

# the Behavior Therapist

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### CLINICAL PRACTICE FORUM

## Adapting Cognitive-Behavioral Strategies to Meet the Unique Needs of Sexual and Gender Minorities

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SEXUAL AND GENDER MINORITY (SGM) people are exposed to chronic invalidation throughout their lives, and this invalidation contributes to higher rates of mental health problems and greater utilization of mental health services relative to cisgender, heterosexual people (Pachankis, 2018; Sloan, Berke, & Shipherd, 2017). This invalidation occurs both interpersonally and systemically, and it manifests in many ways, including exposure to discrimination and violence, a lack of legal protections, and the enforcement of gender as a binary (e.g., gender-segregated restrooms). Over the past decade, research has identified a number of mechanisms linking invalidating experiences and negative mental health outcomes among SGM individuals, and these findings have led to the identification of valuable treatment targets for practice with SGM people. These mechanisms include universal risk factors such as emotional dysregulation (Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009) and risk

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## ABCT congratulates

Richard “Dick” Suinn, ABCT’s 27th President, who will be receiving the American Psychological Foundation/American Psychological Association’s 2020 Gold Medal Award for Life Achievement in Psychology in the Public Interest this August during their Annual Convention in Washington D.C. The citation acknowledges his outstanding lifetime contributions to cognitive/behavior therapy, sport psychology and ethnic minority issues and his leadership in the community and professional organizations.

## INSTRUCTIONS for AUTHORS

The Association for Behavioral and Cognitive Therapies publishes *the Behavior Therapist* as a service to its membership. Eight issues are published annually. The purpose is to provide a vehicle for the rapid dissemination of news, recent advances, and innovative applications in behavior therapy.

- Feature articles that are approximately 16 double-spaced manuscript pages may be submitted.
- Brief articles, approximately 6 to 12 double-spaced manuscript pages, are preferred.
- Feature articles and brief articles should be accompanied by a 75- to 100- word abstract.
- Letters to the Editor may be used to respond to articles published in *the Behavior Therapist* or to voice a professional opinion. Letters should be limited to approximately 3 double-spaced manuscript pages.

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factors specific to SGM people such as internalized stigma, rejection sensitivity, and identity concealment (Meyer, 2003).

Cognitive and behavioral therapies (CBTs) can be used to address each of these SGM-specific treatment targets and it is important for clinicians to understand how to adapt CBT techniques to provide care that is maximally effective for SGM people.

CBTs enjoy a robust evidence base and acknowledge the context of behavior by attending to learning history and using functional analyses of the antecedents and consequences of behavior (Newman, LaFreniere, & Shin, 2017). A cognitive-behavioral case conceptualization acknowledges both etiological mechanisms and maintaining mechanisms of psychological distress. This framework allows for the consideration of negative thoughts and avoidance behaviors as potential learned responses to invalidation. As such, this approach is well suited to addressing the mental health needs of SGM people, a population whose elevated levels of distress occur within a context of discrimination and victimization. CBTs offer valuable coping techniques to address unhelpful cognitions and behaviors, and they offer the opportunity to empower SGM people through the promotion of skills acquisition. CBTs also offer problem-solving strategies that are needed when the problem is not how a client is thinking or behaving, but rather the environment itself. Given that SGM people experience discrimination and violence, an important initial step is for a clinician to assess the extent to which a client's thoughts and behaviors are consistent with evidence in their environment. By doing so, the clinician can select intervention strategies that help the client to make positive life changes while attending to the realities of their circumstances.

In this article, we focus on how to utilize traditional and newer CBT strategies to address SGM-specific treatment targets. First, drawing on strategies from Dialectical Behavior Therapy (DBT; Linehan, 1993), Acceptance and Commitment Therapy (ACT; Hayes, Stroschal, & Wilson, 1999) and traditional CBT, we discuss the use of validation, cognitive defusion, and cognitive restructuring for addressing internalized stigma. Second, we apply these cognitive strategies as well as behavioral activation to rejection sensitivity experienced by SGM clients. Third, we discuss strategies to address challenges related to identity management and disclosure, such as values clarification, decisional balance,

and exposure. Finally, we conclude by acknowledging the need to intervene at multiple levels in order to address the ways in which problems in the broader societal context contribute to the distress experienced by SGM people. This article is a brief overview for clinicians who are familiar with cognitive and behavioral therapies and are interested in applying these techniques to SGM-specific treatment targets. Those who are interested in more thorough reviews are encouraged to refer to comprehensive resources for evidence-based mental health practice with SGM individuals (e.g., Pachankis & Safren, 2019) and mindfulness and acceptance for SGM individuals (e.g., Skinta & Curtin, 2016).

### **Treatment Target #1: Internalized Stigma**

Internalized stigma, which is the process of absorbing negative messages about one's stigmatized identity from the environment, is a mechanism through which external invalidation becomes internal invalidation and leads to mental health problems among SGM people (Newcomb & Mustanski, 2010). DBT emphasizes the contribution of an invalidating environment to psychological distress, a framework that readily lends itself to acknowledging and combating the psychological toll of internalized stigma. Linehan (1993) describes an invalidating environment as punishing of private experiences and communicating that these experiences are due to socially unacceptable characteristics. SGM people are routinely punished for the expression of their sexual and gender identities. For instance, sexual minorities are disproportionately exposed to discrimination and victimization relative to heterosexual individuals (Katz-Wise & Hyde, 2012), and gender minorities experience pervasive discrimination and violence (Hughto, Reisner, & Pachankis, 2015), including transgender women being at increased risk for murder (Dinno, 2017).

A consequence of environmental invalidation is self-invalidation, which is to communicate to oneself the messages communicated by the invalidating environment (Linehan, 1993). The environment communicates messages that SGM people are defective, unacceptable, and immoral, which may become internalized. Becoming aware of how internalized stigma operates may help shift stigma-related cognitions away from beliefs of personal shortcomings toward the unfair burden of environmental invalidation. To do this, a therapist's explanation of an invalidating environment to an SGM client can explicitly include that invalidation occurs on the basis of SGM status. Then, the therapist could ask the client to identify their own experiences of invalidation and to consider the extent to which these messages of invalidation from the environment have become internalized.

An antidote to invalidation is validation, whereby "the therapist communicates to the client that [their] responses make sense and are understandable within [their] current life context" (Linehan, 1993, p. 222). Validation also means describing a person's behavior as understandable given the causes. In using validation to target internalized stigma, a therapist begins to show how it makes sense that a client experiences self-invalidation in the form of internalized stigma given the person's learning history. For instance, a person who struggles with chronic shame related to growing up in a rejecting faith tradition (i.e., an invalidating environment) can be validated with statements such as, "It makes sense that you have the thought that you are unlovable given the messages you received as you were growing up." The therapist models validation and begins to teach the client how to validate oneself, an important skill for targeting internalized stigma.

In addition, there are a number of strategies from ACT that can be used to target negative beliefs about SGM people that have been internalized. In particular, ACT includes multiple cognitive defusion skills, which are skills to help people notice thoughts as ongoing cognitive events without evaluating them as accurate or erroneous (Hayes et al., 1999). For example, clinicians can teach clients to acknowledge that their thoughts are not facts by encouraging them to revise their self-talk by adding, "I am having the thought that ..." before their actual thought.

For example, if a gay client has the thought that "Gay people are bad," they could revise that by repeating the sentence "I am having the thought that gay people are bad." Similarly, it can be helpful for clients to recognize that their thoughts may be habitual rather than factual, rooted in the messages they received from external sources such as invalidating environments. In the previous example, the gay client could say to himself, "I've had this thought before. It's what other people used to say to me." These strategies can remind clients that their thoughts are not facts and create

distance between their thought and the impact of their thoughts on their emotions.

In addition to the aforementioned strategies from DBT and ACT, traditional strategies from CBT can be used to address automatic negative thoughts related to one's sexual orientation or gender identity. For example, clients can learn to monitor thoughts related to sexual orientation or gender identity and subsequent emotions and behaviors, to identify potential biases in their thinking, to evaluate the evidence for and against their thoughts, and to replace automatic negative thoughts with more accurate ones. For example, during a social interaction, a bisexual person might have the thought, "If I tell them that I'm bisexual, they won't believe me," which could lead to anxiety, shame, and avoidance urges. In evaluating the evidence for and against the thought, the person might acknowledge that some people have not believed them in the past, and also that other people have believed them. This might lead them to the more balanced and accurate statement: "If I tell them that I'm bisexual, they may or may not believe me." As demonstrated in this example, cognitive restructuring can be used to acknowledge the reality of a client's lived experience (in this case, that they have experienced discrimination in the past) while also acknowledging the ways in which automatic negative thoughts can be biased.

Cognitive restructuring can also be paired with other strategies such as developing a plan for how to cope with rejection if it occurs. For a more detailed discussion of cognitive restructuring with SGM clients, see Burton, Wang, and Pachankis (2017).

Clinicians might also encourage clients to seek opportunities to interact with others who share their identities in order to combat internalized stigma. Connecting with community members can be a helpful behavioral intervention for targeting internalized stigma given that a negative perception of oneself is more likely among those with a stigmatized identity, particularly when similar others are not readily apparent (Frible, Platt, & Hoey, 1998). Further, research has demonstrated that being around similar others is associated with greater psychological well-being among sexual minorities (Goodenow, Szlach, & Westheimer, 2006; Hatzenbuehler, 2011), and that community connection is beneficial for the mental health of transgender individuals (Sherman, Clark, Robinson, Noorani, & Poteat, 2019). These findings highlight the potential benefits of helping

SGM clients to identify sources of community support.

### **Treatment Target #2: Rejection Sensitivity**

Rejection sensitivity, or the anxious expectation of rejection on the basis of one's minority status, is a transdiagnostic risk factor for multiple mental health problems—including depression, generalized anxiety, and social anxiety—in SGM people (Cohen et al., 2016). Given that many SGM individuals have experienced rejection on the basis of their SGM status throughout their lives, it makes sense that they would learn to anticipate continued rejection in the future. While this sensitivity to rejection may serve a protective function at some times and in some contexts, it may not be effective if/when it influences one's behavior in nonthreatening situations (for a detailed discussion, see Feinstein, 2019). As such, scholars have emphasized the importance of attending to rejection sensitivity in clinical practice with SGM clients (Feinstein, 2019; LeBeau, 2019).

For example, LeBeau (2019) described the use of behavioral activation (BA) to address rejection sensitivity with SGM clients. BA is an evidence-based treatment for depression focused on increasing activities that have the potential to provide positive reinforcement and decreasing escape or avoidance behaviors (Martell, Dimidjian, & Herman-Dunn, 2013). Given that rejection sensitivity can contribute to avoidance of situations where rejection might occur, LeBeau (2019) suggested that BA could be used to increase SGM clients' engagement in activities that have the potential to provide positive reinforcement. For example, if an SGM client avoids social situations that have the potential to be pleasant events because they expect and are anxious about rejection, then BA could be used to reengage them with such activities. That said, as LeBeau noted, it is also important for therapists to consider that SGM clients experience actual threats in their lives such as exposure to violence. In such cases, therapists can pair BA with safety planning in order to prepare SGM clients to safely engage in activities.

Additional strategies from traditional CBT, such as cognitive restructuring, can also be used to address rejection sensitivity with SGM clients. In general, it is helpful to remember that people with anxiety and depression tend to notice evidence that supports their cognitions and disregard

evidence that does not. As such, the use of Socratic questioning can help elicit evidence for and against rejection-related cognitions and, in turn, help clients arrive at a more realistic assessment of their likelihood of being rejected in a given situation (Newman et al., 2017). Clients may find that they overestimate the probability of rejection occurring, and this new way of thinking may lead to a reduction in feelings of anxiety and depression.

Some clients may struggle with assessing the evidence for and against their thoughts, in which case alternative strategies for working with rejection-related cognitions may be necessary. As noted above, ACT utilizes cognitive defusion strategies to help clients recognize that thoughts are "just thoughts" and that people can choose how to act irrespective of thoughts. If an SGM person experiences anxious expectations of rejection in specific situations, that person could learn strategies to help them defuse from their thoughts. For example, if an SGM client is having the thought, "I am going to be rejected," they might say, "I am having the thought that I am going to be rejected" as a way to acknowledge that it is a thought rather than a fact and to create the space to choose how to proceed. Another defusion strategy is to repeat a thought using a silly voice (e.g., saying "I am going to be rejected" in a cartoon character's voice). This strategy can also create distance from the thought while changing the client's internal experience as they restate their thought in a silly voice (Hayes et al., 1999).

When fears and expectations of rejection fit the facts, such as in invalidating environments, problem solving may be a useful strategy. Problem solving includes identifying a goal or what needs to change, brainstorming solutions, and putting a solution into action (Linehan, 2014). For instance, if a particular family member or friend declines to use a client's name and pronouns, the client may wish to consider such solutions as limiting the amount of time spent with this person, talking to family members, or ending the relationship altogether. The client can then assess the pros and cons of each potential solution and select one to implement.

### **Treatment Target #3: Identity Concealment**

The aforementioned punishment of the expression of sexual and gender identities may lead to pervasive patterns of self-silencing such as identity concealment and

consequently increased feelings of shame and anxiety (Pachankis, 2007). Identity concealment may range from explicitly claiming a heterosexual or cisgender identity to more subtle forms of impression management. Identity disclosure is an ongoing process and values clarification can help guide identity disclosures. Values are chosen life directions that can be utilized to guide actions and behaviors. Both ACT and DBT include strategies for clarifying clients' values to understand what a client wants their life to be about. Therapists could work with SGM clients to identify their values in different domains (e.g., work, relationships, health) and to consider the extent to which identity disclosure is necessary and/or important in order to live a valued life. In doing values work, it is important to recognize that not all clients want to disclose their SGM identity in general or in a specific context. Further, disclosure may not always be in a client's best interest. As such, it is particularly important for this work to be guided by the client. A decisional balance activity might be used to help a client evaluate the pros and cons of disclosing their identity in a specific context. Identifying the advantages and disadvantages of identity disclosure can help to increase awareness and guide behavior.

When an SGM client wants to disclose their sexual orientation and/or gender identity but is fearful, strategies from exposure therapy (e.g., fear hierarchies) can be useful. As an example, the first author has used this strategy in his clinical work with sexual minority veterans. Sexual minority veterans who served during the U.S. military's long-standing ban on gay and lesbian service members, and the subsequent modification known as "Don't Ask, Don't Tell," experienced harassment, fear of discharge, and/or actual discharge. Some sexual minority veterans who concealed their sexual orientation during their time in the military continue to do so in the context of receiving care at VA hospitals due to fears of losing access to such care as a result of their sexual orientation. In working with veterans who have concealed their sexual orientation during and after their military service, the first author has utilized exposure hierarchies to guide disclosure of SGM identity both to VA providers and to other veterans. In developing an exposure hierarchy focused on identity disclosure, it may be helpful for clients to begin with people whom they perceive as likely to be affirming and then to progress to more challenging disclosures. Disclosures have the

potential to reduce avoidance behaviors and feelings of anxiety and shame.

However, experiences of discrimination and violence are commonly reported by transgender service members and veterans (e.g., Harrison-Quintana & Herman, 2013; Livingston, Berke, Ruben, Matza, & Shipherd, 2019), and they continue to experience unique stressors such as bans and proposed bans on military service. As noted above, clinicians are encouraged to assess the extent to which the client's concerns are consistent with evidence in their environment and to adjust their approach accordingly. Further, it is important to acknowledge that the VA is a separate entity from the military and does not restrict access on the basis of SGM identity. As such, psychoeducation may help reduce concerns related to disclosure to VA providers.

### Conclusion

CBTs offer valuable strategies to address SGM-specific treatment targets and to empower SGM people. It is also important to acknowledge that interventions are needed at multiple levels in order to improve the health of SGM populations. For example, in addition to individual-level psychological interventions, psychologists can contribute to environmental interventions to address problems in clinical contexts such as ensuring that forms use inclusive language and advocating for gender-inclusive restrooms as well as advocating for laws and promote the well-being of SGM people (for a detailed discussion of multilevel interventions for SGM populations, see Sloan & Shipherd, 2019). In order to be effective as a clinician and an advocate for SGM people, it is important to keep abreast of the language used by SGM individuals to describe their identities and the sociopolitical events affecting SGM people. In closing, we hope this article provides a useful introduction to adapting cognitive and behavioral strategies to meet the unique needs of sexual and gender minorities, and we encourage readers to explore more comprehensive resources (e.g., Pachankis & Safren, 2019; Skinta & Curtin, 2016) to further their knowledge of evidence-based practice with SGM individuals.

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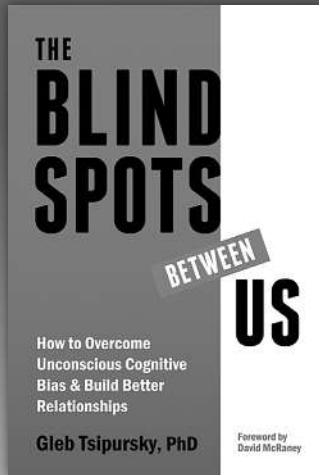
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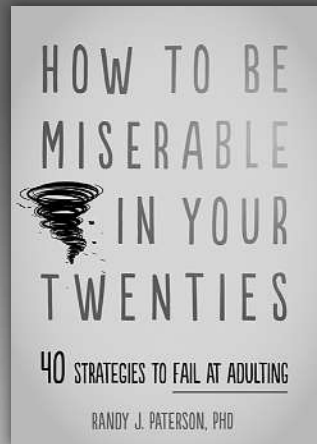
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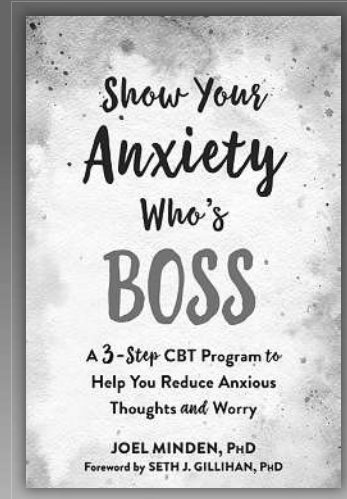
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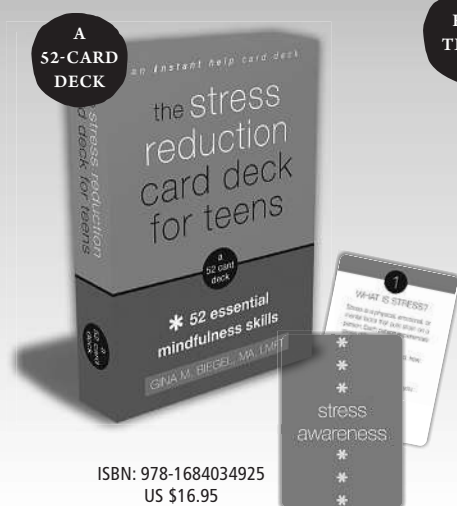
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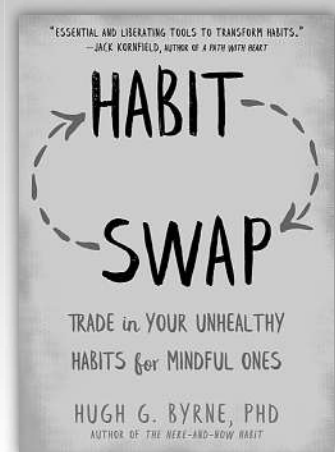
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## From Your Executive Director: What Your Leadership and Staff Are Working on to Serve You Better

Mary Jane Eimer, *Executive Director*



TECHNOLOGY HAS BEEN the focus at the ABCT central office over the past year. We worked with a consultant to review our current proprietary database, which functions well but needs upgrades, and compared it to products from companies that cater to membership organizations. We also looked into website options that offer content management systems, allow us to update in-house, and are easier to navigate. The two systems must work together seamlessly as we currently house five different directories on our website. We need one change of address or email to flow to all directories. This upgrade is not for the faint of heart as we have over 10,000 records to migrate, new fields to add; moreover, staff faces a stiff learning curve and technology comes at a cost. At their January teleconference, the Board gave us the go-ahead to proceed. After tackling the database and the web, we will look at the list serve. We know the current system has its limitations, hiccups, and frustrations.

As we review our database, website, and list serve, we have been asking questions and getting feedback from Regine Galanti, our Web Editor; Daniella C. Cavenagh, our Clinical Directory and Referral Issues Committee Chair; and Jamie A. Micco, our List Serve Chair. They have been very generous with their time and solicited input from their committee members. Their input has been invaluable and greatly appreciated.

After a fruitful 7-year partnership with Evidence Based Practice, they are changing their focus and will no longer be hosting ABCT's webinars. Special thanks to member Kelly Koerner and her staff. They are professional, knowledgeable, and delightful to work with. We shall miss working with them. Staff did a thorough review of companies and found only one, and that at double the price. Last year we purchased equipment to handle video-con-

ferencing, selecting Zoom (our VA-based members are permitted to use that software). Happily, the Zoom package we use has a webinar module. Four of us have begun our training in running a Zoom webinar, the art of archiving, and running point during the live presentations. We are up for it! (but not without some trepidation).

Privacy laws for professional membership organizations are all the rage these days. Staff is working with a consultant to help us develop policies and procedures so we are in compliance with the European Union's General Data Protection Regulations (GDPR) and Canada's Personal Information Protection and Electronic Documents Act (PIPEDA), while keeping an eye on various states that are gearing up in this arena. New York just adopted the SHIELD Act this past October. The acronym, Stop Hacks and Improve Electronic Data Security Act, just makes me smile—someone was having fun making that one up.

There are costly penalties if we are audited and found not to have policies in place or appropriate privacy fields in our AMS. ABCT, as a North American organization with a global reach, including in the European Union, needs to evaluate and address our ongoing privacy practices, IT systems, and third-party/vendor agreements as they relate to GDPR and PIPEDA requirements. We have been collecting policies from all vendors we work with to ensure that they have acceptable privacy practices. And we've been stepping up our cybersecurity with more safety measures to come. As we transition to a new database, we will be adding more fields related to your preferences for privacy. We are reviewing other technology initiatives to ensure ABCT stays up-to-date and user-friendly. One example, high on our list, is the way we process continuing education certificates from the Annual Convention and the convention app.

I'm pleased to share that Dakota McPherson has been promoted to Mem-

bership and Marketing Manager. Dakota will be instrumental in our transition to a new database and helping us define new personas and tracking how we market to you. We are working to target our marketing to your specific needs by transaction history, continuing education participation, etc. We are in the process of hiring a Membership Services Assistant. Soon I will be posting the Outreach and Continuing Education Manager position. We are looking for someone who is in the field, knows the science, and can help with our outreach efforts by coordinating with the coalitions with whom we participate, and grow our online continuing education offerings. That position will also be responsible for maintaining our continuing education sponsorship with the American Psychological Association, National Association of Social Work, National Board of Certified Counselors, and the California Association of Marriage and Family Therapists. I will be advertising for the position on our list serve and posting on our job bank. Interested? Seriously, I hope a few of you are.

Prior to the Annual Convention, the Board of Directors approved the formation of the Task Force to Promote Equity, Inclusion, and Access. The main objectives of the task force are (a) to assess the degree to which historically marginalized groups are supported by ABCT, the degree to which there is equity across groups, and the ways in which ABCT can increase support and equity; and (b) to provide data and recommendations to assist the Board of Directors in ensuring that all members have equal access to the professional benefits offered by the association. Soon you will be asked to participate in a survey so the task force can learn more about members' experiences and opinions related to equity, inclusion, and access within ABCT. Please participate in the survey!

Task force members represent various SIGs and include Anu Asnaani, RaeAnn Anderson, Sierra Carter, Ryan DeLapp, Brian Feinstein, Christine (Cho) Laurine, Cristina López, Sandra Pimentel, Jae Puckett, Shireen Rizvi, and Laura Seligman.

Until next time!

...

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## Clinicians' Mindfulness and Treatment Outcomes for Substance-Using Adolescents

Virginia Kelly Arlt Mutch, *Montefiore Medical Center*

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ADOLESCENT SUBSTANCE USE is a major public health concern associated with significant social, legal, and health risks that extend into adulthood, including higher risk for developing substance dependence, dropping out of high school, and having a criminal justice record (Green, Musci, Johnson, Matson, Reboussin, & Ialongo, 2016). Substance use is also associated with mental health outcomes, including depression (Swendsen & Merikangas, 2000), anxiety (Schumacher & Williams, 2020), and even psychosis (Vallersnes et al., 2016). Despite these consequences, substance use during adolescence is highly prevalent and often appears normative. The National Institute on Drug Abuse (NIDA, 2015) reported that 37.4% of 12th graders endorsed past-month alcohol use, with 19.4% who endorsed heavy episodic drinking. Approximately 12.9% of adolescents between 12 and 17 identified as current alcohol drinkers, with 7.2% reporting heavy episodic drinking (SAMHSA, 2012). Illicit drug use also puts adolescents at increased risk for health consequences. Marijuana is the most commonly used drug among adolescents, where 11.7% of 8th graders and 35.1% of 12th graders report current marijuana use. Chronic substance use in adolescence is associated with less time spent in school, lower grades, delinquency, and dropout rates (Lee & Vandell, 2015). Substance use also affects peer and family relationships; as the severity of adolescents' substance use increases, adolescents may experience isolation and disconnectedness from their friends, parents, and siblings (Newcomb & Bentler, 1988). Adolescents who initiate substance use early also risk legal consequences, such as Driving Under the Influence (DUI) and Driving While Intoxicated (DWI) charges, or involvement in a motor vehicle collision (Hingson, Heeren, Levenson, Jamanka, &

Voas, 2002). Overall, many adolescents are using alcohol and marijuana without an appreciation for the risks of physical and psychological consequences.

Because of the ubiquity and high-risk nature of adolescent substance use, clinicians and researchers have developed brief interventions to provide time-limited, focused treatment. A primary goal of brief interventions targeting substance use is to address and enhance individuals' motivation to change (O'Leary & Monti, 2004). Many brief interventions rely on the transtheoretical approach, or the Stages of Change model (Prochaska & Diclemente, 1992). According to this model, the most effective way to promote change within an individual is to adapt treatment to meet a person's current needs based on the person's stage of change, rather than forcing the individual into a more advanced stage. Results from clinical trials indicate that brief motivational interventions result in decreased substance use and substance-use-related consequences, and increased treatment engagement, particularly for those with heavy substance use patterns and less motivation to change (O'Leary & Monti, 2004). Thus, brief interventions are a viable option for adolescents engaging in substance use.

Motivational Interviewing (MI; Miller, 1983) is one example of a brief motivational intervention that respects the client's autonomy and has an empathic, person-centered focus. MI is associated with a prolonged reduction in substance use and abstinence (Miller & Rose, 2009). MI is particularly appropriate for adolescents since they typically do not seek treatment and may benefit from cultivating motivation to change (Deas & Clark, 2009; Pagey et al., 2010). Early researchers in this field identified that MI has the power to decrease alcohol consumption and the neg-

ative effects of alcohol among adolescents (Marlatt et al., 1998). Adolescents engaged in MI report reductions in drug use and improved behavioral outcomes (McCambridge & Strang, 2004).

While many studies demonstrate that MI-based interventions help decrease individuals' use of alcohol, tobacco, marijuana, and other drugs and also report positive outcomes (e.g., readiness to change, engagement in the treatment process), 33% do not show reductions in substance use (Barnett et al., 2012). Therefore, researchers and clinicians in the field need to identify factors that may improve outcomes for those clients who are treatment refractory. The question posed is whether the cause of this imperviousness to change is caused by factors pertaining to the client, the treatment itself, or the clinician. Within the meta-analysis conducted by Barnett and colleagues, parent inclusion was identified as a factor that may improve results, but no other adolescent-specific factors emerged as enhancing or interfering in the relationship between brief MI interventions and substance use outcomes. Barnett et al. also highlighted that the type of feedback adolescents received and when to provide feedback is an area for further exploration, as feedback may influence adolescents' readiness to change, which may be an important mechanism for reductions in substance use. However, in this meta-analysis, there were no statistical differences between the intervention designs, suggesting that discrepancies across the brief MI treatments themselves did not account for the individuals who did not reduce their use. Interestingly, no analysis of clinician-specific factors was conducted. As such, an exploration of the impact of the qualities or behaviors of the clinician is warranted.

Clinician-specific variables are likely to be important because it has been well-established that the therapeutic alliance alone has been found to account for up to 30% of change in therapy (Hubble et al., 1999; Norcross & Goldfried, 1992). As such, the variables specific to the clinician affect the therapeutic relationship and would be expected to greatly impact outcomes for the client. With specific regard to adolescents, those who drop out of therapy because of dissatisfaction with treatment tend to report poorer therapeutic alliance and ruptures than those who stay in therapy or feel they got what they needed from treatment (O'Keeffe, Martin, & Midgley, 2020). In addition, alliance factors such as agreed-upon treatment goals and an emo-

tional bond have been identified as particularly predictive of therapeutic outcomes for high-risk adolescents (Ormhaug, Jensen, Wentzel-Larsen, & Shirk, 2014; Zorzella, Muller, & Cribbie, 2015). Thus, a clinician's personal characteristics and ability to be attuned to the client and form a bonded rapport would be integral to successful treatment.

The cultivation of mindfulness in clinicians may be a factor that can augment treatment outcomes. Mindfulness is defined as moment-to-moment nonjudgmental awareness (Kabat-Zinn, 2005) and has recently been integrated into a number of Western health professions, including clinical psychology (Valerio, 2016). Mindfulness is the practice of paying attention to the present moment while cultivating a nonjudgmental attitude towards what is present (Dimidjian & Linehan, 2003; Kabat-Zinn, 2005, 2012). Clinicians who practice mindfulness may enhance MI-based interventions because of an increased ability to pay attention and focus on the present task, which is to deliver adherent MI (Christopher, Christopher, Dunnagan, & Schure, 2006; Epstein, 1999; Epstein, 2003a; Epstein, 2003b; McCollum

& Gehart, 2010; Schure, Christopher, & Christopher, 2008). Additionally, mindfulness practice and MI training both promote congruent qualities, in particular, nonjudgment, compassion, empathy, and person-centeredness (Rollnick & Miller, 1995; Venner, Feldstein, & Tafoya, 2006). Participation in programs such as Mindfulness-Based Stress Reduction (MBSR) has also helped clinicians enhance their skills for coping with stress and protect themselves against work-related fatigue (Irving, Dobkin, & Park, 2009). For example, a meta-analysis by Escuriex and Labbé (2011) found that clinicians' mindfulness practice positively influenced clinicians' well-being, as indicated by decreases in stress, negative mood states, and burnout. The authors also found improvements in psychosocial functioning, self-compassion, and interpersonal relationships.

The few studies that have specifically examined the impact of clinician mindfulness on client outcomes have yielded mixed results. Findings from Stratton (2005), for example, found no correlation between therapists' self-reported trait mindfulness and clients' outcomes. Similarly, Stanley et al. (2006) found that mea-

asures of mindful awareness had no relationship to clients' ratings of their improvement. Mindful awareness in this study also was found to be significantly negatively correlated with both patient functioning and therapists' ratings of improvement. Yet other studies (Grepmair, Mitterlehner, Loew, Bachler, et al., 2007; Grepmair, Mitterlehner, Loew, & Nickel, 2007) have shown more support for the impact of clinician mindfulness on client outcomes. In the context of inpatient treatment, patients of clinicians who practiced 1 hour of Zen meditation per day reported greater understanding of problems and self-efficacy to solve them, more psychological change, and greater symptom reduction.

The aim of this pilot study was to examine whether clinicians' mindfulness practice would be associated with decreased alcohol and marijuana use among adolescent clients receiving MI. No studies to date have specifically examined the treatment outcome of substance use in the context of a brief MI-based intervention with clinicians assigned to practice mindfulness. The authors hypothesized that clinician mindfulness practice would be negatively



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associated with adolescent clients' substance use outcomes, such that increased practice would be associated with reduced substance use in the context of a brief MI-based intervention.

## Method

### Participants

Participants ( $n = 25$ ) were adolescent clients referred to an ongoing in-school MI-based clinical research intervention, Project READY (Reducing the Effects of Alcohol and Drugs on Youth; [Stewart, Siebert, Arlt, Moise-Campbell, & Lehinger, 2016]). Participants were referred to Project READY by peers, teachers, counselors, and administrators from the school, or self-referred and screened for recent substance use (any instance of alcohol or drug use within the last 3 months). Eligible subjects enrolled in Project READY and signed informed consents. Subjects were encouraged to bring home consents for parents to review; however, parental consent was not required from clients over the age of 13 (RCW 70.96A.095, 230).

### Procedure

Clinicians were six graduate students (male = 1, 33% Asian American, 50% White, 16% Haitian American) in a clinical psychology doctoral program at a private university in the Pacific Northwest who were engaged in an ongoing MI-based clinical research intervention, Project READY. Two clinicians had 4 years of experience in Project READY, two clinicians had 3 years, one clinician had 2 years, and one clinician had 1 year. Project READY is a manualized, school-based, MI intervention aimed at helping adolescents reduce or abstain from the use of alcohol and other drugs; participants in Project READY have been shown to make greater decreases in substance use and related consequences than participants in a waitlist control group (Stewart et al., 2016).

The clinicians who participated in this study were originally part of a randomized control trial designed to examine the effect of mindfulness practice on adolescent client outcomes compared to clinicians who delivered the Project READY intervention as usual. Due to small sample size and high attrition rates of both adolescent clients and graduating clinicians, an analysis of the randomized trial was not feasible. The clinicians in this study represent only the clinicians who were invited to practice mindfulness.

*Project READY.* Clinicians consisted of 6 (1 male) graduate students in a clinical psychology doctoral program at a private university in the Pacific Northwest, with between 1 and 4 years of experience in Project READY, who were already participating in Project READY and selected to augment their practice with mindfulness. Clinicians had attended two 2.5-hour trainings in MI and the Project READY protocol and spent approximately 50 hours shadowing experienced clinicians during sessions before meeting with clients independently. All clinicians attended trainings annually to refresh their understanding and implementation of MI. Clinicians also received weekly 1-hour group supervision from a licensed clinical psychologist, who was also a Chemical Dependency Professional (CDP), with 24 years of experience as an MI therapist.

Project READY consisted of four standardized sessions where clinicians used the therapeutic style of MI while engaging clients in structured exercises such as Decisional Balance, Goal-Setting, and Relapse Prevention planning. Data for treatment outcomes were collected during the initial session and after the fourth session of Project READY. During the 2 years in which data collection for this study took place, standardized Sessions 1 through 4 required an average of 5.62 meetings to complete ( $SD = 2.11$ ), over an average period of 8.51 weeks ( $SD = 5.21$ ). Some participants engaged in an additional four sessions, which consisted of unstructured, informal, MI-based "check-ins." Adolescents who chose to participate in additional sessions did so completely out of their own volition; symptom severity was not a criterion for ongoing treatment. Adolescent clients did not participate in any mindfulness activities as part of the intervention.

*Mindfulness intervention.* In addition to trainings in MI and the Project READY protocol, clinicians attended two 2-hour mindfulness trainings prior to meeting with clients. Clinicians also attended refresher trainings biannually. Similar to previous studies involving teaching mindfulness to graduate student clinicians (Christopher et al., 2006; Schure et al., 2008), these trainings were loosely based on the MBSR curriculum (Kabat-Zinn, 2003). Clinicians were encouraged to practice mindfulness using the activities taught during the training, such as mindful breathing, eating, walking, and body scan, and during other activities in their daily life. They were instructed to practice mind-

fulness independently throughout each week, and immediately prior to meeting with adolescent clients for a minimum of 5 minutes. They were also encouraged to listen to audio recordings of client sessions, to reflect on the content of each session. Clinicians kept a weekly log of their mindfulness practice, which included the number of mindfulness exercises in which they chose to engage, as well as the length of time they dedicated to their practice. Data for mindfulness practice were collected at the end of each week and then analyzed at the end of participating clinicians' academic quarter. These data were used to examine the relationship between mindfulness practice and outcome variables.

### Measures

Clinicians' mindfulness practice was measured by self-reported mindful activities. Clinicians completed weekly logs that included the type, frequency, and duration of mindfulness exercises in which they engaged. Logs were collected from the six participating graduate student clinicians at the end of each academic quarter in which they participated in the study.

The Customary Drinking and Drug Use Record (CDDR; Brown et al., 1998) was used to assess changes in alcohol and drug consumption. The current study used this measure to collect demographic information, including age, gender, race/ethnicity, height, and weight, and two items that assess for quantity (number of drinks in a typical instance of drinking) and frequency of substance use (number of instances of drinking alcohol/using drugs). Notably, participants in this sample reported only alcohol and marijuana use. Thus, "substance use" in this study only refers to alcohol and marijuana use.

### Research Design and Statistical Analyses

To prepare data for analyses, quantity (duration of mindfulness practice in minutes) and frequency (number of instances of mindfulness practice) were multiplied to provide a combined representation of mindfulness practice. An overall mean score of quantity and frequency of mindfulness practice across all quarters of participation was used during analyses to reflect the average mindfulness practice employed throughout the study. Alcohol use scores were calculated to reflect the quantity (number of standard drinks) multiplied by the frequency (number of days drinking) over the past month. Marijuana

use scores reflect the frequency (number of days using marijuana over the last month). Changes in substance use were measured by the reported quantity and frequency of use at the fourth and final session, controlling for initial rates of use. Support for this method of assessing quantity and frequency is provided by Poikolainen, Podkletnova, and Alho (2002).

In order to assess the association between clinician mindfulness and client substance use, two multiple linear regression analyses were used (one for alcohol, one for marijuana). Clinicians' mindfulness practice was entered as a continuous independent variable. Outcome variables were posttreatment alcohol and marijuana use. Models controlled for clients' alcohol use at Session 1 and clients' marijuana use at Session 1, respectively.

**Results**

**Subject Characteristics at Baseline**

Adolescent clients identified as Black/African American (28.0%) Asian/Pacific Islander (20.0%), White/Caucasian (28.0%), Hispanic/Latino (20.0%), or multi-racial/ethnic (4.0%). Adolescent clients' ages ranged from 14 to 18 ( $m = 15.96$ ), and were predominately male (56.0%). Given the small sample size, analyses did not control for sociodemographic characteristics. In other research conducted within this intervention, these demographic variables have not been correlated with changes in alcohol or marijuana use (Stewart et al., 2016).

**Adolescent Substance Use Pre- and Posttreatment**

Given the wide range of alcohol use reported, alcohol use scores were square root transformed to reduce skewness and kurtosis. As seen in Table 1, adolescent clients were observed to decrease the quantity and frequency of their alcohol use from Session 1 ( $m = 4.34$ ,  $SD = 3.90$ ) to Session 4 ( $m = 2.27$ ,  $SD = 3.38$ ),  $t(24) = 3.36$ ,  $p = 0.003$ . At Session 1, clients reported drinking an average of 5.09 ( $SD = 5.41$ ) times per month and having an average of 5.00 ( $SD = 4.30$ ) drinks per drinking episode. At the end of the study, clients reported drinking an average of 2.64 ( $SD = 5.37$ ) times per month and having an average of 2.48 ( $SD = 3.28$ ) drinks per drinking episode. Adolescent clients were also observed to decrease their marijuana use as indicated by number of days of use from Session 1 ( $m = 14.63$ ,  $SD = 9.60$ ) to Session 4 ( $m = 7.54$ ,  $SD = 9.78$ ),  $t(23) = 3.78$ ,  $p = 0.001$ . Both sub-

stance use scores were observed to decrease by nearly half at the end of the intervention.

**Clinician Mindfulness Practice**

A wide range of mindfulness practices were reported by participating clinicians. Many clinicians primarily logged activities that were introduced during the mindfulness training prior to the intervention, which was loosely based on the MBSR protocol (Kabat-Zinn, 2003) and includes mindful breathing, eating, walking, and body scan. Others reported a number of other activities that they chose to complete mindfully, but were not included in the initial mindfulness training, such as yoga, prayer, and devotion.

Given that a wide degree of flexibility was provided to clinicians regarding their frequency and type of engagement in MBSR practice, a wide variance of mindfulness practice was observed across clini-

cians. However, scores remained in realistic and expected ranges for the mindfulness intervention. Mindfulness scores were square root transformed to reduce potential skewness and kurtosis.

Clinicians increased the quantity and frequency of their mindfulness practice from the end of the first academic quarter of the intervention, ( $m = 15.88$ ,  $SD = 8.96$ ) to the end of the last academic quarter of the intervention ( $m = 18.30$ ,  $SD = 15.37$ ),  $t(24) = 5.95$ ,  $p < 0.011$ . At the end of the first quarter, participating clinicians practiced mindfulness on average 2.85 ( $SD = 1.54$ ) times per week for a combined duration of 51.22 ( $SD = 32.76$ ) minutes. At the end of the last quarter, participating clinicians practiced mindfulness on average of 5.04 ( $SD = 3.19$ ) times per week for a combined duration of 88.71 ( $SD = 89.99$ ) minutes.

**Table 1.** Pre- and Posttreatment Substance Use Outcomes Among Adolescent Client Participants

Treatment Outcome	Session 1		Session 4	
	M	SD	M	SD
Alcohol Use (average days per month x average number of drinks per day)	4.34	3.90	2.27*	3.38
Marijuana Use (average days per month)	14.63	9.60	7.54**	9.78

Note. \*  $p < 0.01$  \*\*  $p < 0.001$

**Table 2.** Regression Analyses for Mindfulness Practice and Treatment Outcomes Controlling for Session 1 Substance Use

Substance Use Outcome	F (df)	R <sup>2</sup>	p	B
Alcohol at Session 4	17.808 (2, 22)	0.640	0.024	-0.114
Marijuana at Session 4	5.201 (2, 22)	0.342	0.040	-0.406

Note. Alcohol use variables represent the quantity (number of drinks) multiplied by the frequency (days per month) of use. Marijuana use variables represent the frequency (days per month) of use.

### *Associations Between Clinician Mindfulness Practice and Client Substance Use*

Bivariate correlations indicated a significant negative relationship between clinicians' overall mean mindfulness practice and treatment outcomes among adolescent clients. Clinician mindfulness practice was correlated with lower use of alcohol ( $r = -0.390, p < 0.05$ ) and marijuana ( $r = -0.412, p < 0.05$ ) among clients at the end of treatment.

Findings from the regression analyses (Table 2) indicated that clinicians' mindfulness practice was associated with lower posttreatment alcohol use among their clients, controlling for initial session alcohol use ( $B = -0.114, p = 0.024$ ). Clinicians' mindfulness practice was also associated with lower posttreatment marijuana use among their clients, controlling for initial session marijuana use ( $B = -0.406, p = 0.040$ ). Clinicians' mindfulness practice accounted for 10.7% of the variance in clients' posttreatment alcohol use and 15.8% of the variance in marijuana use.

### **Discussion**

The primary finding of this pilot study is that student clinicians who received augmentation mindfulness training prior to delivering a four-session MI program to reduce adolescent substance use were associated with promising treatment outcomes. Increases in clinicians' mindfulness practice were associated with decreases in their clients' substance use, suggesting mindfulness practice may promote improved treatment outcomes for clients. As some previous researchers and clinicians have advocated (Dimidjian & Linehan, 2003; Epstein, 1999; Epstein, 2003a; Epstein, 2003b), this study supports the role of mindfulness practice among clinicians and the potential positive impact among their clients.

This study also offers a unique contribution to the literature by measuring actual mindfulness practice over time in order to study the association of change in mindfulness as opposed to utilizing a self-report measure of mindful characteristics at a singular time point (e.g., Stratton, 2005). Utilizing mindfulness practice rather than a self-report measure of trait mindfulness may provide a real-world reflection of the relationship between clinician mindfulness and outcomes. Furthermore, considering the mixed results of mindfulness and client outcomes (Grepmaier, Mitterlehner, Loew, Bachler, et al., 2007; Grepmaier, Mitter-

lehner, Loew, & Nickel, 2007; Stanley et al., 2006; Stratton, 2006), this study provides further support for the positive role of clinician mindfulness in treatment outcomes. Specifically, this study also supports the benefit of enhancing brief motivational interventions through promoting clinician mindfulness when treating adolescent substance use.

Of note, clinicians in this study were required to maintain diaries of their meditation practice, and they varied greatly in the degree of mindfulness they practiced. At the initiation of this study, clinicians practiced mindfulness about three times per week for a total of about 51 minutes on average (approximately 17 minutes each session) and by the end of the study, they practiced about five times per week for nearly 90 minutes on average. This quantity and frequency of practice appeared to have a positive impact on their clients' substance use outcomes. Again, this study raises the consideration of examining mindfulness "dose," or identifying what quantity and frequency of clinicians' mindfulness practice may enhance therapist effectiveness and impact client outcomes.

Although previous studies have examined the impact of clinicians' mindfulness practice on other outcomes, this is the first study to examine the association between clinicians' mindfulness practice and clients' substance use. Notably, this study also examined the role of clinicians' mindfulness practice within an intervention that did not include a mindfulness component for clients. While researchers have contended that clinicians who employ mindfulness-based therapies should also practice mindfulness themselves, findings from this study support the case that clinicians implementing other forms of therapy with their clients may expect to see therapeutic benefits from practicing mindfulness as well.

### **Limitations**

The results of this study lend preliminary support to the efficacy of this clinical enhancement but warrant further exploration. A major limitation is the inability to analyze the effects of randomization to an active control group compared to the effects Project READY as usual due to small sample size and high attrition rates of both clients and clinicians. Therefore, we cannot make claims about the unique role of clinician mindfulness on clients' behavioral changes. The authors acknowledge that clinicians who practiced more mindfulness may have been more effecting ther-

apists for other confounding reasons. Other limitations include the varied nature of mindfulness practices and the wide range of quantity and frequency of mindfulness practice among clinicians. Mindfulness logs indicated that interventionists participated in a number of different styles and approaches to mindfulness, ranging from occasional deep breathing exercises to long, formal, meditative sits, which may have differentially affected outcomes. Findings should be interpreted with caution due to varying doses of mindfulness practice on behalf of clinicians. In addition, whether clinicians did indeed listen to their session tapes and reflect on them as part of their mindfulness practice was not a data point collected for this study. This type of therapy-specific and focused mindfulness practice could have more of an impact on MI adherence than general mindfulness activities and whether this would differentially enhance outcomes is a valid area for exploration. Relatedly, no measure of fidelity to the mindfulness intervention was used. Although clinicians provided self-reported practice of mindfulness, adherence measures of mindfulness may have enhanced methodology. Additionally, the authors did not control for clinicians who had prior mindfulness training. Instead, the authors collected qualitative information regarding clinicians' prior exposure to mindfulness, which included a cursory knowledge of the benefits of mindfulness in psychological practice (e.g., as a component of Dialectical Behavioral Therapy) as well as popular culture (e.g., attending yoga classes). One exception was a clinician who had attended a mindfulness meditation retreat.

An additional limitation was the inability to directly compare alcohol and marijuana use, given that alcohol was measured by quantity and frequency and marijuana was measured by frequency alone. While psychometrically validated measures of alcohol quantity have long been available (CDDR; Brown et al., 1998) and give a robust picture of total alcohol consumption over time, marijuana use has been primarily measured solely by frequency of use; national epidemiological surveys only measure frequency of marijuana use (SAMHSA, 2012). While recent studies have advanced quantity measures of marijuana use (Cuttler & Spradlin, 2017), these were not available at the time of this study, nor have they been validated with adolescents.

Also worth consideration are client-specific factors that limit generalizability.

While in this population, alcohol and marijuana were the most commonly reported substances used by adolescents and as such were the only two substances examined in this study, we cannot generalize these findings to other adolescent populations that may be using different substances. Notably, this study relied only on adolescents' self-report of substance use. The use of more objective measures, such as naturalistic observation or drug tests conducted by saliva or urine analysis, could improve the accuracy of measurement.

### Future Studies

The results of this study justify further consideration of potential pathways between clinician mindfulness and improved outcomes. The authors proposed that mindfulness practice might be a congruent addition to a brief, MI-based intervention as they both promote qualities of client-centeredness, empathy, and nonjudgmental acceptance. An obvious question that emerges is one that considers nonjudgmental acceptance and empathy as mediators in the pathway from clinician mindfulness to client outcomes. Another consideration is that mindfulness is largely a practice of paying attention, on purpose, and in the present moment. One may hypothesize that with practiced intention, a clinician may adhere with greater focus to a treatment protocol, thus enhancing the effectiveness of that treatment. Attentional focus therefore may be a mediator of change. Further study is needed to specifically examine the role of empathy, acceptance, and focused attention as potential mediators between clinician mindfulness practice and client outcomes.

Future studies should employ randomized controlled trials with active control groups to substantiate these preliminary findings. Assigning clinicians to deliver MI only or MI augmented with mindfulness practice will allow for a better understanding of the clinical influence of mindfulness. Further, randomized clinical trials comparing clinician mindfulness practice to treatment delivery as usual within existing mindfulness-based treatments that target substance abuse, such as Mindfulness Based Relapse Prevention (Bowen et al., 2009), would allow for more clarity regarding the impact of clinician mindfulness. This approach would also garner support for advocates of clinician mindfulness practice within other mindfulness-based treatments (e.g., DBT; Dimidjian & Linehan, 2003).

Openness to mindfulness would also be expected to differentially impact outcomes and should be further investigated. Clinicians' attitudes towards mindfulness practice may shape their willingness to participate and affect their time spent practicing on their own and during the intervention itself. This may be an especially important factor to target and measure during training, as well.

The dose and type of mindfulness that clinicians employ are also worthy of further study. Previous studies that have examined mindfulness among clinicians have primarily based their trainings on the MBSR protocol, which involves intensive practice and encourages 45- to 60-minute meditations, as well as opportunities to engage in mindfulness during walking, eating, and through yoga. Studies in the field may not capture and/or report actual participant time in meditation practice (i.e., minutes of daily practice) as this study set out to examine. The relationship between actual participant practice time and outcomes remains unclear. Related to this discussion is a recent study (Zanesco, Denkova, Rogers, MacNulty, & Jha, 2019) which indicated that duration of mindfulness training differentially impacted the relationship between at-home mindfulness practice and working memory, suggesting that the dose of mindfulness practiced may depend on the dose of mindfulness training. This study highlights the relevance for future studies to consider measuring the dose of mindfulness training and practice. Clinicians' preference for a particular type of mindfulness practice (e.g., preferring to practice yoga as opposed to sitting meditation) is also worthy of further examination. Knowing the optimal type, quality, quantity, and frequency of clinician mindfulness practice to yield clinically meaningful effects for clients would allow researchers to provide clinicians with more specific "prescriptions" of mindfulness to practice. Finally, an objective measure of fidelity to mindfulness, such as an app that could record practices and give real-time data about frequency and duration of practice, would certainly enhance measurement of engagement.

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## ORIGINAL RESEARCH

# Acceptability of Behavioral Activation Smartphone Apps Following Acute Psychiatric Treatment

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THE TRANSITION FROM ACUTE psychiatric treatment to outpatient care is challenging and a period of high risk for relapse (Vigod et al., 2013). The month following discharge from acute care—inpatient or partial hospitalization—is a critical period during which individuals are more susceptible to relapse and suicide (Goldacre, Seagroatt, & Hawton, 1993; Horvitz-Lennon et al., 2001; Mortensen et al. 2000). Although there is a clear need for interventions that facilitate this post-acute transition period, very few are currently available. Smartphone apps offer low-intensity and scalable options for providing on-demand support in patients' daily lives, reminders to practice recently learned coping skills, and opportunities to self-monitor.

Smartphone apps delivering Behavioral Activation (BA) may be particularly well-suited to the post-acute transition period. BA is a simple, well-established intervention that uses a few specific strategies (e.g., self-monitoring, activity scheduling, setting small achievable goals) to increase engagement in adaptive behaviors that elicit positive reinforcement, increase positive affect, and maintain healthy daily structure (Kanter et al., 2010; Martell, Dimidjian, & Herman-Dunn, 2013). BA is effective when delivered in acute care settings, and many inpatient and partial hospital programs incorporate relevant principles (Hopko et al., 2003; Moshier & Otto, 2017). BA smartphone apps may enhance patients' ability to implement BA in their daily lives.

Although many research efforts begin with developing a new app for an identified need, few apps developed in research settings are eventually implemented or sustained (Firth et al., 2017). Therefore, we started with a review of existing apps that would best meet our needs for a post-acute intervention. We desired apps that would both be scalable (e.g., publicly available on iOS and Android), specific to BA (rather than a suite of CBT interventions), and were consistent with existing recommendations for app evaluation, including evidence-based, good user experience, and data security and privacy policies (Neary & Schueller, 2018; Torous et al., 2018). A 2016 review identified over 100 apps that purportedly offered CBT or BA (Huguet et al., 2016). However, only 10% of these apps followed CBT or BA principles; most lacked privacy policies; and none had efficacy data.

Using previous reviews (Firth et al., 2017; Huguet et al., 2016), our own search, and our own expertise in the app space, we selected two apps that best met our use case. MoodMission delivers real-time, momentary strategies (“missions”) based on BA principles that are personalized to the individual's current mood and prompts users to rate their mood before and after completing a mission (Bakker et al., 2018a). In a pilot trial with 44 participants, MoodMission was rated higher than standardized health app norms in a majority of domains on the Mobile Application Rating Scale (MARS), a widely used measure of user experience in mobile health apps (Bakker et al., 2018a). Qualitative feedback

indicated participants found the app easy to use and aesthetically appealing. Participants found the nonclinical language of “missions” emotionally relevant and believed the app helped increase their mental health awareness. In a randomized control trial comparing three mental health apps and a waitlist control condition, those using MoodMission experienced a significant decrease in depressive symptoms compared to the control and one of the comparison mHealth apps (Bakker et al., 2018b). However, these pilot studies included nonclinical participants, some of whom were investors in the development of the app.

In contrast, Moribus facilitates behavioral scheduling through calendar features and emphasizes a balance of activity types. This app prompts patients to rate themselves on scales of mastery and pleasure once their activity is complete (Bardram et al., 2017). A pilot study in five individuals receiving therapy supported the feasibility of logging activities and the activity categories used in the app, but these patients did not actually use the app (Bardram et al.). We were unable to identify any additional data for Moribus. However, we selected this app because it met our other criteria, its features were diverse enough from MoodMission to provide a useful comparison, and its activity scheduling features were consistent with principles of BA, including how it is delivered in our partial hospital program.

We conducted a pilot feasibility and acceptability study as a first step toward testing whether publicly available BA smartphone apps could facilitate skill use and improve outcomes during the post-acute period. Specifically, we asked 30 patients to use both MoodMission and Moribus during the month following acute care. We did not randomize patients to use one app because these two apps complement each other and we envisioned that they may eventually be used together. We also prioritized quick data collection. Although this design limited us from drawing any conclusions about either app in isolation, it was sufficient and efficient for collecting initial feasibility and acceptability data.

Based on prior work examining patient interest in mental health smartphone apps (e.g., Di Matteo, Fine, Fotinos, Rose, & Katzman, 2018; Torous, Friedman, & Keshavan, 2014), we expected strong interest in participating in this study. Based on our prior work testing augmentations to hospital treatment as usual (e.g., Beard et

al., 2019) and research using smartphone apps during the post-acute period (e.g., Forgeard et al., in press), we expected it to be feasible to deliver a brief orientation session during acute care, during which patients downloaded the apps and reviewed the primary features. We had no a priori expectations regarding use or acceptability of either app.

## Methods

### Participants

Participants ( $N = 30$ ) were patients with severe mood and anxiety disorders attending a partial hospital program (PHP) at McLean Hospital from July to August of 2018 who provided informed written consent to the study (see Table 1 for demographics). Participants were recruited between their 3rd day and second to last day. To be eligible, patients had to own a smartphone (98% of this clinic population owns a smartphone; Beard et al., 2019) and be stable enough to be able to provide informed consent and complete the orientation session (e.g., not experiencing acute symptoms of mania or psychosis). Due to the group therapy format of partial hospitals, all patients were required to have sufficient English language skills to attend. We did not have any exclusion criteria regarding diagnosis, functional ability, or suicidal ideation. Patients who were determined too clinically acute (i.e., were likely to require imminent inpatient treatment) by their case manager or had logistical issues that impaired their ability to participate in the study (i.e., scheduling conflicts or inconsistent program attendance) were de facto excluded because practical constraints prevented them from participating. The average age was 32.1 years ( $SD = 13.6$ , Range = 19 to 63), and the average duration of treatment from admission to discharge (including nontreatment days such as weekends) was 12.9 ( $SD = 2.6$ , Range = 9 to 20) days.

### Treatment Setting

The PHP is an insurance-based (including Medicare and Medicaid) program at McLean Hospital, a nonprofit psychiatric hospital located in a suburb of Boston, MA. Approximately half of patients are referred directly from inpatient hospitalization, and the other half are referred from community providers. The PHP treatment comprises primarily group therapy sessions teaching CBT and Dialectical Behavior Therapy (DBT) skills. Patients attend the program during weekdays (8:30 A.M. to 2:50 P.M.)

and return home each evening. In addition to the skills work, patients also meet with a case manager for treatment and after-care planning and a psychiatrist for medication consultation. See Beard and colleagues (2017) for more detailed description of the PHP treatment.

### Smartphone Applications

MoodMission provides “on demand” activities in moments of increased “anxious feelings” or “low mood,” though the app will prompt the user to engage via push notification if the user has not used MoodMission in a few days. Users report their symptom type and level of severity, which the app uses to generate five activity options. If desired, the user can ask for five additional options. These “missions” are intended to be brief and easy to complete from home or in public. They include activities such as physical exercise, mindful activities, and social engagement, and are all designed to be non-technology-based interventions. Each mission also contains a “Why This Helps” section that provides psychoeducation. Finally, the app prompts the user to rate their mood before and after the mission.

Moribus is a calendar-based app that facilitates scheduling of a range of activities including movement, work and education, daily living, practical and social, and prompts users to rate their activities on scales of mastery and pleasure. Each activity is color coded by type of activity, which then enables the user to see the proportion of activity types in each day. Moribus has additional self-report surveys that we did not instruct participants to use, as they were not relevant to the aims of the present study.

### Measures

**Frequency of use.** Participants responded to a survey prompt nightly: “How many times did you open/use Moribus/MoodMission in the past 24 hours?” We averaged participant ratings for each week of the month following discharge.

**Acceptability.** Participants completed the System Usability Scale (SUS; Brooke, 1996; Bangor, Kortum, & Miller, 2008), a 10-item self-report measure assessing user experience, at 2 weeks following discharge. Items are rated from “strongly agree” to “strongly disagree.” We administered the SUS items separately for each app (MoodMission/Moribus). Total scores can range from 0 to 100, with a score above 68 indicating above average usability.

Participants also responded to three prompts nightly about each app: (a) How easy was it to use the app today?; (b) How satisfied were you with the app today?; (c) How helpful was the app today? We averaged ratings to create one score for each app and item for each participant.

**Procedure**

The Partners Healthcare IRB approved all research procedures. Participants completed an orientation session with a research staff member while attending the PHP. During the orientation session, participants provided informed consent and were then oriented to the two smartphone apps, Moribus and MoodMission, and another smartphone app that delivered the study surveys, MetricWire. MetricWire is a secure HIPAA compliant application used to deliver surveys. Participants were asked to use both Moribus and MoodMission and to report on their frequency of use and satisfaction. MetricWire prompted participants to complete their surveys at 6 P.M., and they had 4 hours to complete it. This pilot study did not collect any use data directly from MoodMission or Moribus. Staff did not have any contact with participants for the 4 weeks following discharge from the PHP, except for two participants who were contacted via email in the first week after discharge regarding lack of survey completion. Participants completed additional measures in order to pilot future research procedures, which are not the focus of the current study. Participants were compensated \$10 each week for completing any of the daily MetricWire surveys, and an extra \$15 per week for completing at least 70% of the daily surveys. Thus, patients could receive up to \$100 total at the end of the month.

**Results**

**Feasibility**

Of the 36 patients approached for the study, 30 (87%) consented to the study. All 30 (100%) participants were able to complete the 30-minute orientation during the PHP.

**Naturalistic Self-Reported Use of BA Apps**

Figure 1 illustrates self-reported use of each BA app over the 4 weeks for participants who responded to the nighttime survey. In total, 25 participants responded to at least one survey prompt about their app use. On average, participants reported opening MoodMission 0.40 times per day

(*SD* = 0.42) and Moribus 0.38 times per day (*SD* = 0.53),  $t(24) = 0.24, p = .824, d = 0.05$ .

**Acceptability of BA Apps**

Fifteen participants responded to the 2-week survey, but 3 of these provided partial data. The 12 participants with complete SUS did not significantly differ from participants who did not respond to the survey or fully complete the survey on demographic variables. Participants rated MoodMission ( $M = 69.4, SD = 17.42$ ) as significantly more usable than Moribus ( $M = 40.6, SD = 16.79$ ),  $t(11) = 3.23, p = .008, d = 0.93$ .

Figure 2 illustrates the study-specific acceptability ratings for each app averaged

over the 4 weeks of use. Participants rated MoodMission as significantly easier to use,  $t(23) = 4.07, p < .001, d = 0.91$ , and were more satisfied,  $t(23) = 3.22, p = .004, d = 0.60$ , compared to Moribus. Finally, there was a nonsignificant trend for participants to rate MoodMission as more helpful than Moribus,  $t(23) = 1.93, p = .066, d = 0.36$ .

**Discussion**

This pilot study examined the feasibility and acceptability of using two BA smartphone apps during the month following discharge from acute psychiatric care. Overall, partial hospital patients were highly interested in using a smartphone

**Table 1.** Demographic and Diagnostic Characteristics (*N* = 30)

Demographic Characteristics	Values (%)
Age in years (mean, <i>SD</i> )	32.1 (13.6), range = 19-63
<b>Gender, n (%)</b>	
Female	22 (73.3)
Male	8 (26.7)
<b>Race</b>	
White	27 (90.0)
Multiracial	2 (6.7)
Black	1 (3.3)
<b>Ethnicity</b>	
Non-Latinx	28 (93.3)
Latinx	2 (6.7)
<b>Sexual orientation</b>	
Heterosexual/straight	24 (80.0)
Bisexual	4 (13.3)
Gay/lesbian	1 (3.3)
Write-in response (“prefer not to pick a label”)	1 (3.3)
<b>Education</b>	
High school/GED or less	2 (6.7)
Some college	12 (40.0)
4-year college graduate	8 (26.7)
Post-college education	8 (26.7)
Current student	10 (33.3)
<b>Employment</b>	
Not employed	11 (36.7)
Employed part time	7 (23.3)
Employed full time	12 (40.0)
<b>Marital status</b>	
Never married	19 (63.3)
Separated/divorced	3 (10.0)
Married	6 (20.0)
Living with partner	2 (6.7)
<b>Primary Diagnosis (per program psychiatrist)</b>	
Major Depressive Disorder	24 (80%)
Bipolar Disorder	1 (3%)
Obsessive Compulsive Disorder	3 (10%)
Generalized Anxiety Disorder	2 (7%)

app to practice skills following discharge, as evidenced by the high consent rate (87%). It was also feasible for all patients to participate in a 30-minute orientation session during acute care. During the first week following discharge, participants reported using MoodMission and Moribus apps approximately four times. However, rates of survey completion and self-reported use decreased thereafter.

Participants rated MoodMission more favorably on usability and satisfaction than Moribus. SUS scores indicated that MoodMission was above average, whereas Moribus was in the unacceptable range and well below average. Anecdotal participant feedback obtained during the orientation

session converged with quantitative ratings; participants described MoodMission as being easy to navigate and aesthetically pleasing. Some participants noted that Moribus was redundant with calendar applications they already used (e.g., Apple or Google Calendar). To place these ratings into a broader context of other everyday products, MoodMission's SUS score was higher than ratings of Excel spreadsheets and electronic health records, but lower than Google searches or microwaves (Kortum & Bangor, 2013).

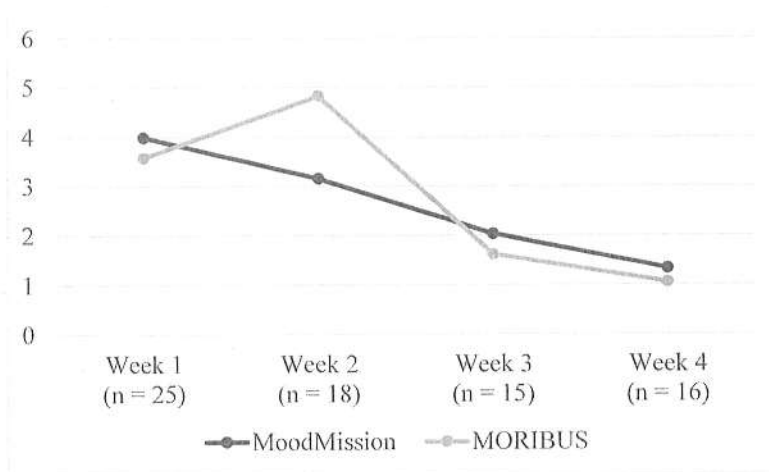
In contrast, neither app was rated as particularly helpful; on a 1 to 7 Likert scale, both apps' average score was 2. These low helpfulness ratings differ considerably

from patient positive feedback regarding BA group therapy in this partial hospital (Stein et al., in preparation) and high satisfaction ratings for the partial hospital program overall (Beard et al., 2017). It may be that low-intensity app forms of BA are not powerful enough to be helpful during an acute episode and challenging transition of care. However, the current study only provides information about perceived helpfulness. Studies comparing BA apps to a control condition are needed to determine their clinical utility as a post-acute intervention.

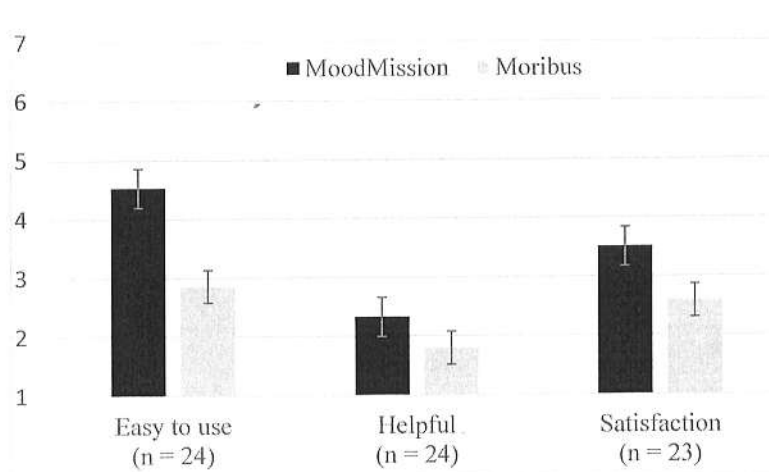
Results of this study must be interpreted within the context of several limitations related to it being a pilot study. First, participants used both apps, and there was no control group. Thus, we cannot determine effects of either of the BA apps on behavior or symptom outcomes. The data from this pilot study suggest that further trials evaluating these outcomes are warranted, particularly for MoodMission. Second, we did not collect data from the smartphone apps on actual usage. Self-reported app use is subject to various retrospective recall biases. Third, and as expected, survey completion declined over the 4-week follow-up period. It is unclear whether participants who stopped responding to study surveys were still using the BA apps. Finally, the demographic makeup of the PHP is primarily non-Latinx, White, and highly educated. The current findings may not generalize to other demographic groups; future studies in diverse samples and from other geographic regions are needed.

Although thousands of mental health smartphone apps are available, extremely few have any empirical support. We need better models to evaluate publicly available apps for integration into existing care settings rather than developing and evaluating apps that will never be used outside of research studies. The current study is a first step toward providing this much-needed data for two publicly available BA apps. Findings underscore patients' high interest and the feasibility of using such apps during the critical post-acute transition, but also the challenges inherent in sustained app use. As neither app received stellar acceptability or helpfulness ratings, future studies should evaluate additional available apps. Future trials should move beyond feasibility and acceptability to determine effectiveness and value for real-world clinical settings as well as testing models of sustainable implementation in such settings.

**Figure 1.** Number of times opened app per week.



**Figure 2.** Acceptability ratings for MoodMission and Moribus.



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## Mentorship Matters: Graduate Student Mentorship of Undergraduate Mentees

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DERIVED FROM Athena's disguised character Méntōr providing advice to Telemachus in Homer's *Odyssey*, mentorship refers to both a process and a relationship in which an individual with experience and knowledge provides guidance to someone else with less experience. Although graduate students are the beneficiaries of mentorship, they occasionally have the opportunity to serve as mentors to junior students during graduate training; however, not much literature or advice exists to characterize this relationship. This article aims to define and identify domains of mentorship, raise considerations for engaging in the process of providing mentorship while a graduate student, offer recommendations for initiating and maintaining the mentorship relationship, and suggest possibilities for additional levels of involvement beyond an academic department. The principles discussed in this paper likely apply to mentorship across disciplines, yet a goal of this article is to offer some guidance for graduate students engaged in the mentorship of undergraduate mentees (UMs) in psychology departments more generally (with some points specific to clinical psychology).

Common components of mentorship relationships include mutual reciprocity, direct interaction, and role modeling (Palmer, Hunt, Neal, & Wuetherick, 2015). Mentors, who wield greater experience than mentees, provide practical and emotional support and assistance with career and professional development. Palmer and colleagues (2015) identified numerous theories associated with mentorship, including Bandura's social learning theory, developmental perspectives, the relationship continuum model, and "adaptive mentorship" (Ralph & Walker, 2010). Although the theoretical underpinnings of mentorship extend beyond the scope of this article, published theories are available (e.g., Brown, Daly, & Leong, 2009). As described below ("Getting Started"), graduate students may wish to review this body of liter-

ature when developing their own mentorship philosophy.

Undergraduate mentorship by graduate students within clinical psychology departments spans various domains, including research, professional development, and clinical endeavors. Graduate students may mentor undergraduates who serve as research assistants for a study (e.g., the graduate student's dissertation project), conduct independent research (e.g., a literature review or secondary data analysis), or carry out a senior thesis project. Tasks may include helping an undergraduate identify a body of literature and develop a research question; engage with data collection, entry, and coding; and/or prepare findings for presentation or publication. In the domain of professional development, graduate school mentors may aid UMs in preparing for graduate school or considering career choices. Although undergraduate mentorship by graduate students may include some clinical responsibilities, the current article will not address clinical supervision in a vertical structure (for information regarding this topic, see Scott, Ingram, Vitanza, & Smith, 2000). Still, it is acknowledged that graduate students may mentor undergraduates as they conduct clinically informed tasks such as simple risk assessments (e.g., scanning the results of a participant's Beck Depression Inventory-II [BDI-II]) in the context of a research study.

### Why Become a Mentor? Should I Do It at All?

#### *Benefits to the Graduate Student*

There are numerous advantages to mentoring UMs while a graduate student. First, some research projects cannot be executed without ample assistance. For instance, studies involving confederates or simultaneous protocols with multiple participants are more easily implemented with the help of UMs. Beyond the scope of data collection, including undergraduates in research may help increase research pro-

ductivity as UMs may be interested in collaborating on conference presentations or publications.

Including UMs in research also enables graduate students to learn valuable skills in providing high-quality mentorship. It is advantageous to mentor undergraduates during graduate school given available vertical mentorship opportunities (e.g., learning from a faculty advisor and other senior graduate students with more experience). Additionally, whether in a faculty position, at an academically affiliated medical center, or even within industry, providing mentorship to others will likely be of great value in any leadership role, so it is ideal to start developing these skills early. For example, you will gain practice communicating both positive and negative feedback to your mentees—an essential communication skill across many careers. This skill may not come easily; thus, repeated practice is essential to developing finesse in delivering feedback.

Finally, undergraduates often come to the table with unbridled energy and an eagerness to learn and contribute by virtue of their desire to become entrenched within the field of psychology. Undergraduates may bring innovative research ideas—for example, a novel way to recruit participants through social media. Working with UMs is a way of passing the torch to those who may realize their passion for clinical psychology through a process of working with role models. Importantly, many UMs may be participating in psychology research for the first time, so graduate mentors are well-positioned to profoundly affect their values about the conduct of research. These early experiences have the potential to influence mentees' sense of confidence and self-efficacy and shape the way they see themselves "making it" in this field.

#### *Benefits to the UM*

Participating in research before applying to graduate programs (or even paid RA positions) is of enormous benefit to UMs seeking a career in clinical research, and is described in detail elsewhere (see <http://www.abct.org/Resources/?m=mResources&fa=GettingGraduate>). Working with a graduate student mentor may offer unique advantages. For example, undergraduates working with graduate students are likely to benefit from guidance on a range of professional development issues. Graduate mentors serve as role models, slightly "ahead" of where UMs hope to be in a few short years. By virtue of recently

going through the process themselves, graduate students are well-positioned to mentor UMs through every step of the graduate and/or job application process, including identifying which programs best fit their career goals, evaluating strengths and weaknesses of their experiences to date, providing feedback on cover letters, curriculum vitae, and other aspects of the application, scheduling mock interviews, and navigating the decision process after interviews. Graduate students may be more up-to-date on changes to standardized testing, having recently completed the process themselves, or more aware of specific mentors' styles given peers in the field enrolled at other institutions. Graduate students may also be more adept than faculty members at understanding the typical trials and tribulations of UMs. In considering work-life balance, UMs may be faced with making difficult decisions, such as needing to relocate from family or moving to expensive locations. Undergraduates may feel more comfortable turning to graduate students, who may be more "in touch" or current (relative to faculty members) with these concerns.

Letters of recommendation are another important benefit to undergraduates. Notably, graduate students may have more time to spend mentoring undergraduates compared to faculty members, who are typically already consumed with intensive mentorship of their own graduate students, among other professional obligations. Because graduate students often have more intimate knowledge of the UM's contributions, they may be better positioned to write a personalized letter of recommendation. Of note, most letters of recommendation can be written by a graduate student and cosigned by the principal faculty member in charge of the lab.

Last, UMs can receive mentorship in soft skills and professionalism. For example, graduate students can coach UMs in writing letters to potential mentors by providing examples of their own emails and helping to wordsmith a brief introduction. Additionally, UMs can receive guidance in appropriate etiquette and attire for situations ranging from running participants to attending a job interview. Although a UM may be reluctant to ask an older faculty member for advice on such a question, the UM may feel more comfortable approaching a younger (and perhaps more contemporaneously dressed) graduate student mentor given the smaller power/age differential between UMs and graduate students in comparison to UMs and faculty. Gradu-

ate students may also be better positioned to normalize and gently correct "student" behaviors incompatible with "professional" behaviors.

### Potential Drawbacks

Despite the myriad benefits of mentoring undergraduates in research, it is important to acknowledge potential drawbacks as well. Time is a precious, finite resource, and taking on UMs detracts from valuable time dedicated to priorities such as writing. Depending on the extent to which UMs have prior research experience, graduate students may need to devote considerable time to training. In addition, although repetitive, painstaking work is a central part of most research, UMs will likely be dissatisfied if their only responsibility is a rote task such as data entry. Thus, graduate mentors will want to optimize the menu of roles and responsibilities entrusted to UMs. This will require the provision of training sessions (necessitating preparation and planning), as well as a willingness to continuously monitor progress and remain vigilant for potential misunderstandings and errors. Undergraduates seeking mentorship on independent research projects, secondary data analyses, or honors theses may require an even greater time commitment.

It is also important to consider the potential for complicated dual relationships. Graduate students serve many roles and may be employed as course instructors or teaching assistants (TAs). Accordingly, a graduate student may find that they are simultaneously serving as a TA for a course (e.g., grading undergraduates' assignments) while recruiting UMs for their lab. In this case, the graduate student may elect to wait until the conclusion of a given term (e.g., after submitting final grades) to include a certain UM in the lab so as to minimize difficulty with this dual relationship or any potential perceptions of favoritism. Graduate students should also be mindful of the social issues that may arise given the potential similar age of the mentor and UM. In a small college town, graduate students and undergraduates may socialize in similar spaces; discussion up front is recommended.

Finally, graduate students may be concerned about their competence to mentor undergraduates and, similar to many times throughout their education, may find themselves experiencing imposter syndrome or in a position of "fake it till you make it." Indeed, there may be times when

the graduate student is problem-solving a research-related task for the very first time, only days before training UMs. Other situations may necessitate delivering difficult or challenging feedback to a mentee, which can be anxiety-provoking for both the graduate student and the UM. These confidence issues will likely be alleviated after getting started. The following principles and strategies laid out below will aim to help navigate the complexities of mentoring undergraduates.

### Recommendations and How-Tos

#### *Before Getting Started*

Prior to mentoring UMs, graduate students can benefit from conducting a brief self-assessment to clarify their own goals, values, and availability. Professional goals could be either research/task-oriented or personal. For example, a graduate student may identify a professional research goal of completing a study requiring multiple UMs simultaneously to run a paradigm. Alternatively, graduate students with a professional goal of obtaining a faculty position at a teaching institution may wish to explore whether they enjoy mentoring or demonstrate that they are capable of undergraduate mentorship.

Regarding availability, graduate students should consider questions such as, "Do I have the time given my current workload/course load?" Graduate students may conclude that the time spent mentoring a UM and providing instructions for data entry could be better spent completing the task independently. Graduate students ought to assess their needs and identify whether these needs can be met by an undergraduate skill set. Although an undergraduate may be able to assist with conducting and scoring certain measures, they are unlikely to serve as a blind independent rater and conduct diagnostic assessments. Graduate students also must consider how many students they will mentor. Responsibilities involved with training a small cohort of UMs who will do data entry and advising one student on a year-long thesis project diverge; although the former group may be mentored with group sessions that fade in frequency as students acclimate to the software/procedures, the latter may require more in-depth, time-consuming meetings for an extended period of time. Graduate students should also consider UMs' previous research experience. For example, have they completed a research methods course? Have they opened SPSS before? Do not

underestimate the time required to respond to student's inquiries!

### Getting Started

Start by capitalizing on the many resources available to you! There are numerous excellent guides on how to mentor undergraduates in psychology research (see Table 1). We recommend meeting with your faculty advisor to delineate a plan for UMs' research involvement and seeking any resources or standard operating procedures (SOPs) they may have based on past graduate student mentorship endeavors. Informal discussions with mentors about their perspective on effective mentorship and wisdom garnered throughout their career are helpful. This also provides an opportunity for you and the faculty member to establish a process for checking in and developing an ongoing process for evaluating the experience. Engaging in similar conversations with senior graduate students or other trusted faculty is likely to be fruitful as well. Finally, it is not a bad idea to touch base with staff/faculty in the undergraduate psychology department, who may have some excellent ideas for getting started.

Ideally, before serving as a primary graduate student mentor, you would have the opportunity to collaborate with or co-mentor other graduate students. In doing so, the development of your mentorship skills can be scaffolded through the process of mentoring UMs across projects involving increasing levels of leadership. A great way to start is by observing others—for

example, sitting in on lab meetings of more senior graduate students in your lab. It is also helpful to work in tandem with other graduate students on a faculty mentor's project to learn from one another. Ideally, occasional direct observation and feedback from senior graduate students or a faculty mentor is beneficial prior to mentoring undergraduates independently.

We recommend reflecting on your philosophy of research mentorship in the same way you would mull over your pedagogical values prior to teaching a course. Start by reflecting upon personal experiences working with research mentors. What were some of the most positive and formative experiences you had during your training? What skills ended up being essential to your success in research? Who do you want to emulate and how? On the flip side, when it comes to ineffective mentor-mentee relationships, do you have any "horror stories"? If you've had negative experiences along the way, how can you avoid repeating them with your own mentees? Putting yourself in the shoes of your UMs so you can be tuned in with their needs and preferences is a critical piece of providing high-quality mentorship.

### Recruiting UMs

You may be able to recruit UMs already working in your lab depending on their availability; this can be advantageous because other graduate students can comment upon their strengths and weaknesses. You may also be interested in putting out a call to the wider psychology department.

Ask staff working in the undergraduate psychology department about centralized ways of recruiting UMs; typically, there is an active list serve or a particular course (e.g., Research Methods) to draw from. You will want to provide a brief description of the time commitment, responsibilities, and any benefits (e.g., opportunity to learn to administer a computerized cognitive assessment) to the undergraduate. To help you evaluate potential applicants, you might request that all undergraduates complete an application form. In addition to requesting basic information, this form could include questions such as the following: Why are you applying for this position? What do you hope to gain from this experience? Describe any previous experience you have had as a research assistant. You may also want to request academic transcripts to ensure potential UMs are in good academic standing. See Table 2 for additional suggestions.

Interviewing prospective UMs to evaluate the goodness of fit for each UM for a given project is vital. Gain a sense of what each applicant is hoping to achieve by serving as a research assistant so you can determine whether you would be able to provide those experiences. Consider each applicant's prior research experiences and assess how many hours they can devote to the lab each week. For applicants whose GPA presents concern, provide applicants the chance to justify grades while also keeping in mind that it may be hard for a UM to devote adequate time to the lab if they are not keeping up with their studies. Finally, it is useful to get a sense of each applicant's level of enthusiasm for the project as well as their general demeanor, as this will affect the atmosphere of lab meetings. Be sure to share any standards of practice that would be important for applicants to know prior to agreeing to join the lab and offer time for questions. Prior to making offers, consider the number of UMs you will need to help with a given project; ultimately, this will depend on the scope of the project and number of hours each UM is able to devote to the lab per week.

### Staying Organized

Upon taking on UMs, you will want to develop, review aloud, and have them sign a lab "contract" or SOP to ensure complete understanding of roles and responsibilities in the lab. Include your contact information and outline steps for notifying you in the case of unexpected leave or illness. Direct students to communicate with you as soon as they are aware of any deviation

**Table 1.** Recommendations for Future Reading

Evans, S. E., Perry, A. R., Kras, A., Gale, E. B., & Campbell, C. (2009). Supervising and mentoring undergraduates: A graduate student perspective. *the Behavior Therapist*, 32, 77-82.

Lee, A., Dennis, C., & Campbell, P. (2007). Nature's guide for mentors. *Nature*, 447, 791-797.

Reimers, T. *Mentoring best practices: A handbook*. Accessible online at: <https://www.albany.edu/academics/mentoring.best.practices.chapter3.shtml>

Website of University of Kansas' Center for Undergraduate Research: <https://ugresearch.ku.edu/mentor/tips-for-effective-mentoring>

Website of Cornell University Graduate School: <https://gradschool.cornell.edu/diversity-inclusion/signature-initiatives/graduate-students-mentoring-undergraduates/>



from protocol and stress the importance of ethical conduct in research. Explain that everyone is responsible for knowing and adhering to the honor code and treating one another without discrimination to maintain a rewarding learning environment. It is beneficial to specify a dress code for UMs who interact with participants and include guidelines for UMs asking for letters of recommendation. The “contract” or SOP should be a living document that is continually revised and revisited at important junctures (e.g., beginning of each semester).

Next, depending on the project at hand, a syllabus that includes assigned guided readings and trainings can help to get UMs up to speed. The purpose of this is twofold. Most obviously, your UMs will need to learn the responsibilities expected of them as part of the lab. It is helpful to have written guides to completing all tasks, though, depending on the task, it will also be critical to provide walk-throughs in person. The other purpose of assigning readings and trainings is to teach UMs why they are being asked to complete a given task. Remember, UMs are not merely there to assist; they are also eager to learn. To introduce your UMs to the science, you will want to share with them a list of seminal readings informing your project. Your UMs will likely become more passionate and put more effort into producing good work if they understand the importance of the work you are doing (e.g., how are you advancing existing literature, how did you select your methods). For example, you might wish to present your dissertation proposal informing the project (stripped of information that might interfere with blinding) to your mentees and encourage questions.

With rare exception, all labs have regular meetings designed to get everyone working on a project on the same page with efficiency. Depending on the study, you will likely spend time reviewing protocols in detail, followed by conducting practice assignments and observations, and providing regular feedback. UMs should also be encouraged to ask questions and work through minor missteps, without fear of reprisal. Additionally, you may hold additional meetings for subcommittees (e.g., coding teams comprised of a subset of lab members). Small team meetings are a wonderful way to accomplish projects that extend beyond the time allotted for lab meetings.

Lab meetings also offer an opportunity to build group cohesion and UMs’ sense of

confidence. You can facilitate your mentees’ ability to develop informal presentation skills by encouraging them to provide updates and share progress aloud. To help increase your UMs’ confidence and passion for research, you may set aside time for journal clubs, in which individual members can select an article of their choosing and present it aloud to the team. Lab meetings are also an excellent setting for professional development discussions. For example, you could develop a mini-lecture on getting into graduate school and use this to begin a discussion with your mentees about their career goals. For those who are interested, you could devote a lab meeting to conducting a round-robin-style editing session for curriculum vitae and personal statements.

It is also important to offer time to meet with UMs individually as needed. UMs may wish to meet individually for a range of personal (e.g., navigating a difficult interpersonal issue, requesting to change their responsibilities) or professional topics (e.g., seeking advice related to graduate school, initiating a secondary data analysis). Because mentees may be hesitant to initiate a meeting, it can be useful to have established office hours during which they are encouraged to visit. Ideally, you should also initiate individual meetings with each UM semi-regularly (e.g., once/semester) to obtain and provide feedback and assist them in working toward their professional goals.

### *Developmental Considerations*

As the UM’s skills evolve, so too do their needs. Accordingly, graduate school mentors can help with academic goal setting as well as professional development (e.g., professionalism, networking, leadership) and preparation for graduate school. With regard to academic goal setting, a graduate student may gradually scaffold expectations for a UM to increase lab-related responsibilities from data entry to managing other UMs doing data entry. Similarly, a UM may mature from conducting literature searches to submitting their own poster abstract for a local student conference. Making adjustments to training plans over time not only serves to meet the needs of budding UMs, but also helps to keep the mentorship process stimulating, as new developments unfold. Further, as individual workloads shift with the flow of the academic calendar (e.g., additional grading during midterms) as well as graduate program milestones (e.g., lengthy assessment reports in the second year of training), mentorship expectations must adapt. Depending on timing, graduate students may need to alter the frequency of mentorship meetings and pause certain study tasks. By looking ahead, graduate students can also budget time and prioritize to ensure minimal disruption to their calendar. This is also useful for considering who to take as a UM; training a younger sophomore student may require additional attention and supervision up front but could result in 2 years of dedicated work in the lab, as opposed to investing in training a second-semester senior who may catch on

**Table 2.** Suggested Questions for Undergraduate Mentee/RA Application

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Class Year, expected graduation date (month/year), major, GPA
Relevant completed coursework (e.g., research methods, clinical psychology)
Current employment, if applicable (approximate hours/week)
Why are you applying for this position?
What do you hope to gain from this experience?
Why are you interested in joining this lab?
What are your plans for after graduation/career goals?
Describe any previous experience you have had as a research assistant.
Describe any experience with [statistical package, study technique such as imaging].
Indicate the number of hours you want to work per week and your available time frames.
Indicate summer availability.

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quickly but fade quickly given end-of-year/graduation commitments.

Graduate students should continuously monitor their own needs and availability. Reevaluating at the beginning and end of semesters, as well as following the completion of milestones, helps assess the goals of the given project/task (e.g., Has the rate of data entry been sufficient and prompt?). Consider availability (Have I been spending my mentorship time efficiently?), anticipated shifts in needs (e.g., Given the next cycle of the project what, if anything, needs to be adjusted?), boundaries (Are my boundaries too rigid? Nonexistent?), and enjoyment and personal growth (Is this professional relationship adding value or undue burden?). Mentors may also wish to solicit feedback from their mentees in advance of self-reflection. Tools for soliciting feedback and promoting self-reflection are available online (e.g., <https://ictr.wisc.edu/mentoring/mentor-evaluation-form-examples/>).

### *Difficult Conversations*

The organic, nuanced nature of mentorship heralds inevitable difficulties. Faux pas ranging from a UM arriving in gym clothes to a participant session, a busy graduate student double-booking a meeting with a UM, to mounting concerns regarding data integrity, all necessitate difficult conversations and trouble-shooting. Several steps and approaches are recommended. Difficult conversations are often easier with an existing foundation of trust and respect. Beginning with a review of expectations (timeliness, dress, goals, etc.) can serve as a helpful reference point for difficult conversations (e.g., “As we discussed in September, the expectation is...”). Addressing and documenting concerns privately in a prompt, direct manner is valuable. After identifying a specific concern, allow the mentee time to respond, and listen to their response and explanation. Rather than providing a solution, suggest potential options and engage in collaborative discussion for troubleshooting to minimize the power imbalance. If the situation allows, disclosing a time when you were in a similar position may be helpful for normalizing the experience. If you are struggling with what to say when, consult your peers or faculty advisor for guidance. All in all, avoid the urge to avoid! For further reading, Johnson and Huwe (2002) offer strategies for addressing dysfunction in the mentorship relationship.

### *Building Trust, Keeping Up Morale, and Mentoring the Whole Individual*

Bidirectional trust is vital in the mentor-mentee relationship. A UM can gradually earn a mentor’s trust in myriad ways, including timeliness (meetings, deadlines) and accuracy (data entry, IRB correspondence). With a mentor’s trust, a mentee can earn increased levels of responsibility (e.g., running participants during evening time slots), which can, in turn, engender additional opportunities for the UM. Increased UM autonomy can benefit a graduate student mentor by allowing them to devote more time to other tasks. Mentors must also demonstrate and promote trustworthiness. This can be verbalized explicitly (e.g., describing ways of preserving confidentiality), displayed through action (e.g., providing timely edits to a UM’s personal statement, holding appointments consistently), and demonstrated through role modeling (e.g., demonstrating ethical practices with regard to data analysis, expressing vulnerability, and normalizing uncertainty). A mentee who trusts their mentor may be more open and willing to ask questions and acknowledge difficulties, weaknesses, or concerns. When the aforementioned principles are neglected, trust can erode—or break entirely—and mentors and mentees should be prepared for what to do next. The mentor and mentee should discuss the incident (or series of infractions) and develop a plan for remediation. The graduate mentor may seek consultation from peers or from their faculty advisor and may wish to include the advisor to mediate concerns. The graduate student may also consult with the University Ombudsperson, if the service is available. In some cases, the decision to end the mentor-mentee relationship may be warranted.

Undergraduates can bring a fresh, optimistic, and curious mindset to research. Although this perspective can be refreshing, energy is not limitless. Given the slow pace of research, combined with the tedium of some tasks UMs endure, keeping up morale is essential for mentees. Beyond overtly displaying enthusiasm, providing positive reinforcement via genuine feedback is vital. For example, congratulatory comments to address milestones related to recruitment (e.g., “25% of the way there!”), effort or time (“6 months of hard work!”), or outcomes (“Less than 10 data discrepancies in a massive dataset—great attention to detail.”) can help to foster continued enthusiasm while conveying that you are

paying attention to the UM’s progress and valuing their efforts. Depending on the level of accomplishment, providing an appropriately sized celebration or recognition can be a powerful motivator. Examples include an email to the entire lab following a students’ conference abstract acceptance or a pizza party for a group of mentees after completing data entry. Scheduled low-stakes events that bring the group together can help to build mentor-mentee relationships and foster a sense of community.

Graduate students may be particularly attuned to the UM’s well-being, including school-life balance and propensity for coping with stress. Do not underestimate the power of dedicating time at the beginning or end of each individual meeting to check in with the UM about how things are going outside of research. Given that college is a stressful time for many students and many psychological disorders onset during this period, the mentor may elect to take a holistic approach and, when necessary, recommend counseling services or additional support. Graduate students should be aware of the tendency for students to self-disclose mental health concerns and prepared to acknowledge the dual-relationship in order to triage appropriately. Indeed, an explicit mention and psychoeducation about avoiding a dual role (e.g., mentor and therapist) is recommended.

Taking into account the biases and prejudices you bring to the mentor/mentee relationship is vital for working effectively with mentees whose personal background differs from your own (with regard to age, race, gender, class, religion, and more). In addition to fostering knowledge and awareness of your own identity, seeking knowledge about your mentee’s identity is requisite for effective mentorship. In order to gradually get to know your mentee, regular explicit discussions are valuable. This includes acknowledging barriers that may result from differences in communication styles. For example, Davidson and Foster-Johnson (2001) highlighted cultural differences in respect and conflict management, noting that “students from traditionally high-power distance cultures (e.g., Latinos/Latinas and Asian Americans) place a relatively high premium on respect for people of greater power and status and may be less willing to participate in discussions or debates that suggest they are questioning the authority of a mentor” (p. 558). With regard to conflict management style, differences “vary according to cultural group membership,” and responses to con-

flict situations by graduate students from various cultures will differ from what might be considered “acceptable” by the school culture (p. 559). Failure to get to know your mentee’s background can stifle conversation, trust, and openness. Of course, the mentor should also be mindful of heterogeneity within groups and avoid making assumptions accordingly. Relatedly, graduate mentors should take time to acknowledge outside events—on campus, in the community, or in the national or global environment. For example, mentors may consider how recent campus dialogue has affected them or check in on international students’ concerns given potential changes in federal policy to student visas.

Identity may also influence a UM’s research aims. For example, a second-generation Chinese-American student may express an interest in pursuing research related to stigma and parenting beliefs in mental health treatment-seeking behaviors among Asian-American college students. In this situation, identity-related conversation might permeate not only the research design and recruitment considerations, but also the process of identifying postbaccalaureate research opportunities and constructing cover letters with varying levels of self disclosure. In this case, a willingness to explore opportunities alongside your UM while having candid conversations about the marked lack of Asian researchers in clinical psychology could be beneficial.

### *Beyond the Department*

Through interdisciplinary career development centers or campus orientation programs, some universities may provide interdisciplinary opportunities for undergraduate mentorship. In this setup, current graduate students serve as advisors who give UMs a firsthand sense of the graduate school experience. Graduate students in psychology may find themselves mentoring undergraduates of different disciplines as they explore the GRE, graduate admission processes, gap years, differences between masters and doctoral programs, and tools for identifying potential research mentors. In addition to ongoing services offered in career development centers, graduate students may also become involved with undergraduate programming, such as orientation events. In this capacity, graduate students can provide briefer mentorship sessions aimed at helping UMs acclimate to the institution as a whole and elements of student life.

Graduate students may also wish to mentor undergraduate students for rea-

sons other than shared academic interests. Many graduate students find meaning in mentoring undergraduates with shared identities as they navigate academia. For example, international graduate students may offer mentorship to international UMs regarding U.S. campus culture or strategies for navigating visa-related questions. First-generation graduate students may offer mentorship to undergraduates whose upbringing bears similarity to their own. For example, first-generation graduate students may help UMs navigate difficult conversations with their parents regarding the utility of a gap year or the preference to pursue additional schooling despite familial financial strain.

Outside of the university, graduate students may enlist in options to provide mentorship through professional organizations. For example, the Association for Psychological Science (APS) launched a student caucus (APSSC), which offers opportunities to network and socialize via events and workshops. Through the APSSC Mentorship Program, graduate students are connected with an undergraduate mentee. Some organizations also offer virtual mentorship programs.

### *Conclusion*

Mentorship is a complex, effortful, yet meaningful relationship offering many potential benefits to graduate students and undergraduates alike. Deciding whether or not to mentor and determining what type of mentor you want to be requires significant consideration, and the act of mentorship demands time and continual care. The considerations, suggestions, and tools outlined throughout this article are designed to serve as a reference for what may be one of the most rewarding aspects of your career in psychology.

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## Introducing the ABCT Clinical Practice Series

Susan W. White, *Series Editor*

Lara Farrell, Matthew Jarrett, Jordana Muroff, and Marisol Perez, *Associate Editors*

*I know what I need to do, but how do I actually do it?* This is the question that clinicians and students often ask when working with clients and trying to deliver evidence-based interventions. Five years ago, ABCT and the Oxford University Press initiated a partnership to help clinicians find answers to this question. What resulted was the ABCT Clinical Practice Series. The series is one of the many ways in which ABCT is fostering implementation and dissemination efforts, to bridge research to practice.

The books in the series are fairly brief and written for the practicing clinician. Although the content is based in current research, they do delve deeply into the science underlying the approach. Each book provides concrete guidance on the application of therapeutic strategies and troubleshooting suggestions for when problems arise. Most clinicians view the books as a complement to the *Treatments that Work (TTW)* series, also published by Oxford, in that they are focused on application. However, the strategies in the Clinical Practice

Series are, for the most part, not protocol- or diagnosis-specific.

We encourage ABCT members to explore the titles in the series and keep an eye out for upcoming titles—with many more to come in 2020!

- Farchione and Barlow (2017) provide a useful and detailed guide on how to apply to the Unified Protocol to specific problems (*Application of the Unified Protocol for Transdiagnostic Treatment for Emotional Disorders*).
- Kearney (2019) synthesizes evidence-based strategies for addressing school refusal in *Helping Families of Youth With School Refusal Behavior: A Practical, Efficient Guide for Mental Health and School-Based Professionals*.
- In their 2019 book, Becker, Farrell, and Waller masterfully present the practical application of exposure techniques with eating disordered patients (*Exposure for Eating Disorders*).
- In his 2019 volume, *Addressing Parental Accommodation When Treating Anxiety in Children*, Eli Lebowitz delivers a practical guide for clinicians who need to address parental accommodation in the context of treating anxious children.
- Whiteside and Ollendick (2020) demonstrate the nuts and bolts of conducting effective exposures with children and adolescents (*Exposure Therapy in the Clinical Treatment of Children and Adolescents*).
- In the upcoming release of *Managing Microaggression: Addressing Everyday Racism in Therapeutic Spaces*, Monnica Williams offers sage clinical wisdom on helping clients who have experienced microaggressions and navigating transgressions during therapy.

ABCT is pleased to announce a heavy discount on the books in the Clinical Practice Series for a limited time. To receive a **30% discount**, order online at [www.oup.com/ABCT](http://www.oup.com/ABCT) and enter **discount code: ABCT30**.

On behalf of the editorial team of the Clinical Practice Series, Oxford University Press, and ABCT, I encourage you to peruse these volumes and adopt them within your own clinical practice and training programs.

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# ABCT 2020

Enhancing the Impact  
of Behavioral and Cognitive Therapies

BETTER ACCESS, BETTER OUTCOMES

## 54th Annual Convention ••• November 19–22, 2020 | Philadelphia, PA

### CALL for PAPERS

Over the past few decades, significant advances have been made in the development of effective behavioral and cognitive interventions for a wide range of problems, and ABCT members have been at the forefront of these developments. Yet, many people have difficulty accessing evidence-based care, and many clients fail to engage in or fully respond to existing treatments. ABCT's 54th Annual Convention will highlight advances in research, clinical practice, and training that feature strategies for strengthening the impact of evidence-based psychological treatments through increasing their reach and improving their effectiveness.

We encourage submissions related to the 2020 convention theme, "**Better Access, Better Outcomes: Enhancing the Impact of Behavioral and Cognitive Therapies.**"

Examples of topics related to the theme include:

- Understanding failures to respond to standard behavioral and cognitive therapies
- Developing new methods for improving outcomes in CBT, and understanding when to use them
- Understanding and targeting mechanisms for better CBT outcomes
- Improving the acceptability of evidence-based interventions to promote engagement among consumers, clinicians, and organizations
- Optimizing CBT cost effectiveness while maintaining and improving quality and outcomes
- Using technology to facilitate the delivery of evidence-based psychological treatments
- Leveraging social media to educate consumers and clinicians about the use of evidence-based treatments and how to access them
- Identifying challenges and opportunities in the implementation of evidence-based practices in large institutions, where clinicians may not be well-versed in CBT
- Addressing system, policy, organizational, and individual-level barriers to implementing evidence-based treatments

Submissions may be in the form of symposia, clinical round tables, panel discussions, and posters. **For information about the convention and how to submit abstracts, visit [www.abct.org](http://www.abct.org)**

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*Deadline  
for submissions:*

**Monday,  
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## ABCT's 2020 **Champions of Evidence-Based Interventions**

*This award recognizes outstanding individuals who have shown exceptional dedication, influence, and social impact through the promotion of evidence-based psychological interventions, and who have thereby advanced the mission of ABCT. Importantly, the goal of the award is to identify individuals who translate the impact of research into community health and well-being outside of the scope of their job requirements. Individuals who perform this function as part of their normal job (clinical or research) will not be considered for the award. Champions may not be members of ABCT at the time of their nomination.*

### ► **Potential Candidates**

Nominees should demonstrate the characteristics of champions, broadly construed, as recognized in the implementation science literature (see Knudsen, Gutner, & Chorpita, 2019, for examples relevant to ABCT: <http://www.abct.org/docs/PastIssue/42n1.pdf>). Champions are those individuals who support, facilitate, diffuse or implement the core assets of evidence-based interventions. Champions' efforts expand the scope and impact of evidence-based interventions beyond the reach of researchers alone. They differentiate themselves from others by their visionary quality, enthusiasm, and willingness to risk their reputation for change. Ideal candidates should have demonstrated the following: (1) How the individual has recognized the potential application and impact of evidence-based psychological interventions; (2) How the individual has gone beyond their formal job requirements within an organization to relentlessly promote innovation; and (3) How they actively lead positive social change.

### ► **Recognition**

**Nominees will be reviewed in March, June, and October** by the ABCT Awards Committee, and those meeting criteria will be forwarded to the ABCT Board of Directors for approval. Recipients will be notified by the ABCT President, and their names and photographs will be posted on the ABCT website, along with the rationale for their recognition. Each year's champions will also be acknowledged at our annual awards ceremony at the ABCT Convention.

### ► **How to Nominate**

Email your nomination to [2020ABCTAwards@abct.org](mailto:2020ABCTAwards@abct.org) (link to nomination form is on the Champions web page). Be sure to include "Champions Nomination" in the subject line. Once a nomination is received, an email will be sent from staff, copying the Awards and Recognition Committee Chair. The nomination will be reviewed by the Awards and Recognition Committee, and if deemed appropriate for our program, will be forwarded to the ABCT Board of Directors for final approval. Once reviewed and approved by the Board of Directors, the nominee will be contacted directly by the President, followed up with an ABCT staff member for a final review of the copy to be posted on the ABCT website.

*Visit our [Champions page](#) to see the full listings and descriptions of ABCT's 2018 and 2019 Champions.*

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## Disseminating Evidence-Based Interventions Globally: On Digital Apothecaries and Massive Open Online Interventions

— **Ricardo F. Muñoz, Ph.D.**, Palo Alto University and UC-San Francisco

- 12:00 p.m. – 1:30 P.M. Eastern  
11:00 A.M. – 12:30 P.M. Central  
10:00 a.m. – 11:30 A.M. Mountain  
9:00 a.m. – 10:30 A.M. Pacific

*Cosponsored by ABCT's Digital CBT Technologies to Provide Care to Difficult-to-Reach and Underserved Populations Think Tank*

Most people in need of behavioral health interventions locally, nationally, and globally do not have access to evidence-based interventions because of fear of stigma, financial or time cost, unavailability of trained providers, or unavailability of providers with appropriate language or cultural expertise. Digital interventions (web-based interventions, mobile apps, wearable sensors, and other technological advances) have been tested in randomized controlled trials and found to be effective for a number of health and mental health conditions. Most of these interventions are based on cognitive-behavioral approaches found effective in face-to-face modalities. This webinar will present an overview of digital interventions that have been found effective for several common health conditions, such as depression, smoking, and eating disorders. The webinar will describe the concept of Digital Apothecaries (online repositories of evidence-based digital interventions) and Massive Open Online Interventions (MOOIs, similar to Massive Open Online Courses, or MOOCs), and the important differences between consumable and non-consumable interventions. We will also present a taxonomy of interventions that could be administered via Digital Apothecaries. The webinar is designed to inspire mental health providers to seriously consider the use of digital tools, such as websites and mobile apps, as part of their practice. In addition, we hope to encourage those with expertise in specific treatments for underserved populations to consider becoming involved with the development, evaluation, and dissemination of digital interventions to help as many people as possible.

**Moderated by Jessica M. Lipschitz, Ph.D.**, Associate Director of the Digital Behavioral Health & Informatics Research Program at Brigham and Women's Hospital

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