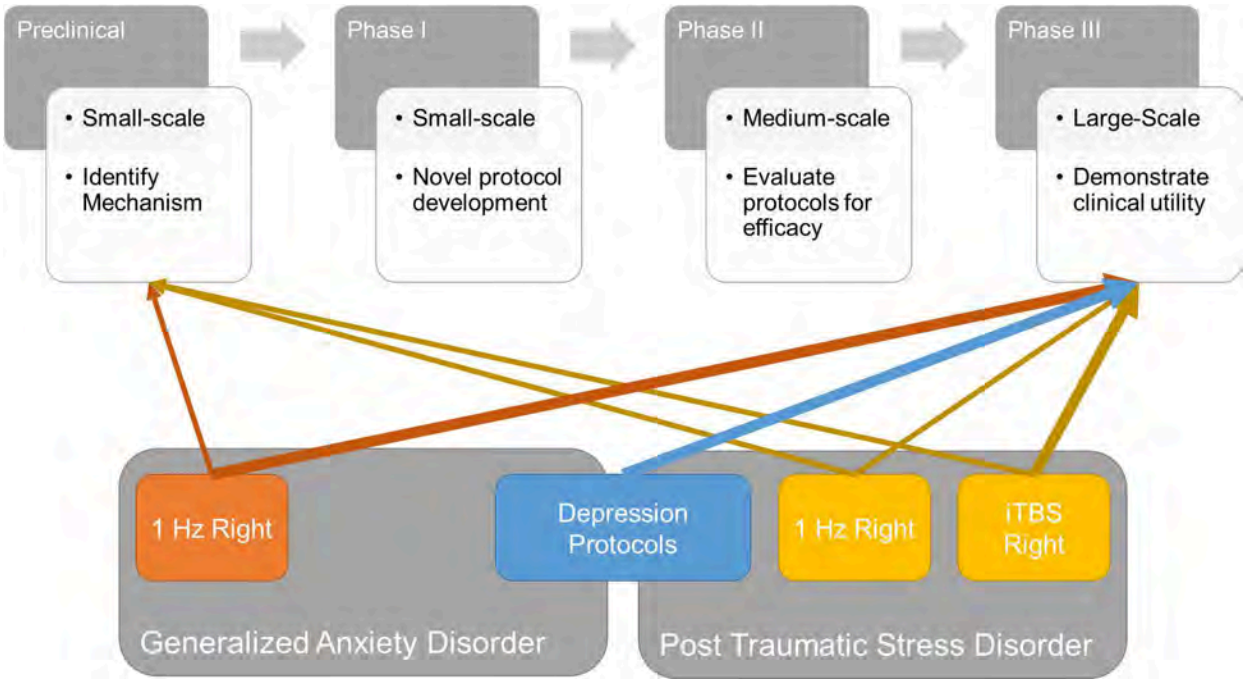
Phase III trials

Once a basic clinical effect has been established in a Phase II trial, the new drug/device will be tested in a large group of people (1,000–3,000 participants) in a Phase III trials (Umscheid et al., 2011). These trials are typically designed to confirm the results of the Phase II trial, check for side effects, or compare the experimental drug/device to existing treatments. In TMS, these typically also involve a comparison between active and sham stimulation, randomization to treatment arms, and blinding of both the participants and the study staff. Pending completion of a successful Phase III randomized controlled clinical trial, there is generally sufficient evidence to apply for FDA approval for the TMS protocol under study. Unfortunately, there has yet to be any sufficiently large, well-controlled study using TMS for anxiety or PTSD.

Future Directions

As shown above, there are 3 primary limitations impeding our path to an FDA approved neuromodulatory treatment for anxiety. First, while we have learned much about the how anxiety and fear are expressed and regulated in the brain through the preclinical and Phase 1 trials above, we still lack a basic understanding of how to translate this knowledge into an optimal protocol. Second, while there have been several small-scale trials

Figure 1. Schematic of typical clinical trial progression. Boxes at top of the figure show the typical progression from preclinical to Phase III clinical trials. Boxes at the bottom of the figure correspond to distinct TMS treatment pathways for anxiety and PTSD. The arrows represent suggestions by the author for where the field should direct their treatment development efforts.



conducted in PTSD and anxiety patients, the target and pattern of stimulation varies across these trials, further supporting our need for a clear mechanistic target. Third, there has yet to be any large-scale, randomized, blinded, sham-controlled clinical trials using TMS to treat PTSD or anxiety.

Without a clear mechanistic target to guide the neuromodulatory research into PTSD and anxiety treatments, the strategy in the field has been to adapt protocols used in depression to these additional populations. This makes sense given the high comorbidity between depression symptoms and fear/anxiety symptoms. It follows then that this approach has led to multiple, small somewhat successful trials (described above). Perhaps there is a unitary dimension of negative mood that encompasses the shared variability between depression and fear/anxiety that is successfully treated by targeting the dlPFC (Mantovani et al., 2013; O'Reardon et al., 2007b; D. White & Tavakoli, 2015). To take it a step further, perhaps standard FDA approved depression protocols should be the first line of TMS treatments for all mood disorders, with a second line of add-on or follow-up protocols aimed at other orthogonal symptom dimensions.

Going forward, I argue that the clearest most efficacious pathway may be to 1) conduct large scale RCTs using depression protocols in PTSD and anxiety. 2) Identify a single or set of symptom dimensions that capture the shared variability between PTSD and anxiety (e.g., elevated arousal, startle reactivity, hypervigilance etc.). 3) Conduct several smaller, well-controlled transdiagnostic studies targeted at reducing expression along this symptom dimension. 4) Select from these transdiagnostic studies the most promising novel treatment protocols and test them with large-scale Phase III trials (See Figure 1). Such an approach would capitalize on the wealth of knowledge acquired from studying MDD and large comorbidity shared across mood disorders, while also yielding new information specific to fear and anxiety that could generate novel second-line treatments or patients who do not benefit from the traditional protocols.

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Membership Spotlight

Sheehan Fisher, PhD

Sheehan Fisher, PhD is an Associate Professor in the Department of Psychiatry and Behavioral Sciences at Northwestern University, where he was recently appointed Associate Dean for Diversity and Inclusion in the Graduate School. His research and clinical interests center on understanding mothers and father's unique contributions to the family and child health. His specific focus has been on mood disorders in mothers and fathers during the perinatal period, and on understanding the effects of stress on parent's mood, parenting, and ultimately infant's health outcomes. More recently he has launched the #RediscoverFatherhood initiative. He notes that the roles of fathers have evolved since the industrial revolution, and that "now fathers are making a comeback and trying to rediscover their important role in the childrearing." Through this initiative Dr. Fisher is endeavoring to change the definition and image of being an involved, exemplary father. As he states, "We are in a new era of fatherhood. But it is not so new."

Fisher, SD, Cobo, J, Figueiredo, B. et al. (2021). Expanding the international conversation with fathers' mental health: Toward an era of inclusion in perinatal research and practice. *Archives of Women's Mental Health, 24*, 841-848.

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Summer 2023 Diversity Spotlight

Interviewer: Esther Lapite, MA

Interviewee: Sannisha K. Dale, PhD

Sannisha K. Dale, PhD

The current spotlight focuses on the specific contributions of Dr. Sannisha K. Dale, a dual licensed clinical psychologist (MA/FL) and Associate Professor at the Department of Psychology at the University of Miami. Dr. Dale earned her Master's degree in Human Development and Psychology at the Harvard Graduate School of Education in 2005, and completed her Ph.D. in Clinical Psychology at Boston University in 2014. She completed her predoctoral and postdoctoral training at Massachusetts General Hospital/Harvard Medical School (MGH/HMS) in both 2014 and 2015 respectively. Thereafter Dr. Dale was an Assistant Professor in Psychology at MGH and an Instructor in Psychology at HMS. Dr. Dale later joined the Psychology Department at the University of Miami in 2017 where she serves as an Associate Professor in Psychology with tenure and holds a secondary appointment in the Department of Public Health Sciences at the University of Miami Miller School of Medicine.

As a scholar, Dr. Dale's research examines the intersections of mental and physical health and works to develop evidence-based psychological and behavioral tools. This research interest coincides with her position as the founder and director of the SHINE (Strengthening Health through Innovation and Engagement) Research Program. The program holds several objectives, which include but are not limited to (a) increasing knowledge surrounding the relationship between resilience, trauma, and health outcome for marginalized communities with or at risk for HIV, (b) investigating the psychosocial and structural factors that contribute to health inequities, (c) developing preventative and intervention-based strategies to foster resilience and positive health outcomes, and (d) engagement community members and partners in research.

Dr. Dale's scholarship has resulted in the publication of 58 peer-reviewed articles, 11 chapters, and over 100 presentations nationally and internationally. She has been cited over 1.7k times and gained media exposure from her expertise. Dr. Dale has been a PI of 13 grants in the area of HIV (e.g. NIMH R01 on Black women living with HIV, T32 focused on training the next generation of HIV and mental health inequities researchers, 2-year implementation science EtHE Supplement from NIMH focused on Black communities hardest hit by HIV in Miami). Her contributions have earned her many honors and awards. Most notably, Dr. Dale was the 2016 recipient of the APA division 45 Emerging Professional-Contributions to Research Award, Harvard University Center for AIDS Research's 2017 recipient of the Inaugural Rhoda Johnson-Tuckett Award for Community Engaged Research, APA's Division 12 2018 recipient of the Samuel M. Turner Early Career Award for Distinguished Contribution to Diversity Research in Clinical Psychology, the 2019 Melba J. T. Vasquez Early Career Award from APA Minority Fellowship Program, and the 2021 Foremother Early Career Mentorship Award from APA Division 35, section 1.

It was an honor and a privilege to interview Dr. Dale. In light of her outstanding contributions to the field, I posed the following five questions and have included her responses below.

1) How do you think the pandemic and post-pandemic living has influenced resilience, trauma, and health outcomes for marginalized communities with or at risk for HIV? What do you think therapists, scholars, and policy-makers can do to support these at risk individuals?

Yeah, I think when you consider COVID, it's a traumatic event. So, when you reflect on the lived experiences of individuals who face intersectional oppression, it becomes clear that there were already systems that were not set up or intentionally designed to negatively impact them. Consequently, there was already a heavier mental health burden. These individuals faced discrimination based on multiple identities that targeted them, along with the likelihood of their housing and employment being affected. Their support systems were also impacted. With the arrival of COVID, another layer of trauma was added. Yes, the entire world has been exposed to COVID, as it is still present in many ways. However, the ways in which it affected communities that were already marginalized were significantly more pronounced. We have observed higher rates of death and losses in these communities. Therefore, the cumulative loss in terms of jobs and housing, as well as the resources they could access, has been substantial. It has had a profound impact on numerous people, including small businesses that may have closed during the COVID epidemic. Moreover, those individuals on the front lines, not just in medical

terms, but also the ones delivering essential services like food, were more likely to contract Long COVID. They are also likely to experience a disproportionate impact in terms of long-term disability and other related issues. Unfortunately, if anything, COVID has merely exposed and intensified the existing structural forces that were already at play, exacerbating the challenges faced by minority communities.

Other individuals, such as scholars and researchers in the field, play a crucial role in supporting this community. I believe that for therapists, it depends on their training and the specific approach they take. Different training programs have varying perspectives and methodologies. What has become evident is that in 2020, both with COVID and the Black Lives Matter protests following the murders of George Floyd and Breonna Taylor, non-Black individuals seemed more shocked by the level of trauma historically faced by these communities. This increased awareness has led to more interest in understanding how these issues manifest. However, it remains uncertain whether this enthusiasm has persisted authentically.

For therapists, policymakers, and anyone seeking to intervene, it is essential to think critically about their respective fields. In the context of therapy, one should consider how systems manifest in their work, how they care for clients, how they refer to individuals, how they intervene, and how they address the stressors faced by their clients within the therapeutic setting. It is also important to reflect on the therapeutic tools used and their potential to be helpful or harmful. Additionally, therapists should create space for cognitions that are rightfully distressing and heavy, acknowledging the reality of their clients' lived experiences.

So, it's about allowing clinical work or research to be informed by intersectionality in terms of theory and the actions it calls for. Simultaneously, it is crucial to recognize not only the active workings of oppressive systems but also the resistance and resilience within these communities. Sometimes, when individuals are new to intersectionality theory, they may feel overwhelmed by the realization that things are terrible. However, it is important to avoid the savior mentality and understand that fixing the system is not an overnight process. Instead, it is necessary to appreciate the existing resistance and consider how to further support community-led efforts by those who have been actively involved and understand the intricacies of the situation.

Being part of the change means avoiding perpetuating the same hierarchies and power imbalances. It means not simply swooping in with resources and claiming to make a change without considering how to direct resources to the people who have been on the front lines, part of the community, and instrumental in driving sustainable change. It is a complex task, but the commitment to understanding and awareness of the situation is vital.

2) You have presented, mentored, and published on many topics related to the intersections of mental and physical health. What other areas of contributions do you see yourself working towards in the next 5 years?

I'll tell you something I say to people all the time when they ask me about my 10-year plan, or even ask me things about institutions and why I think certain institutions are worth being a part of. I say to them that I'm not loyal to an institution or even an academic role per se. But I know that I'll always be in this work. Meaning, if we arrived at a place where there was a cure for HIV or everyone had access to medication and everyone had viral suppression, and nothing else was needed, and it was like, okay, HIV, there's nothing to address, I would still be in the space of doing work in terms of thinking about minoritized communities and our communities. So, I don't think I'll stop. I think it's my 'why', and I think there will always be a lot of work to do, and good work to do. And so, I'll continue to do that. What that may look like or where I do that from, I think is just a matter of how life changes.

3) Many students are navigating the question of "what comes next" following graduation. I am curious if you ever experienced this and how you found yourself in your multiple intersecting roles.

Yes, interestingly enough, I stumbled upon an answer early on. Not the exact answer in terms of collecting this specific data or publishing this exact paper, as it is more of an evolution of different elements coming together. However, I always knew that I wanted my work to be an answer to my "why." Why am I in this field? Why am I doing this? For me, my "why" is utilizing my time, resources, and access to make a positive impact on communities, particularly marginalized ones. This "why" has always remained consistent.

Although I received training in clinical psychology, a field where community-focused work is often not emphasized, I was aware of the outdated notions of rigor and what is rewarded in many clinical psychology programs. It involved taking courses and discussing ideas, but there was a disconnect in the way people thought about things. I felt that they didn't truly understand, despite their degrees and accolades. There's nothing inherently wrong with having those degrees—I have one myself—but limited expertise becomes evident in the gaps, the way questions are asked, how analyses are conducted, and the resulting conclusions. Recognizing this, I brought my own identity and lived experiences into those spaces, knowing that there was more to be considered.

In order to answer my "why," I always wanted to authentically incorporate my lived experiences into my work and consistently think about the community and how to engage with it. Specifically, when it comes to HIV, my desire to work within this field is both professional and personal. I quickly realized its disproportionate impact on communities, including Black women, transgender individuals, and LGBTQ+ individuals, as well as immigrants. I also saw the intersection between HIV and mental health, which is my clinical area of expertise. My heart naturally led me in that direction, seeking to do meaningful work while avoiding harm. This involved going beyond the academic tools I was taught and maximizing the potential benefits by recognizing and honoring the lived expertise that exists within communities.

4) You have mentored many students within your career, and I am sure many might have wanted to follow in your footsteps. I am wondering if there were any takeaway messages or advice that you shared with them and would like others, particularly those holding multiple marginalized identities, to hear as well.

I think it's important to pay attention to the things that bring you joy. It doesn't have to be as technical as creating a daily tracklist or analyzing your mood. It's about keeping a mental note of where you find joy, peace, gratitude, or a sense of fulfillment. The more we focus on those moments, the easier it becomes to gravitate toward activities that align with our purpose. Additionally, it's valuable to explicitly ask ourselves certain questions. In dialectical behavior therapy (DBT), there's an exercise where people write a letter or their own eulogy, envisioning what they would want others to say about them at the end of their life. It helps to think about our values and what we want to achieve. It's okay to consider what we want to be remembered for or what kind of impact we want to have. For me, it's never been about tangible achievements. I often joke that my CV will never fit on my headstone. It's not about collecting accolades. What brings me the greatest joy is the positive impact I've had on people I've had relationships with—family, friends, mentees, participants, anyone. I cherish the memories where I made a positive difference in their lives. It's important to reflect on that and consider the narrative we want for ourselves and how we want to be remembered. This reflection also helps us navigate through life's ups and downs. Whether it's making tough decisions about what to prioritize or what to let go of, we need to assess what brings us joy and what drains us. We have to find a balance. When it comes to my students and mentees, I often discuss their journey with them. I remember what they said during their applicant interviews, but I don't hold it against them. I ask them what aspects of their current activities they still enjoy and what they see themselves doing in the future. Being a graduate student exposes them to different experiences and people in various fields, which can provide clarity about their own aspirations. It's important to pay attention to those moments and be aware of what resonates with them. At the end of the day, the scripts we've been given on how to excel as psychologists or clinicians are just scripts. Some may be more rewarded by academia than others. But it's crucial to have personal introspection and ask ourselves, "What do I want for myself?" and "How can I achieve that?", and then to do it your way.

5) Finally, you hold many positions as a scholar, mentor, licensed psychologist, professor, and director. How do you balance these competing roles, while making time for yourself in the process?

I value authenticity, so it's interesting to receive this question and reflect on my earlier career when I rarely admitted to feeling tired or exhausted. I would often say, "I'm fine" or focus on the positive aspects. However, at some point, I consciously made the decision to acknowledge and embrace the fact that when you take on a lot, exhaustion is natural. Being authentic about that is important. It also challenges the stereotype of the "Strong Black Women," the expectation for Black women to do it all. I recall a powerful quote from Zora Neale Hurston, “If you are silent about your pain, they'll kill you and say you enjoyed it.” In terms of self-care, I believe it's crucial to acknowledge and communicate where I am emotionally and physically. This includes admitting when I'm tired, in need of a break, or require support. It's essential to create a space for those around me, my partner, team, and others, to have these discussions as well.

For instance, during my weekly meetings with students and mentees, we not only follow the agenda but also check in with one another. This check-in involves a wide range of emotions and experiences. Some may express that they've had a challenging time, and they receive words of empathy or acknowledgment. Others may require more emotional support or additional check-ins. I reciprocate by sharing my own state and needs. Setting boundaries can be challenging in academia because external demands often encroach upon them. For example, I may establish a boundary of stopping work at a specific time each day, but if a mentee needs assistance with a fellowship application that requires urgent attention, I may need to make an exception. So, it's about not expecting perfection from myself. I acknowledge the moments when I can hold my boundaries and plan proactively to incorporate rest.

Furthermore, it's important to be mindful of allowing

allowing myself to do nothing. Earlier in my career, I used to be constantly engaged with work, even in my thoughts and dreams. As someone deeply connected to my work, I find joy in it. However, I've learned to give myself permission to disengage and not associate every moment of thinking with productivity or output. This, too, is a form of self-care. Additionally, there are times that call for a complete pause, where I prioritize my well-being over everything else. In those moments, I shut everything down and focus on breathing and taking care of myself. It's crucial to recognize that life involves a lot of labor, and this labor can have detrimental consequences on our health and well-being. My parents used to remind me of this when they said, "Work can kill you, but you can't kill work." While work may never cease to exist, we have to acknowledge that the pursuit of perfection is someone else's narrative, often driven by capitalism. We are enough, and we don't have to push ourselves to the limit or exhaust our capacities to do meaningful and impactful work.

Written by Esther Lapite, M.A.

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When Missed Practical Tasks Can Become Ethical Violations

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Being a practicing clinical psychologist is challenging for many reasons. In addition to the nature of the work, which often requires significant concentration and time, there are a multitude of important logistical and practical issues that also require attention. Like many other health care professionals, psychologists must make split-second decisions that can have significant ethical implications. This column differs slightly from previous columns because we wanted to focus on some types of ethical violations that frequently appear before ethics boards that are more practical (and often preventable).

Communicating with Licensing Boards

The are several requirements of licensed psychologists to remain in good standing with their state's licensing board. Psychologists' attention is often on the laws and regulations that directly affect our work, such as informed consent and record-keeping but there are smaller (but still critical) tasks, such as license renewal and reporting address changes, that can have significant implications (this can be especially challenging for psychologists who hold licenses in multiple states). For example, boards review cases of psychologists who do not renew their license but continue to practice. Psychologists who do not renew their license face the possibility of violating laws regarding the practice of psychology (namely, practicing without a valid license). In some states, this may require the psychologist to repay monies paid (either to an insurance company or patient/client) for the time the psychologist was not licensed as well as risking disciplinary actions from a board.

Although email has made communication much easier and faster, there are some risks. For example, psychologists have reported that emails from boards about license renewals have been sent to their "spam" folder without the psychologist ever seeing the message. As a result, many recommend not simply waiting to receive the notification from the board that the license is up for renewal but being more proactive by adding notes or alerts to one's personal calendar when the renewal will be coming. This will also help ensure that psychologists have time to complete any mandatory continuing education (CE) credits (and be sure to document and keep records of these!), as CE requirement deadlines are often tied with license renewals. Although not usually a board issue, being similarly proactive about malpractice insurance renewals to prevent lapses is also critically important.

Many boards require licensed psychologists to report relevant changes in the psychologist's life or work. For example, psychologists need to inform the board of address changes; failure to report or failure to report in a timely manner may constitute an ethical violation in some states. Some states also require psychologists to report if they have been charged with misdemeanors or other offenses, such as driving while intoxicated.

Finally, communicating and responding to correspondence from the board is a largely preventable issue, but one that happens more than necessary. Ignoring and/or otherwise not responding to board requests for information can lead to more serious complications and questions from the board.

Supervision Planning

Being able to conduct therapy or assessment as a graduate student, intern, postdoctoral fellow or other trainee requires being able to practice under a supervisor's license. This work is a critical component of the trainee's education, not only for skill development but also in the socialization in the responsibilities and expectations of professional psychologists. As such, supervisors provide an invaluable service to the field. One of the most difficult areas for supervisors is relying on trainees to relate what is happening. Research (e.g., Mehr, Ladany & Caskie, 2015) suggests that trainees don't always tell their supervisors what is happening, which can make supervision especially challenging. While psychologists may not have complete control over what is told (or not told) by supervisees, it's important to have a process for supervision by regularly asking about (and properly documenting) all of the supervisee's cases and activities [see Falender & Shefranske (2021) and Campbell (2006) for helpful models, tips, and strategies; see also Fried & Powell (2021) for a discussion of ethical supervision in assessment settings].

There are several preventable but important supervision issues that can come before boards. The first is ensuring that the supervision is provided (both in terms of frequency and format) in ways that meet state laws and requirements. Public health emergencies (such as COVID-19) can prompt temporary or even permanent changes (e.g., the use of telesupervision) that psychologists may not be aware of unless they proactively search the laws and regulations of their state. It is also critical that supervisors are aware of when these accommodations might expire, which is different for each

state.

Other potential violations that may be preventable with proper planning and forethought pertain to supervisor availability. For example, requirements that trainees are able to access and contact a supervisor are usually outlined in state laws and regulations. Problems and complaints can arise when psychologists go on vacation without making proper arrangements or assume that other colleagues are available to supervise.

Finally, states often have requirements about the titles that can be used by students and trainees in advertisements and communication with clients/patients. When supervising a trainee, it's important to consult what words are not permissible. For example, using the term "psychologist" even if accompanied by words like "trainee" or "unlicensed" may not be congruent with state laws. Similarly, representing to clients/patients that the trainee has credentials, education or authority that are inaccurate or potentially misleading can also constitute an ethical violation.

"Scope Creep"

This final one issue we wanted to highlight isn't as practical, but one that can lead to ethical complaints and may be preventable. Our Industrial Organizational Psychology colleagues can likely share many stories of project "scope creep", where the deliverables change with little notice, more is asked of the consultant, and the focus of the project shifts. This concept has applicability outside of Industrial Organizational work as well. Have you ever considered the concept professional practice scope creep?

In clinical practice, this can occur when additional asks are made of the psychologist that fall outside of their trained scope of competency. A client/patient might say something like "Can you just write me a letter that says 'X'?" or "Even though you don't typically see adolescents with a diagnosed eating disorder, I know you'll be able to help my child". While a comprehensive investigation of why this tends to occur is outside of the scope of this column, we suggest that a reason might be the desire to attempt to fulfill the needs and wishes of the client/patient. As a result, however, the psychologist can blur boundaries and end up practicing outside of their competence (see also APA Ethics Code (2017) Standard 2.01 Boundaries of Competence).

Another plausible reason why psychologists practice outside of their competency areas might include the belief that they are competent to do anything and everything with every age group just because they were trained as a clinical psychologist. Is it possible to demonstrate competence in all areas of psychology? Put another way, would you be able to demonstrate educational, training, or supervised experiential training in a particular specialty area of psychology if asked by a board? Of course, if you have a desire to add additional areas of treatment or expertise in the future, there are methods available to gain requisite competencies through additional education, training and supervised experience.

One of the dangers of "scope creep" is that it can be insidious. The case that started out with merely counseling a newly single mother coping with post-divorce adjustment can change quickly with a seemingly benign client/patient request to write a letter about custody. Is it ok to write a letter to the court suggesting that your client/patient get more parenting time, given your role, competencies, and the fact that you haven't interviewed others relevant individuals (including the father)? This is an example of a type of "scope creep" (and potential multiple relationship) case that can come before the board. You might be very effective at doing therapy with someone dealing with the anxieties of their divorce and changing life dynamics but given your role and scope of competence, are not in a position to opine in a custody case (see also APA Ethics Code (2017) Standards 2.04 Bases for Scientific and Professional Judgments, 3.05 Multiple Relationships, and 9.01 Bases for Assessments). As a self-reflective psychologist, it is likely that any request that results in you saying, "just this once", "how hard could that be?" or "as a favor…" should require additional scrutiny.

Conclusion

While there may be times when a psychologist may not be able to foresee a potential ethical complaint, there are several areas in which proactive planning can help to prevent or mitigate the negative effects of one. In the busyness of our business, it is critical that we give attention to what may seem like little things which can have big, unintended consequences.

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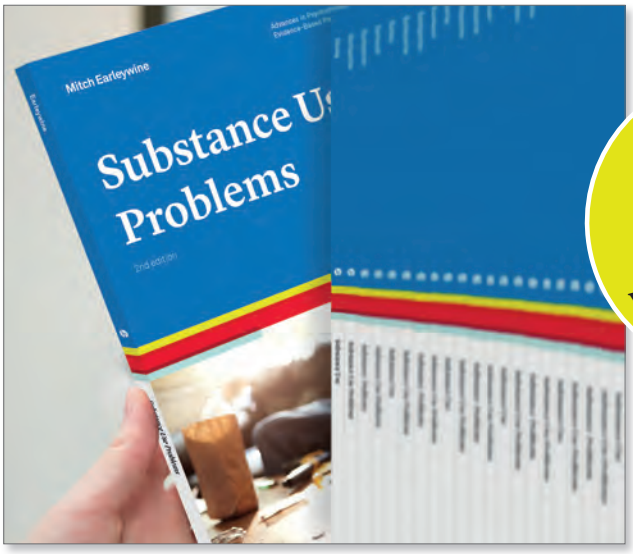

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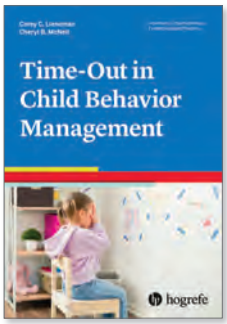

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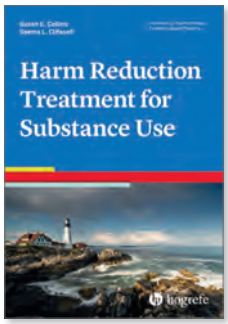

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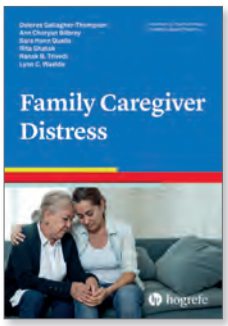

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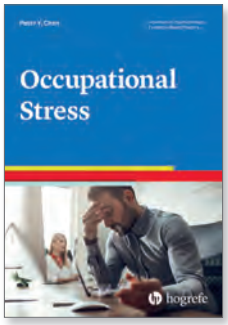

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