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Investigating the Effects of Mindfulness Training on the Well-Being and Clinical Development of Graduate Students

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Investigating the Effects of Mindfulness Training on the Well-Being and Clinical Development of Graduate Students

by

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Abstract

Investigating the Effects of Mindfulness Training on the Well-Being and Clinical Development of Graduate Students

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This report involves a proposed study that intends to examine the effects of mindfulness training for graduate students in the helping profession. The study aims to examine a possible complement to psychology graduate education that may enhance well-being and prevent deleterious consequences of stress, as well as provide students with knowledge and skills to better prepare them for their future roles as practitioners. The study will empirically investigate the efficacy of a mindfulness-based intervention to enhance well-being, benefit the therapist-client relationship through the cultivation of empathy, and promote clinical training progress via enhancing skills rated by clinical supervisors. Additional goals include examination of whether mindfulness training increases mindfulness levels and clarification of the relationship between amount of mindfulness practice and mental health outcomes.

This report provides an integrated analysis of relevant current literature related to these research goals, including an overview of mindfulness, outlining its origins and

defining the construct. After providing this basis for understanding, this report describes mindfulness practice, with particular focus given to Mindfulness Based Stress Reduction (MBSR), which is the intervention to be utilized in the proposed study. Following a brief review of empirical findings that summarize the effects of MBSR found in the literature, mental health providers are discussed as a particularly at-risk population for experiencing stress and its deleterious effects on personal and professional life. The relationship, overlap, and similarities between mindfulness and psychotherapy that have been suggested in the literature are then described, with consideration given to the particular elements they share. Literature which describes a gap in psychology graduate school curricula that neglects self care and clinical skills training, and research that indicates that beginning helping professionals may particularly benefit from self care training is discussed. This report then suggests that mindfulness training may uniquely and efficaciously complement psychology graduate school training, with respect to the enhancement of well-being of therapists in training, their ability to cope with graduate school, and their development of clinical skills. The proposed study is then presented, describing methods and expected results, finishing with a brief discussion.

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Chapter One: Introduction

In recent years, the construct of mindfulness has received a great deal of attention in the field of psychology. Indeed, mindfulness has been proposed to be a common factor across all schools of psychotherapy and treatment modalities, suggested to facilitate an optimal circumstance for psychotherapeutic change (Martin, 1997; Fulton, 2005). Mindfulness is a present moment, purposeful, and nonjudgmental form of directing attention (Sternberg, 2000). Martin (2007) conceptualized mindfulness as a state of psychological freedom that occurs when attention remains quiet and limber, without attachment to any particular point of view. Martin's proposal that mindfulness is a core psychotherapeutic process underscores its role in "freeing up" attention, which is a critical skill for therapists to cultivate in order to engage clients.

During the past few decades, traditional mindfulness meditation practices have been adapted for secular use and incorporated into several interventions that are now widely available in medical and mental health settings (Baer, Smith, Hopkins, Krietememeyer, & Toney, 2006). Although differing in various ways (e.g., necessity of formal meditation practice, individual or group treatment, etc.), mindfulness-based interventions are unified in their view of mindfulness as a set of skills that can be learned and practiced in order to reduce psychological symptoms and increase health and well-being. Research in the burgeoning field of mindfulness has concentrated almost exclusively on patient intervention (Grepmair, Mitterlehner, Rother, & Nickel, 2006; Nickel, Kettler, Muehlbacher, Lahmann, Tritt, Fartacek, et al., 2005; Shapiro, Bootzin, Figueredo, Lopez, & Schwartz, 2003). Findings from clinical studies evaluating the efficacy of mindfulness-based interventions have produced promising data suggesting they are effective for treatment of both psychological and physical symptoms (Baer,

2003). Empirical investigations have consistently found Mindfulness-Based Stress Reduction (MBSR) in particular to be effective in reducing stress.

The stress inherent in graduate training in psychology, coupled with the tendency for graduate programs to advise self-care yet not integrate relevant training into curricula, suggests an unfilled need in current training for self-care. Self-care and resultant well-being of the graduate student could also enhance the therapeutic efficacy of the graduate student as therapist. Grepmair and colleagues (2006) noted that psychotherapeutic research has long neglected the "psychotherapist as an instrument" in favor of psychotherapeutic techniques, despite findings indicating that specific methods account for less variance than common factors, implying that more importance should be placed on the "psychotherapist as an instrument" approach. It makes theoretical sense that a program that promotes well-being and assists stress-management would be useful for psychology graduate students to manage well-being not only for their own benefit but for the increased efficacy of their psychotherapeutic techniques, and should be considered for integration into the curriculum.

In support of this proposition, Fulton (2005) identified therapists (and the therapeutic alliance) as particularly likely to benefit from mindfulness training. He suggested that mindfulness practice is an untapped resource for training therapists of any theoretical persuasion, especially given that mindfulness offers therapists a means to influence those factors that account most for success in treatment (e.g., empathy, paying attention, affect tolerance, and practicing acceptance).

Only four studies to date have attempted to empirically investigate the effects of a mindfulness-based intervention for health care providers (Shapiro, Brown, & Biegel, 2007; Shapiro, Carlson, Astin, & Freedman, 2006; Grepmair et al., 2006; Shapiro, Schwartz, & Bonnel, 1998). Although there was a clear trend in the studies indicating

that the promotion of mindfulness in health care professionals positively influenced their well-being, the methodological limitations hindered the clarity and validity of their results. More than simple empirical replication is necessary to demonstrate the association between mindfulness training and its benefits for health care providers. Absence of randomization and controlled investigation in these studies precludes confidence in their findings, and the integrity of their results is further compromised because there is no data assessing the continuation of mindfulness benefits.

Despite theoretical suggestion of the benefits that mindfulness training may have for therapists in training, there is currently no definitive data that supports this claim. Notwithstanding the lack of definitive data, given the empirically validated efficacy of mindfulness to promote well-being and reduce stress across numerous other populations, it seems reasonable to believe similar results will be found with therapists in training. This, plus the likelihood that mindfulness could further enhance students' clinical development by enhancing therapeutic skills, suggest value in utilizing mindfulness training for psychology graduate students and supports further investigation and research in this population.

This study will prospectively examine whether a mindfulness-based stress reduction program (MBSR) for therapists in training will result in better mental health, enhanced empathy, and other therapeutic skills. Findings in favor of these hypotheses would suggest that graduate training programs should seriously consider including mindfulness training as part of the curriculum.

Chapter Two: Literature Review

The proposed study intends to examine the effects of mindfulness training for graduate students in the helping profession. Specifically, benefits to well-being and clinical skill development will be assessed. The proposed study aims to examine a possible complement to psychology graduate education that may enhance well-being and prevent deleterious consequences of stress, as well as provide students with knowledge and skills to better prepare them for their current and future roles as practitioners. Specifically, this study will empirically investigate the efficacy of a mindfulness-based intervention to enhance well-being, benefit the therapist-client relationship through the cultivation of empathy, and promote clinical training progress via enhancing skills rated by clinical supervisors. Additional goals include examination of whether mindfulness training increases mindfulness levels and clarification of the relationship between amount of mindfulness practice and mental health outcomes.

This paper begins by providing an integrated analysis of relevant current literature related to these research goals. First, an overview of mindfulness is presented, outlining its origins and defining the construct. After providing this basis for understanding the construct, mindfulness practice is described, with particular focus given to Mindfulness Based Stress Reduction (MBSR), which is the intervention to be utilized in the proposed study. Next, a brief review of empirical findings is presented, summarizing the effects of MBSR found in the literature.

Following the review and analysis of mindfulness research, mental health providers are discussed as a particularly at-risk population for experiencing stress and its deleterious effects on personal and professional life. The relationship, overlap, and similarities between mindfulness and psychotherapy that have been suggested in the

literature are then described, and consideration given to the particular elements they share. Literature is discussed which describes a gap in psychology graduate school curricula, such that self care and clinical skills training are neglected despite their importance, and research is described which indicates that beginning helping professionals may particularly benefit from self care training. This paper then suggests that mindfulness training may uniquely and efficaciously complement graduate school training in psychology, specifically with respect to both the enhancement of well-being of therapists in training and their ability to cope with graduate school and with respect to the promotion of clinical skills and development. The proposed study is then presented, describing methods and expected results, finishing with a brief discussion.

INTRODUCTION TO MINDFULNESS

Mindfulness is a concept that originated in Buddhism (Thich, 1999). It was introduced into psychology literature by Langer (1989) and was generalized to mental and physical health settings and popularized by Kabat-Zinn (1993). Mindfulness continues to be integrated into Western health care in the contexts of psychotherapy and stress management, and mindfulness meditation is evolving as a systematic clinical intervention.

Origins of Mindfulness

Mindfulness has its roots in Eastern contemplative traditions and involves a form of meditation originally derived from the Theravada tradition of Buddhism (Hanh, 1976). In fact, mindfulness has been called the "heart" of the Buddha's teachings and of Buddhist meditation more generally (Kabat-Zinn, 2003; Thera, 1962). Despite its cultural/religious origin, Kabat-Zinn (2003) determined mindfulness to be culturally universal, such that it is neither a belief nor an ideology. Instead, he argued for a view of

mindfulness as a coherent, phenomenological understanding of the mind. Nonetheless, he suggested that mindfulness and the traditions from which it originated should be treated respectfully, honoring the integrity of a different but complementary epistemology to scientific psychology.

Defining Mindfulness

Mindfulness is a particular way of attending - on purpose, in the present moment, and non-judgmentally (Kabat-Zinn, 1994). Mindfulness involves attention to and awareness of whatever the mind happens to wander to, and accepting each object without making judgments about it or elaborating on its implications, additional meanings, or need for action (Kabat-Zinn, 1990; Segal, Williams, & Teasdale, 2002). Mindfulness is a state of consciousness that involves attending to moment-to-moment experience (Brown & Ryan, 2003). Baer (2003) described mindfulness as an awareness that occurs without judgment, a way of paying attention in which one observes continually streaming internal and external stimuli constantly, without any expectation of goal or outcome.

Mindfulness is the process of regulating attention in order to bring a quality of nonelaborative awareness to current experience and a quality of relating to one's experience within an orientation of curiosity, experiential openness, and acceptance (Bishop, Lau, Shapiro, Carlson, Segal, & Carmody, 2004). It includes the process of gaining insight into the nature of one's mind and adopting a decentered perspective on thoughts and feelings so that they can be experienced in terms of their subjectivity (as opposed to their necessary validity) and transient nature (contrasted with permanence; Shapiro & Shapiro, 1990).

Quality of Attention

Mindfulness is a conscious moment to moment awareness, cultivated by systematically paying attention on purpose (Kabat-Zinn, 1990). The key to mindfulness, however, is not simply attention. More importantly it is *how* or in what manner one attends. Mindfulness involves an attention that is not attached to any particular view - freedom from the views of others (i.e., socialization, etc.) and an emancipation from one's own habitual view of self and others (Martin, 1997). This attention embodies compassion, impartiality, and acceptance of self and others. Utilizing these qualities, one can cultivate present moment attention in an objective (non-judging), compassionate, and gentle way, open to whatever enters one's field of awareness (Shapiro & Schwartz, 2000).

MINDFULNESS PRACTICE

In meditation and in daily life, mindfulness involves bringing awareness back to the moment – maintaining focus on the here and now, using the breath as an anchor. Mindfulness practice is not about getting anywhere else or fixing anything (Kabat-Zinn, 2004). Rather, mindfulness is the full experience of moment-to-moment events in the absence of distortions by habitual thoughts and emotions (Shapiro et al., 2006).

Mindfulness meditation is a formal discipline that attempts to create greater awareness and consequently greater insight in the practitioner. It goes beyond a closed concentrative one-pointed meditation by introducing openness to all experiences. Mindfulness meditation trains the individual to regulate attention in order to direct and maintain awareness on particular stimuli (e.g., the breath, bodily sensations, perceptions – sights and sounds, cognitions, and emotions), without ignoring other aspects of internal and external stimuli and without judgment (Kabat-Zinn, 1982, 1990; Ramel, Goldin, Carmona, & McQuaid, 2004).

Mindfulness is taught through the practice of meditation exercises, which may be practiced in a variety of postures, such as while sitting or lying down in a relaxed posture, and even while engaged in such routine activities as dishwashing, walking, and eating. During these exercises, participants are instructed to notice the thoughts and feelings that arise without becoming absorbed in their content (Kabat-Zinn, 1982).

Mindfulness skills include focusing attention on the experiences occurring in the present moment, such as sensations, perceptions, cognitions, and emotional states, with a nonjudgmental attitude of openness, acceptance, and curiosity, and without attempting to avoid or escape them, even if they are unwanted or unpleasant (Baer, 2005). For example, a mindful approach to thoughts might include noticing the presence of a particular thought (such as, "I hate driving on I-35") and observing it as a thought, rather than as a reflection of reality or truth that must guide one's actions. Handled in this manner, one is more likely to appreciate the time off of work in lieu of experiencing road rage – clearly a beneficial change. When this stance toward thoughts is practiced consistently, thoughts become less believable and less likely to trigger maladaptive behavior. Attempts to suppress unwanted or feared thoughts (which paradoxically tend to increase their frequency) become less frequent, and willingness to allow thoughts to come and go, regardless of their content, is increased (Baer, 2005). Kabat-Zinn (2003) describes a mindful stance as responding to situations *reflectively* as opposed to reflexively.

In the context of mindfulness meditation, practice is actual engagement in the discipline and is not limited to particular techniques. Kabat-Zinn emphasizes that mindfulness practice requires formal and informal engagement on an ongoing, preferably daily, basis. In this way, mindfulness is a state as opposed to a trait. Mindfulness is a skill developed with practice that is dependent upon regulation of attention while cultivating an open orientation to experience (Bishop et al., 2004).

Importantly, there is an assumption within this orientation which accepts that during practice, intrusions will occur (emotions, thought distortions, anxiety, etc.). It is the way one deals with such intrusions that distinguishes mindfulness from other types of meditation or therapy - rather than pushing them away one is to simply take notice of them. A mindful stance involves accepting their presence, withholding chastising the self, and allowing them to float away.

To summarize, mindfulness may be practiced through various methods, ranging from formal mediation to more informal mindfulness exercises interwoven through daily life activities. Mindfulness practitioners learn to observe the thoughts, emotions, and sensations that arise without evaluating their truth, importance, or value, and without trying to escape, avoid, or change them. While practicing mindfulness, one cultivates nonjudgmental present moment awareness. With continued practice, a mindful stance generalizes and one is more readily able to reflect (instead of react) in future situations.

Viewed this way, it is evident how mindfulness practice may enhance the ability of therapists in training to better cope with the many demands of graduate school. Mindfulness training would clearly be useful in facilitating a therapist's ability to optimally attend, listen, respond, and fully "be" with a client. The next section describes the most popular and common method of mindfulness training, the intervention used in the proposed study.

Introduction to Mindfulness Based Stress Reduction Intervention

Mindfulness based stress reduction (MBSR) is among the earliest mindfulness-based interventions to be used in Western settings and is the most frequently cited in psychological literature (Baer, 2003). In the past 27 years more than 13,000 patients have completed the MBSR program at the Stress Reduction Clinic founded at the University of

Massachusetts, (http://www.umassmed.edu/cfm/history.aspx). MBSR was originally developed as a training vehicle for the relief of suffering, designed to serve patients not responding well to traditional medical treatments (Kabat-Zinn, 2003). The literature provides increasing support for the efficacy of MBSR to treat a variety of problems (Baer, 2005). Notwithstanding, MBSR is not intended to replace traditional medical therapy but to work adjunctly with it (Shapiro et al., 1998).

MBSR is based on the premise that enhancing the capacity to be mindful—that is, to attend to present moment experience in a receptive manner—will, over time, reduce suffering. For example, being mindful will reduce identification with self-focused thoughts and emotions that can lead to poorer mental health (Kabat-Zinn, 1990; Brown, Ryan, & Creswell, in press).

Mindfulness is explicitly emphasized in, as well as woven throughout, all components and exercises of MBSR. Participants receive training in numerous meditative practices and mindfulness skills. The growing literature provides increasing support for the efficacy of MBSR to treat a variety of problems (Baer, 2005).

Brief Description of MBSR Intervention

MBSR is a manualized intervention program, consisting of 8 weekly group session (1.5 hours), one full day retreat, and homework practice (45 minutes, 6 days each week). Each of the group sessions involves 25 minutes of meditation practice (e.g., sitting meditation with a focus on awareness of sensory objects, breathing, body sensations, or thoughts), 25 minutes of mindfulness exercises (e.g., mindful movement such as yoga), and a 10 minute discussion.

Given its popularity, adaptability, and versatility, and because MBSR is currently the only manualized mindfulness-based intervention, it appears to be the best candidate

for mindfulness training in general, and certainly for use in research. MBSR was designed for application to persons facing stress, and the program can be flexibly adapted to specific populations. Empirical investigation using other mindfulness interventions would decrease the integrity and validity of findings, given the non-manualized nature of protocol/procedure and training components. Further, the ability to accurately and confidently compare results across studies or with findings in the literature would certainly be reduced.

Empirical Findings

This section outlines empirical evidence of some of the beneficial effects achieved by MBSR training. Because in the proposed study, therapists in training undergo MBSR training, these results are presented to support the expectations forming the foundation of study, that such benefits will also be outcomes for graduate students in psychology.

Results from Baer's (2003) recent meta-analysis indicated that on average, mindfulness-based interventions yielded at least medium-sized effects, with some falling in the large range. Generally, research has suggested that (a) with training, most often in the form of meditation, one's level of mindfulness can be increased, and (b) this heightened awareness of internal and external events is beneficial. Baer concluded that despite methodological flaws, current literature suggests mindfulness-based practices, MBSR in particular, likely meet criteria for a 'probably efficacious' APA designation.

The empirical literature has documented that mindfulness-based interventions have effectively reduced stress, anxiety, and depression in both clinical and nonclinical populations (Miller, Fletcher, & Kabat-Zinn, 1995; Shapiro et al., 1998). Mindfulness training has been linked to benefits for individuals suffering from a variety of disorders,

such as fibromyalgia, cancer, AIDS, heart disease, gastrointestinal disorders, hypertension, sleep disorders, panic disorders, binge eating, mood disturbance, and personality disorders (see Baer, 2003; Grossman, Neimann, Schmidt, & Walach, 2004; Salmon, Sephton, Weissbecker, Hoover, Ulmer, & Studts, 2004 for reviews).

To date, a mindfulness-based intervention is the sole treatment to successfully reduce major depression relapses (Teasdale, Segal, Williams, Ridgeway, & Soulsby, 2000; Teasdale, Segal, & Williams, 1995). Chronic pain patients are another population for which mindfulness interventions have been uniquely effective. These patients demonstrated improved pain ratings, medical symptoms, and psychological symptoms, and the benefits were maintained over time (Kabat-Zinn, 1982; Kabat-Zinn, Lipworth, & Burney, 1985).

Kabat-Zinn (2003) highlighted findings from three particularly innovative studies demonstrating beneficial effects associated with mindfulness training: (a) Significant skin clearing in psoriasis patients who were given audiotapes of guided mindfulness meditation during UV treatments (Kabat-Zinn, Wheeler, Light, & Cropley, 1998); (b) Beneficial changes in brain function, immune function, and emotional processing in healthy volunteers participating in a work-site MBSR training program (Davidson, Kabat-Zinn, Schumacher, Rosenkranz, Muller, Santorelli, Urbanowski, Harrington, Bonus, & Sheridan, 2003); and (c) Decreased rates of PSA increase, which is associated with tumor progression in patients with biochemically recurrent prostate cancer, when typical dietary intervention was combined with MBSR (Saxe, Herbert, Carmody, Kabat-Zinn, Rosenzweig, Jarzobski, Reed, & Blute, 2001).

To summarize, empirical findings support the efficacy of mindfulness-based interventions to benefit numerous populations struggling with a variety of disorders. MBSR is specifically intended to reduce stress and a growing body of research indicates

that this stress reduction program, which emphasizes the cultivation of mindfulness, effectively enhances psychological well-being, mental health, and physical health. The following section discusses mental health professionals as a population particularly at risk for experiencing stress and its deleterious effects.

MENTAL HEALTH PRACTITIONERS AND STRESS

Research has documented that a significant proportion of mental health professionals experience psychological impairment at some point in their careers (Coster & Schwebel, 1997; Guy, Poelstra, & Clark, 1989). It is intuitive that caring for emotionally stressed or distressed individuals is often itself stressful. Research indicates that many therapists experience "compassion fatigue" (Figley, 2002; Weiss, 2004) due to the emotional labor involved in therapeutic work (Shapiro et al., 2007; Mann, 2004).

A plethora of negative consequences due to stress have been documented in mental health providers due to stress. These outcomes include increased depression, emotional exhaustion, and anxiety (Radeke & Mahoney, 2000; Tyssen, Vaglum, Gronvold, & Ekeberg, 2001), psychosocial isolation (Penzer, 1984), decreased job satisfaction (Blegen, 1993), reduced self-esteem (Butler & Constantine, 2005), disrupted personal relationships (Myers, 1994), and loneliness (Lushington & Luscri, 2001). In addition to affecting psychological and interpersonal variables, stress may lead to decreased professional effectiveness. For example, stress appears to negatively impact attention and concentration (Skosnik, Chatterton, & Swisher, 2000), impinge on decision-making skills (Klein, 1996; Lehner, Seyed-Solorforough, O'Connor, Sak, & Mullin, 1997), and reduce practitioners' ability to establish strong relationships with patients (Enochs & Etzbach, 2004; Renjilian, Baum, & Landry, 1998). Research has also documented the relationship between stress and burnout for mental health professionals

such that stress increases the likelihood of occupational burnout (Rosenberg & Pace, 2006).

In summary, mental health providers are a particularly at risk population to experience stress and its deleterious personal and professional outcomes. Given their role in helping others, it is not surprising that they experience stress. At the same time, given their role in helping others, stress is particularly problematic because it affects the quality of the help given to others. The findings presented underscore the importance of self-care for health care providers, as they must help themselves before they will be able to effectively help others.

Mindfulness Training for Therapists

Given MBSR's efficacy in reducing stress and enhancing well-being across so many populations and disorders, it is reasonable to expect similar findings to occur with mental health providers. In particular, the deleterious effects of stress on mental health providers described previously (e.g., depression, anxiety, attention and concentration debilitation, and reduction in providers' ability to establish strong relationships with patients) might be assisted and prevented with MBSR training.

In recent years, numerous authors have published work theorizing about the plausible relationship between mindfulness and psychotherapy. Indeed, mindfulness training and clinical training appear to share many core elements. Intuitively correct, these ideas need empirical support. Relevant empirical investigation has begun only recently and few studies have yet been undertaken. These few have demonstrated MBSR to be effective in reducing stress and enhancing well-being for health care professionals and trainees (Cohen-Katz, Wiley, Capuano, Baker, Kimmel, & Shapiro, 2005; Rosenzweig, Reibel, & Greeson, 2003; Shapiro et al., 2005; Shapiro et al., 1998). In the

next sections, relationships between mindfulness and psychotherapy will be discussed, establishing the basis for an expected result in the proposed study: mindfulness training enhances clinical training, suggesting serious consideration for integration into psychology graduate school curriculum.

Relationship between Mindfulness and Psychotherapy

Most empirical research and clinical implementation has focused on mindfulness therapy for clients, overlooking the plausible role of mindfulness training for therapists. Fulton (2005) described numerous ways in which mindfulness may be integrated with psychotherapy. For example, methods range from the implicit influence of the meditating therapist, theory-guided, mindfulness-informed psychotherapy, and to the explicit teaching of mindfulness practice to clients. The first method is the primary focus of this paper, which proposes a study to examine the benefits of mindfulness training for therapists.

Martin (1997) conceptualized mindfulness to be a common factor underlying all orientations within psychotherapy, suggesting that, "In a sense, mindfulness is right under our feet when we and our patients are doing our best work" (p.310). This statement underscores how the process of mindfulness is implicitly involved (in fact, a critical goal) within the counseling session. Mindfulness facilitates the therapist's ability to engage a psychological freedom necessary to optimally interact with the client (e.g., to simultaneously examine her or his own situation or role, conceive revisions, and implement them). Martin (1997) theoretically demonstrated this emancipation to be a cornerstone of successful therapy for many theoretical orientations (i.e., psychodynamic, cognitive-behavioral, etc.).

Similarly, Ingram (2005) described the likelihood that therapists already incorporate many of the principles in positive psychology into their treatments. Shapiro and colleagues (1998) discussed the role of mindfulness in the therapist's maintenance of well-being and mental health, which benefits the therapeutic process by allowing them to be more effective at helping clients do the same. In addition to this powerful element, it seems likely that mindfulness may play a more direct role in benefiting the therapeutic process. Specifically, mindfulness training may likely and largely benefit clinical training and the professional career as a therapist at large.

Further Investigation into Mindfulness and Psychotherapy

Although an invisible component of therapy to the client, the mindful therapist may be quite influential in therapy process and outcome. Mindfulness meditation provides training that directly augments the work of psychotherapy. In fact, mindfulness training and clinical training share many core elements. For example, clinical and mindfulness training both emphasize the importance of physical presence (e.g., posture body awareness) and internal experience (e.g., mental noting of thoughts and feelings). The practice of meditation can facilitate countertransference awareness for the clinician and, over time, it strengthens aspects of ego functioning. Indeed, the practice of mindfulness meditation enhances ability to recognize and sit with feelings, an awareness of one's internal states, and a capacity for unconditional presence (Kurash & Schaul, 2006).

All psychotherapists need to practice a certain degree of vigilance during therapy (Sternberg, 2000). Grepmair and colleagues (2006) underscored how complex this task is. To be vigilant, and to maintain vigilance throughout a clinical session, the clinician must simultaneously perceive the most subtle, momentary, verbal and nonverbal clues,

continually self-perceive, and manage counter transference reactions (Sternberg, 2000). To be sure, mindfulness practice enhances one's ability to be vigilant in this way. In addition, mindfulness may help to avert premature termination from therapy by enhancing attention to client indications of dissatisfaction (Richmond, 1992).

Empathy is a crucial component that all clinicians must continually cultivate. Defined by Rogers (1961), empathy is (1) the capacity to understand, be sensitive to, and feel what another is feeling, and (2) the ability to communicate this sensitivity to the person. Although unanimously agreed to be critical for successful therapy and encouraged to be achieved and increased during graduate training, there is no training in how to increase empathy. Mindfulness training may be the answer, as it is likely to enhance one's listening skills, awareness of and sensitivity to others' needs, and a compassion for their experiences. Shapiro and colleagues (1998, 2007) demonstrated preliminary support that this relationship exists.

Learning to be present with the client and to listen without judgment are central aspects of therapy training (Kurash & Schaul, 2006) and are also outcomes of mindfulness training. Fulton (2005) highlighted the core elements of clinical training that are outcomes of mindfulness training: enhanced ability to pay and sustain attention, affect tolerance, acceptance, empathy, and compassion. Thus, it is theoretically evident that mindfulness training would complement traditional clinical training. It seems plausible that inclusion of mindfulness training would not only enhance graduate student's mental health, but additionally facilitate and enhance clinical skills training.

To summarize, existing research with health care providers suggests that beginning mental health professionals may find benefit from the self-care skills training offered in the MBSR program. Further, there is a large degree of overlap between the core elements of good psychotherapy and practicing mindfulness. Many core elements of

therapist training are likewise the critical elements in mindfulness practice, and are taught and increased via mindfulness training. The following sections describe why graduate students in counseling and clinical psychology may particularly benefit from mindfulness training – in terms of mental health and also professional/clinical development.

GRADUATE TRAINING IN PSYCHOLOGY

There is evidence that younger and newer helping professionals are particularly susceptible to occupational stress (Skovholt & Ronnestad, 2003; Vander-Kolk, 1982; Vredenburgh et al., 1999). Thus, programs designed to teach self-care skills to helping professional trainees (i.e., students) may represent an important form of "preventive treatment" for individuals at risk for later psychological problems (Shapiro et al., 2007; Coster & Schwebel, 1997).

Stress in Psychology Graduate School

Graduate students undergo a large amount of stress during academic training. The process of defining and taking up one's professional role involves highly complex internal and external adjustments (Newton, 1971). Students strive to balance personal and professional aspects of their lives in order to survive graduate school. Inability to cope successfully with the enormous stress of graduate education in health care fields may lead to a cascade of consequences at both a personal and professional level (Shapiro et al., 1998).

At a personal level, stress interferes with students' intra- and interpersonal lives and their emotional and physical health. As practitioners, their effectiveness may be diminished by reduced work output, their inability to balance demands of work and family, and a diminished quality of relationships with clients, co-workers, and the like. In addition, stress may inhibit professional effectiveness by decreasing humanistic

qualities that are fundamental to optimal patient care (Shapiro et al., 1998). For example, empathy was introduced previously as a critical clinical skill. Shapiro and colleagues (2005) noted that unfortunately and ironically, graduate school may decrease an individual's ability to cultivate empathy rather than enhance it. At minimum, effectively coping with the stress inherent in graduate school is a ubiquitous obstacle.

There is no question of the importance of training in theories and therapy skills and methods for psychology graduate students, but given the greater importance of the therapeutic relationship for treatment outcomes, a challenge for the field is to find a way to help cultivate the qualities shared by excellent therapists (Fulton, 2005). Such qualities may be harder to learn than basic skills and knowledge (Lazarus, 1993; Norcross & Beutler, 1997). Given the vast amount of stress students experience during graduate school, and the coping resources necessary for the professional life to follow, an emphasis on self care that includes means (e.g., education) for students to obtain such skills appears to fill a critical gap. Serious consideration and prioritization of research on this topic is clearly necessary. Identifying cost-effective and time-effective methods to increase self care that could become part of the curriculum would greatly benefit therapists in training.

Psychology Graduate School Curricula

Typically, psychology graduate curricula are comprised of foundational and theoretical courses, treatment methods, and practical experience. Meta-analyses of outcome research indicate that superiority of one therapeutic method or theory over another is rather weak and that most forms of treatment work as well as most other forms of treatment (Luborsky et al., 2002; Wampold, 1997; Miller et al., 1997). In fact, research suggests that 30% of variance in treatment outcome appears to be attributable to

"common factors" present in most successful treatment relationships. Indeed, the most potent predictors of a positive treatment outcome are related to qualities of the therapist and therapeutic relationship (Fulton, 2005).

Despite decades of research demonstrating the importance of the therapeutic alliance for effective treatment, relatively greater than type of therapy, relevant training is absent from graduate curricula. Rather, courses consist of theory and various methods of specific treatments. Fulton (2005) highlighted this paradox, that graduate psychology programs emphasize models of treatment, protocol-driven therapy, and techniques over the less tangible qualities of therapist.

Numerous explanations for this void abound. For example, curricula are already quite full, and professors and students are already too burdened. Further, the difficulty and murkiness concerning teaching these less tangible qualities hinder their inclusion.

Despite this albeit understandable neglect, educating students about how to be better therapists should be a priority. Learning self-care tools during graduate school will enhance coping and increase success while in graduate school and as a future professional. In addition to the self-care component, the plausible benefits for the professional lives of therapists-in-training – the positive effects of mindfulness training for the therapeutic alliance and clinical development – would surely be a great addition to the curriculum.

MINDFULNESS TRAINING FOR THERAPISTS IN TRAINING

Self-care is an aspect of training that is often discussed but infrequently highlighted. Despite the American Psychological Association's promotion of wellness for clients via mind-body interventions, and particularly mindfulness-based therapy, there lacks emphasis on such training during graduate school. The utility of mindfulness for

psychology graduate students as self-care training is maximized when considering the additional/secondary effects mindfulness training is suggested to cultivate regarding clinical development efficacy. The proposed study aims to provide evidence supporting the efficacy of mindfulness training to enhance well being, and additionally to benefit clinical development, for therapists in training. Ultimately, it is anticipated that a mindfulness-based intervention will assist students in integrating a healthier and more balanced approach to both their own lives and their clients' lives.

Kurash and Schaul (2006) described feedback from interns who had been trained in mindfulness meditation as part of internship curriculum. The feedback has been uniformly positive during the six years since the program's inception. Comments included the usefulness of mindfulness, silence, and self-reflection for conducting psychotherapy and for tolerating the stresses on internship. To date, few empirical investigations have empirically examined whether this theoretically reasonable relationship between mindfulness and psychotherapy - specifically, that training in the former will enhance training in the latter – is valid. The next section reviews the only five known studies in the literature whose findings address this hypothesis.

Prior Research Examining Impact of Mindfulness for Health Care Providers

Findings from a study carried out by Shapiro and colleagues with medical and premedical students indicated significant benefits in the MBSR intervention group as compared with controls *(*Shapiro et al., 1998). Students trained in MBSR reported decreases in state and trait anxiety, reduced overall psychological distress including depression, increased empathy, and enhanced spiritual experiences. Grepmair and colleagues (2006) briefly reported results from a study in which psychology graduate students reported enhanced mental health and therapeutic outcomes following meditation

training (Grepmair et al., 2006). Unfortunately this research was published only as a letter to the editor, with many aspects of rationale, methods, and results unreported and unknown. Although the authors claimed (in the title and throughout the single page letter) to involve a mindfulness intervention, the brief description of the Zen meditation instruction utilized as intervention was neither manualized nor similar to mindfulness training in the form of MBSR.

Shapiro and colleagues (2005) investigated the effects of MBSR intervention for health care professionals actively engaged in clinical practice (Shapiro et al., 2005). Two out of five mental health measures demonstrated statistically significant differences between experimental and control group participants. Given the sample size of 10, their analyses lacked sufficient power. Indeed, validity of the entire study is questionable given the inappropriate use of statistics with such a small sample. Other serious limitations of this study include pre-existing differences between experimental and control groups and large attrition in the MBSR group (44% drop-out rate, contrasted with the typically less than 20% drop out rate for an MBSR intervention; Kabat-Zinn, 1982; Kabat-Zinn et al., 1985; Shapiro et al., 1998).

Stanley and colleagues claimed to have examined the effects of therapist mindfulness on therapy outcomes (Stanley, Reitzel, Wingate, Cukrowicz, Lima, & Joiner Jr., 2006). The list of errors and limitations present in this study is so vast that credibility and validity of all study conclusions appear to be completely ruled out. A brief description follows.

Described as a treatment study, the cross-sectional design of the Stanley study did not include any sort of intervention or presence of a reference group. Rather, existing levels of mindfulness were correlated with treatment outcomes. Yet, the authors interpreted research findings to suggest that enhanced mindfulness interferes with

treatment outcome because it may distract the clinician from the greater agenda of adherence to manual-based, empirically supported therapies. The sample was small, and there was no demographic information or critical descriptive information for statistics reported. Only an average mindfulness score for the sample was given, neglecting report of even the range of scores. Without information reporting magnitude and dispersion of scores, factors that may affect correlation and regression results (e.g., restriction of range issues and floor/ceiling effects) remain plausible and the audience is unable to investigate further. Lastly, the authors claimed causal conclusions despite the non-experimental nature of their design. These causal inferences are clearly unfounded and preclude confidence in the integrity of the entire investigation.

Most recently, Shapiro and colleagues published findings from a study documenting mental health benefits for therapists in training (Shapiro et al., 2007). Although providing a foundation for future work, the non-randomized and cohort-controlled design, in addition to other limitations, underscores the preliminary nature of the study.

Despite numerous pleas in the literature for researchers to assess individual's mindfulness levels across mindfulness training and to clarify the process whereby MBSR achieves its beneficial effects, only two of the five studies reported here did so. Both used only one mindfulness measure, a scale that is somewhat outdated and assesses only one aspect of mindfulness. Only two of the studies utilized a control group, only one using a randomized design.

The validity of all five studies is limited by plausible experimenter effects, social desirability, and sample bias. All samples were small and self-selected, and all members were recruited from the same site. Particularly problematic limitations of these studies include neglect of a follow-up assessment and reliance on self-report measures. While

adding to the literature claiming that MBSR is beneficial, it is unknown whether these effects were maintained even one week later. Regarding assessment, reliance on self-report psychological questionnaires limits generalizability, given that such self-reports are intrinsically limited and open to response bias.

To summarize, the few relevant studies that exist are plagued by serious flaws in design, such that there is yet very little known about the relationship between mindfulness and clinical training. Indeed, the mindfulness literature at large suffers from poor methodology. Despite promising findings regarding the effects of MBSR, numerous authors have emphasized that few studies have been methodologically sound (e.g., limitations such as small sample size, inadequate control groups, neglect of adherence check inclusion, and dependence on self-report methods of assessment; Baer, 2003; Kabat-Zinn, 1982, Kabat-Zinn et al., 1985). They contend that in order for the field of mindfulness research to continue to expand and to allow for stronger conclusions on the effects of mindfulness practice, research is needed to test the effectiveness of mindfulness-based interventions using well-controlled, experimental designs.

Conclusion and Rationale for Proposed Research Study

In response to these gaps in the mindfulness literature, the proposed study aims to extend previous research by using a matched, wait-list control design with an adequate sample size. In addition, the study incorporates daily journals in order to examine students' adherence to mindfulness practice and its relationship to outcomes. The study will be the first to assess long-term effects of mindfulness training for therapists (and one of the few in the current mindfulness literature in general) by measuring maintenance of effects six months after completion of the intervention. In order to inform the unknown process whereby MBSR leads to benefits, two mindfulness scales are included in the

design, to be completed across three time points for this purpose. A second unique feature of the proposed study is the assessment of the value of MBSR training for a novel population (psychology graduate students) that is particularly likely to benefit from such training for a number of reasons (i.e., benefits of mindfulness for stress management and self-care, enhancement of clinical skills and working alliance, etc.). Finally, in addition to assessing the progress of therapists via self-report methods, this study is the first to include observational methods in measuring the success of MBSR training. Supervisors will rate the development of therapists in training in terms of students' clinical skills prior to intervention, following MBSR completion, and 6 months later.

The proposed study intends to examine a possible complement to psychology graduate education that may enhance well-being, prevent deleterious consequences of stress, and provide students with knowledge and skills to better prepare them for their current and future roles as practitioners. The purpose of the study is to assess the efficacy of a mindfulness-based intervention to enhance well-being, potentially enhance the therapist-client relationship through the cultivation of empathy, and promote clinical training progress via enhancing skills rated by clinical supervisors. Additional goals of the study are to support the commonly-held belief that mindfulness training increases mindfulness levels and to investigate the relationship between amount of mindfulness practice and mental health outcomes. Ultimately, it is hoped that if the results of the study are favorable, MBSR intervention will be integrated into graduate school curriculums to assist students personally and professionally during graduate training and thereafter.

Chapter Three: Proposed Research Study

STATEMENT OF PURPOSE

The primary purpose of the proposed study is to examine the impact of a mindfulness based intervention for therapists in training. Prior research has consistently demonstrated that mindfulness promotes mental and physical health across many populations and disorders. Particularly robust are findings supporting the efficacy of Mindfulness Based Stress Reduction (MBSR) to reduce stress (Astin, 1997; Miller, Fletcher, & Kabat-Zinn, 1995; Speca, Carlson, Goodey, & Angen, 2000; Baer, 2005). The plausible efficacy of mindfulness training to improve clinical skills and to enhance the therapist-client relationship through augmenting empathy, has also been suggested in the literature.

Training in a mindfulness based intervention appears particularly suited for graduate students in clinical and counseling psychology given the large amount of stress inherent in graduate education, further exacerbated by the often unfulfilled need to include adequate self-care in their busy regimen of graduate school life. Preliminary support for the effectiveness of an MBSR intervention to promote well-being in Masters level therapists in training (Shapiro et al., 2007) was first published four months ago. This study did not assess long-term effects, relied solely on self-report methods, and was flawed by numerous limitations that are problematic in the vast majority of related research, hindering advancement of the greater mindfulness literature.

To date, no known study has investigated whether mindfulness training promotes professional development (i.e., clinical training) for therapists in training. Given the potential costs of stress on mental health care professionals' well being, teaching future therapists ways of managing stress seems imperative. The current study builds upon

previous research by assessing clinical development, as rated by their personal supervisors, in addition to self-report assessment. This study is designed to address many of the limitations of studies reported in the literature, including larger sample size, reference with randomized control group, and follow-up assessment. The proposed study intends to address many of the gaps in current theory and empirical research.

The proposed exploratory study will use a randomized controlled study design implementing a 2 (experimental versus wait-list control group) by 3 (baseline, post treatment, follow-up) study design, allowing for between and within group comparisons across four dependent variables (mindfulness, perceived stress, empathy, and clinical skills). Self-report methods include two mindfulness measures, a measure of perceived stress, and an empathy scale. Participants' personal supervisors will rate their clinical skills using an assessment scale. Study participants will be randomly assigned to an 8-week MBSR group or a wait-list control group, who will receive the identical MBSR intervention after the experimental group completes the program.

RESEARCH QUESTIONS

This study will address the following research questions:

1. Compared to control group participants, do participants taking part in the MBSR training demonstrate greater improvement on the set of mental health outcome variables (mindfulness and perceived stress) from pre- to post-test, and are these improvements maintained across time (6 months later)?
2. Do two frequently used mindfulness measures (MAAS and 5MF) indicate similar outcomes?

3. Compared to control group participants, do the MBSR group participants demonstrate greater increases in empathy and other core therapeutic skills over short term (pre- to post-test) and long-term (6 months) intervals?
4. Does amount of time spent practicing mindfulness affect mental health outcomes?

METHOD

Sample

Participants

Graduate students from counseling and clinical psychology programs will be actively recruited to participate in this study. All second- and third-year graduate students attending the University of Texas at Austin, Texas State University, or St. Edwards University, who are enrolled in clinical and counseling psychology, are eligible to participate.

Recruitment

The intervention will be offered in the form of an enrichment elective available to second- and third-year graduate students for a credit/no credit grade based completely on participation and attendance. Brief presentations describing the "Mindfulness-Based Stress Reduction" elective will be given, and the graduate student advisors will be asked to send out information concerning the program to all eligible students. Flyers detailing the course will be distributed throughout the buildings housing the programs.

Eligibility

Inclusion criteria for participation include (a) being a second- or third-year doctoral student in counseling or clinical psychology at University of Texas at Austin,

Texas State University, or St. Edwards University, (b) being currently enrolled in practicum, and (c) being English speaking. (The reason for the third criterion is that the MBSR intervention, including all patient material, is currently only available in English, and I am neither funded nor capable at this time for translation). Exclusion criteria include having (a) current substance abuse problems and (b) current suicidal ideation.

Randomization

Approximately 200 psychology graduate students will be actively recruited from the two programs over a one-year period. Interested students (approximately 170) will fill out forms indicating their willingness to be randomly assigned to a waiting list to take the course the following year. Only those students willing to be randomly assigned to either the intervention or control group will be included in the study. 150 participants will meet these criteria, give their informed consent to participate, and be randomly assigned to an intervention group (n = 75) or a wait-list control group (n = 75). Randomization will be matched for gender, race, age, year in program, degree level, and university.

Procedure

The proposed design is a matched randomized study in which participants are assigned to the 8-week mindfulness-based intervention or the wait-list control group. Participants in the intervention group will then be split into three classes of 25 participants each. In order to minimize experimenter effects and extend generalizability across experiments, the following procedures will be followed: (1) the groups will have co-leaders instead of a single facilitator; (2) the three intervention classes will be equivalent except for different pairs of co-facilitators; (3) an undergraduate research assistant will administer and collect assessment measures; and (4) all participants will be

assigned a confidential identification number to which the primary investigator does not have access.

Assessment

Participants in both the intervention groups and control groups will be measured three times: (1) before intervention, (2) shortly following the intervention, which is scheduled to coincide with exam period in an attempt to rigorously scrutinize the benefits of mindfulness training during an extremely high stress period (Shapiro et al., 1998), and (3) six months after termination of intervention to assess longer-term effects.

Description of Intervention: MBSR Treatment

The manualized 8-week Mindfulness Based Stress Reduction (MBSR) course that will be used in this study was briefly described previously. The MBSR intervention consists of eight weekly 2.5 hour sessions, one half-day meditation retreat, and daily homework assignments.

Each weekly session consists of 25 minutes of meditation practice, 25 minutes of mindful movement exercises with yoga, and a 10 minute discussion. The atmosphere of the groups will be safe and open, facilitating an environment where participants can share their direct experience with the group. The environment will not, however, be similar to a support group, in that participants will share only about their experiences of mindfulness and not difficulties in their lives.

Home practice assignments are to be completed six out of seven days per week, for 45 minutes each day. Homework includes daily journals, mindfulness practices, and guided mediation from a tape.

Participants will receive training in the following meditative practices: (a) sitting meditation, involving awareness of body sensations, thoughts, and emotions while

continually returning the focus of attention to the breath; (b) body scan, a progressive movement of attention through the body from toes to head, observing any sensations in the different regions of the body; (c) Hatha yoga, which consists of stretches and postures designed to enhance greater awareness of and to balance and strengthen the musculoskeletal system, and (d) three-minute breathing space, a "mini-meditation" that focuses on the breath, the body, and what is happening at the present moment (Segal et al., 2002). Inherent in all these techniques is an emphasis on mindfulness, to continually bring attention to the present moment.

MBSR instructs participants to focus attention on a target (i.e., breathing) and remain aware of it in each moment. Arising emotions, sensations, and cognitions are to be observed nonjudgmentally. After noting any emerging (distracting) content, attention is returned to the present moment. Mindfulness practice encourages participants to view most thoughts, sensations, and emotions as essentially transient.

Group Leaders

Co-facilitators will be psychologists working at the UT Counseling and Mental Health Center, all six of whom have extensive training and experience in MBSR.

Control Group

Participants (n = 75) who are assigned to the wait-list control condition will complete questionnaires at the same time points as the experimental group participants (pre- and post-training, and 6-month follow-up). The following year, all control group participants will be offered the opportunity to participate in an equivalent MBSR intervention.

Measures

Standard demographic measures will be obtained (ethnicity, age, gender, education, prior meditative experience). Participants will complete the following instruments to assess the four principle quantitative dependent variables.

Five Factor Mindfulness Questionnaire (5MF)

The Five Factor Mindfulness Questionnaire (5MF; Baer, Smith, & Allen, 2006) is a 39-item scale designed to measure overall mindfulness. It also yields five subscale scores - observing (O: noticing or attending to stimuli); describing (D - labeling or noting of observed phenomena); acting with awareness (AA - attending to the present moment); accepting without judgment (AJ - being non-evaluative about present experience); and non reactance (NR - acting deliberately instead of reflexively). An example item of the 5MF is, "I perceive my feelings and emotions without having to react to them." The authors of the scale investigated and demonstrated adequate internal consistency and convergent and discriminant relationships with other variables such that mindfulness facets were shown to be differentially correlated in expected ways with several other constructs. Results supported the scale's incremental validity in the prediction of psychological symptoms. Higher scores indicate greater mindfulness; Cronbach's alphas are expected to range from .76 to .87.

Mindful Attention Awareness Scale (MAAS)

The Mindful Attention Awareness Scale (MAAS) (Brown & Ryan, 2003) is a 15-item measure designed to assess mindfulness level on a 6 point Likert-type scale (1 = almost always, 6 = almost never). The MAAS has only one scale and is focused on the presence or absence of attention to, and awareness of, what is occurring in the present. An example item is, "It seems I am 'running on automatic' without much awareness of

what I'm doing." The MAAS has been shown to be a reliable and valid (convergent, discriminant, and incremental) instrument for use in both college student and general adult populations (Brown & Ryan, 2003). Higher scores indicate more mindfulness in that higher scorers tend to be more aware of and receptive to inner experiences and are more mindful of their overt behavior. Cronbach's alpha is expected to be around .83.

Perceived Stress Scale (PSS)

The Perceived Stress Scale (PSS) is a ten-item scale designed to assess the degree to which situations in one's life are appraised as being stressful (Cohen & Williamson, 1988). The PSS was designed for use with community samples of individuals with at least a junior high school education. The items are easy to understand, the response alternatives are simple to grasp, and the questions are quite general in nature and hence relatively free of content specific to any subpopulation group (Cohen, Kamarck, & Mermelstein, 1983). An example item is, "In the last month, how often have you found that you could not cope with all the things that you had to do?" The PSS is a widely used measure, consistently demonstrating adequate internal and test-retest reliability and predictive validity with a range of self-report and behavioral criteria (Cohen et al., 1983). Higher scores indicate more perceived stress. Cronbach's alpha in this study is expected to be at least .85.

Empathy Construct Rating Scale (ECRS)

The Empathy Construct Rating Scale (ECRS) is an 84-item scale designed to assess empathy on a 5-point scale (La Monica, 1981). The ECRS has been demonstrated to have high reliability and discriminant validity (Shapiro, Morrison, & Boker, 2004). This study uses the adapted version constructed by Shapiro and colleagues (1998) in their investigation of MBSR outcomes for medical students. The 42 items in the adapted

version provide a measure of overall empathy. In the study by Shapiro and colleagues, the alpha coefficient of .89 suggested it was highly reliable. Typical items include self-assessments of ability to listen carefully, accurately paraphrase the feelings of others, and checks to see if one's understanding of another's experience is valid. Higher scores indicate more empathy. Cronbach's alpha in this study is expected to be at least .87.

Counselor Skills Personal Development Rating Form (CSPD-RF)

The Counselor Skills Personal Development Rating Form (CSPD-RF) is a 20-item measure to be completed by a supervisor and designed to measure the performance of a counselor-in-training in counseling situations on a 7-point Likert-type scale, with responses ranging from 1 (unacceptable) to 7 (outstanding; Wilbur, 1991). An example item is, "The counselor's observed use of clarification skills in responding to client statements." In addition to providing a total score intended to reflect overall performance, the authors suggest that two subscores should be calculated: (1) personal development and (2) skills development, with 10 items contributing to each subscore (Wilbur, Roberts-Wilbur, Hart, Morris, & Betz, 1994). The reliability of the CSPD-RF has been demonstrated across numerous studies, yielding split-half reliability coefficients of .83 and .84, and Cronbach's alphas ranging from .91 to .95 (Torres-Rivera, Wilbur, Maddux, Smaby, Phan, & Robert-Wilbur, 2002; Phan, 2001; Phan, Torres-Rivera, & Smith, 2000; Torres-Rivera, Phan, Maddux, Wilbur, & Garrett, 2001). Torres-Rivera and colleagues (2002) provided empirical evidence of the construct validity of the CSPD-RF.

Each of the participants in this study will be working with supervisors during their various practica. Supervisors will assess graduate students' training progress via the CSPD-RF. Higher scores indicate better counseling skills. Cronbach's alpha in this study is expected to be at least .90.

Daily Mindfulness Practice Journals

As an adherence check and in response to a gap in the literature, daily journals will be used to measure compliance with mindfulness practice and allow assessment of the effects of practice amount on study outcomes. Participants will be asked to complete daily mindfulness practice journals for the entire 8-week intervention. This study will use diaries modeled by those used by Shapiro and colleagues (2007) in a similar study. In these journals, to be completed at the end of each day, MBSR participants will indicate the number of minutes of sitting meditation, body scan, yoga, and informal mindfulness practice performed that day.

Preliminary Analyses

Initially, preliminary analyses will be conducted to ensure that data meet the Multivariate Analysis of Variance (MANOVA) assumptions. In addition, analyses will be conducted to demonstrate that experimental and control groups did not significantly differ at baseline and to investigate pre-existing differences within groups (e.g., based on degree level or school program). It is expected that groups will not significantly differ on important study outcomes, allowing data to be collapsed. Thus, the reported analyses compare the entire group of MBSR participants with the entire control group.

Attrition

The high rate of completion of the program (97%, 73 of 75) is expected to be consistent with previous studies of MBSR (Kabat-Zinn et al., 1992, Kabat-Zinn & Chapman-Waldrop, 1988, Shapiro et al., 1998), and it is expected that only three control group participants will not complete post-measures. Thus, the total sample size in the following analyses is $N = 145$.

RESEARCH QUESTIONS, SUMMARY OF HYPOTHESES AND DATA ANALYSIS

Research Question 1

Compared to control group participants, do participants taking part in the MBSR training demonstrate greater improvement on the set of mental health outcome variables (mindfulness and perceived stress) from pre- to post-test, and are these improvements maintained across time (6 months later)?

Hypothesis:

Over time, participants in the MBSR group will demonstrate greater improvement on the set of mental health outcome variables (mindfulness as indicated by scores on the 5MF and the MAAS, and perceived stress as indicated by scores on the PSS) compared to the control group participants.

Rationale:

The efficacy of MBSR to enhance mental health has been demonstrated across numerous populations struggling with many disorders. Numerous authors have discussed the similarity of mindfulness training and clinical training, and many others have pointed to the current lack of self-care training for psychology graduate students. By examining the effects of MBSR on the mental health and well-being of therapists in training, this study intends to address these issues in the literature with an understudied but particularly suited population. This goal is important given the criticality of promoting well-being and stress tolerance in trainees preparing to enter the demanding counseling and psychotherapy professions. In line with past MBSR research, it is expected that relative to controls, participants in the MBSR program will show improvements in mindfulness levels (demonstrated to be associated with numerous cognitive and affective indicators of well-being) and stress levels.

Further, numerous authors have described concern about the validity of MBSR. That is, whether mindfulness training does in fact lead to increased levels of mindfulness. Despite a multitude of pleas in the literature for researchers to examine this question by measuring mindfulness levels across mindfulness training, the issue has not yet been empirically investigated and little is currently known about the processes whereby mindfulness training leads to beneficial effects. Thus, this study includes two widely used measures of mindfulness levels, and will assess changes in mindfulness levels prior to and following MBSR training. It is hoped that these results will clarify the validity of MBSR to enhance mindfulness levels in its practitioners.

Analysis:

A repeated measures MANOVA with one between-subjects factor (condition) and one within-subjects factor (pretest versus post-test versus follow-up) will be conducted to investigate possible differences between participants on three dependent variables (mindfulness assessed by the MAAS, mindfulness assessed by the 5MF, and perceived stress assessed by the PSS), using an alpha level of .05 as the criterion for statistical significance. It is expected that there will be a significant interaction effect between condition and time on the three dependent variables taken together.

Univariate analyses will be conducted next. A series of 3 x 2 repeated measures ANOVAs, each with a between-subjects factor of condition and a within-subjects factor of time, are projected to produce significant interactions between condition and time for each dependent variable. In order to investigate post hoc pretest to post-test comparisons, and post-test to follow-up comparisons, using difference scores calculated for each group, independent samples t-tests will be conducted. These contrasts are expected to show that the mindfulness group will demonstrate significant improvement on the three dependent

variables compared to the control condition at time 2 (post-intervention) and at time 3 (6 month follow-up).

Research Question 2

Do two frequently used mindfulness measures (MAAS and 5MF) indicate similar outcomes?

Hypothesis:

The MAAS and the 5MF will indicate similar levels of mindfulness in study participants.

Rationale:

Both the Mindful Attention Awareness Scale (MAAS) and the Five Factor Mindfulness Questionnaire (5MF) have been frequently utilized as the sole measure of mindfulness in many studies. Yet, results are compared across studies, assuming high convergent validity of the measures. To date, no known study has utilized both measures in a treatment-outcome study. Thus, this study aims to provide empirical support for the consistency between results of these measures by comparing MAAS and 5MF scores for all participants at each of three assessment times. Clearly, confirmation of this assumption is critical, and evidence to the contrary has major implications for mindfulness research.

Analysis:

The analyses described previously will address this research question. Results indicating either (1) statistically significant increases in both measures or (2) null findings for both measures will support the hypothesis.

Research Question 3

Compared to control group participants, do the MBSR group participants demonstrate greater increases in empathy and other core therapeutic skills over short term (pre- to post-test) and long-term (6 months) intervals?

Hypothesis:

Over time, compared with control group participants, MBSR group participants will demonstrate greater increases in empathy, personal development, and therapeutic skills development (e.g., attending and observational, interpretation, and reflecting skills in response to client statements).

Rationale:

Despite theoretical suggestions, no known study has investigated the benefits to clinical training in psychology following mindfulness training. This study will address this gap between theoretical and empirical knowledge by providing data gathered in two methods. It is expected that MBSR training will promote cultivation of empathy and other core clinical skills, thereby enhancing clinical training and progress. Empathy, a critical component of successful therapy, will be assessed via a self-report scale. In addition, clinical supervisors will rate empathy and other clinical skills of the study participants prior to, following, and six months after the MBSR training. This data will be obtained both for participants who undergo mindfulness training and for control group participants, who represent graduate students undergoing typical clinical training (but without mindfulness training).

Analysis:

A repeated measures MANOVA with one between-subjects factor (condition) and one within-subjects factor (pretest versus posttest versus follow-up) will be conducted to

investigate possible differences between participants on two dependent variables (empathy and personal and clinical skill development rated by supervisors), using an alpha level of .05 as the criterion for statistical significance. It is expected that there will be a significant interaction effect between condition and time on the two dependent variables taken together.

Univariate analyses will be conducted next. A series of 3 x 2 repeated measures ANOVAs, each with a between-subjects factor of condition and a within-subjects factor of time, are projected to produce significant interactions between condition and time for both dependent variables. In order to investigate post hoc pretest to post-test comparisons, and post-test to follow-up comparisons, using difference scores calculated for each group, independent samples t-tests will be conducted. These contrasts are expected to show that the mindfulness group will demonstrate significant improvement on the two dependent variables compared to the control condition at time 2 (post-intervention) and at time 3 (6 month follow-up).

Research Question 4

Does amount of time spent practicing mindfulness affect mental health outcomes?

Hypothesis:

Amount of time spent practicing mindfulness will affect mental health outcomes.

Rationale:

A primary component of the MBSR program is in-class and home-based practice of several mindfulness-based skills, and it is widely believed that this skills practice is related to the positive outcomes of the MBSR program (Carson, Carson, Gil, & Baucom, 2004; Shapiro, Bootzin, Figueredo, Lopez, & Schwartz, 2003). However, past research examining the relation between amount of mindfulness practice and degree of change in

affective, behavioral, and neurophysiological outcomes has been mixed, with some reporting positive findings (Carson et al., 2004; Shapiro et al., 2003) and others null findings (e.g., Shapiro et al., 2007; Davidson, Kabat-Zinn, & Schumacher, 2003). In light of the importance of this issue for mindfulness intervention research, this study will examine the relationship between the amount of mindfulness practice performed and the well-being-related outcomes of the MBSR program. Given the lack of clear, supportive evidence for the role of mindfulness practice on MBSR outcomes, directional hypotheses are not made.

Analysis:

To investigate this hypothesis, repeated measures analyses of variance (ANOVA) will test the effects of the mean number of weekly minutes of mindfulness practice on pre-post intervention changes in perceived stress, empathy, and clinical skills rated by supervisors. It is expected that there will be significant effects of total weekly mindfulness practice time over the 8 weeks of the MBSR program for pre-post intervention changes in all three dependent variables.

Chapter Four: Discussion

The stress inherent in the professional life of a psychologist (and in preparation for it) has numerous deleterious consequences for graduate students' well-being as well as their professional effectiveness. Preparation for the practitioner role should occur on many levels, including self-care of students in trainings. Numerous authors have described the need for studies exploring possible complements to graduate education.

To contribute to the foundation of future research in this area, an intervention study should first demonstrate successful short-term effects and include follow-up assessment to ensure that detected benefits are maintained (Shapiro et al., 2005). The proposed study will explore the short-term effects of an 8-week mindfulness-based intervention on psychology graduate students using a well-controlled statistical design, including a follow-up assessment 6 months after completion of the intervention.

Summary of Results

The data is expected to indicate that participation in a mindfulness-based stress reduction intervention can effectively enhance mindfulness skills, overall and specifically with regard to observing, describing, acting with awareness, accepting without judgment, and non-reactivity, reduce perceived stress, enhance empathy, and increase supervisor ratings of personal and clinical skills development. Further, these benefits are maintained 6 months post-treatment. In addition, two mindfulness measures demonstrated similar results. Finally, the amount of mindfulness practice is expected to affect outcomes in mental health and clinical development.

It is important to note that the post-test measures are administered during exam period, thus all participants (both the treatment and control group) are under stress. Despite this, the intervention group demonstrates significant change in the predicted

direction for all of the outcome variables. Further, detected changes are maintained 6 months after the intervention was completed.

IMPLICATIONS

The integration of a meditation practice into any organization is a slow process that poses complex questions. Kurash and Schaul (2006) argued that the benefits provide a counterpoint to the complexities inherent when incorporating such training into an organization's structure and something needs to be fixed a psychology internship program. They believe that the advantages of integrating an ongoing mindfulness meditation component, which directly augment the work of psychotherapy, make the challenges worthwhile. The practice of meditation can facilitate countertransference awareness for the clinician and, over time, it strengthens aspects of ego functioning. The ability to recognize and sit with feelings, an awareness of one's internal state, and a capacity for unconditional presence are all enhanced by the practice of mindfulness meditation.

LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

Methodological

Although this study demonstrates significant results using a well-controlled design, there are many limitations and suggestions for future research. The results from this study that demonstrate that the short-term changes produced by MBSR are maintained six months later should be replicated by future research, which should also extend the follow-up period at which participants are assessed. Results demonstrating enduring effects of the intervention would underscore and further illuminate the utility of MBSR in helping students deal with ongoing stressors of graduate school as well as the future stress involved in being a practitioner in the field of psychology.

The placebo effect is a potential confound; however it can be viewed as part of the healing process that should not be eliminated (White, Tursky, & Schwartz, 1985). Another limitation involves the generalizability of the results. While numerous measures are undertaken to ensure the internal validity of this study, external validity is less of a focus. Although the main purpose of this study is to study change over time due to MBSR intervention in psychology graduate students (rather than the general population), even this population was only sampled from three universities in the same general area.

Further, it is important to note the students comprising this sample voluntarily choose to enroll in the MBSR class as an elective. Experimenter effects and social desirability are other potential limitations. It is possible that students want to please the experimenter (or themselves), and thus answered the self-report measures inaccurately, even though in an attempt to minimize the effect of this possibility, all students were given confidential identification numbers (blind even to the experimenter), the researcher did not administer or collect any of the data, and the three groups were co-led by different experimenters.

In addition, all but one of the assessment measures is a self-report psychological questionnaire, which is intrinsically limited and open to response bias. Future research should explore the physiological effects of mindfulness interventions in addition to the psychological effects.

Regarding Difficulty Integrating into Curriculum.

For meditation to be integrated into a curriculum or organization (i.e., APA instructed aspect of psychology graduate training curricula), the supervisory staff must be trained in meditation, must value such training, and must maintain some kind of ongoing meditative practice. Practice is essential since what is being learned is a way of observing

and maintaining presence in the world that relies upon mindfulness and awareness, which can only be learned through experience.

The acknowledgement that not all students will be interested in participating in mindfulness training is an important consideration to note. While it has been suggested that MBSR training be included as a typical component of the program, a student's right to choose or decline participation in any course must be respected. Feeling "free" not to attend may be difficult given its integration into the program in general, but also because of the implications/outcomes involving group cohesion that would be missed out upon. However, the right to choose not to participate must be made explicit.

Regarding Difficulties for Therapists-in-Training.

On the whole, the meditation experience is set in a positive direction by its core teachings and practice. However, the heightened attention to mindfulness that accompanies the introduction of meditation into the training program may initially increase anxiety (i.e., regarding role, professional identity, and personal awareness) (Kurash & Schaul, 2006). Beginning a doctoral program provokes anxiety for most students, as do initial practica experiences, and attempts to observe oneself during this time can challenge one's usual defenses to cope with entry. At the very least, mindfulness increases one's awareness of the anxiety. Yet, within a brief period of time and continuing over the course of a training year, Kurash and Schaul (2006) noted that in their study meditation had seemed to reduce anxiety, heighten a sense of group cohesion, and facilitate openness to learning for their interns. On the physical level alone, the practice of meditation is helpful in reducing stress and helping to establish balance. The very articulation of meditation's essential components, such as mindfulness and friendliness, facilitates group cohesion and encourages an open attitude to learning.

CONCLUSIONS

Although the exploratory mechanisms of the mindfulness intervention are yet unclear, the results of this study may have important implications across many levels. A number of novel features are introduced that have not yet been previously reported on in the context of MBSR. The proposed study will document the potential effectiveness of mindfulness training to enhance psychology graduate students' psychological well-being as well as help to cultivate skills to use in their roles as mental health practitioners. The significant findings are strengthened because data acquisition post-intervention coincides with participants' exam period. The short-term results are encouraging, as are maintenance of results 6 months later.

Expected results from the proposed study will suggest that this intervention may prove a useful complement to graduate education. Further, these findings give strength to the hypothesis that mindfulness can be thought of as preventive medicine, assisting cultivation of a "way of being" that fosters healing and growth in students' own lives as well as development of skills to effectively help others. Inclusion of mindfulness training during graduate training appears promising and should be given consideration for integration into standard psychology higher learning curricula.

Appendix A Five Factor Mindfulness Questionnaire

1	2	3	4	5
never or very rarely true	**rarely true**	**sometimes true**	**often true**	**very often or always true**

_____ 1. When I'm walking, I deliberately notice the sensations of my body moving.

_____ 2. I'm good at finding words to describe my feelings.

_____ 3. I criticize myself for having irrational or inappropriate emotions.

_____ 4. I perceive my feelings and emotions without having to react to them.

_____ 5. When I do things, my mind wanders off and I'm easily distracted.

_____ 6. When I take a shower or bath, I stay alert to the sensations of water on my body.

_____ 7. I can easily put my beliefs, opinions, and expectations into words.

_____ 8. I don't pay attention to what I'm doing because I'm daydreaming, worrying, or otherwise distracted.

_____ 9. I watch my feelings without getting lost in them.

_____ 10. I tell myself I shouldn't be feeling the way I'm feeling.

_____ 11. I notice how foods and drinks affect my thoughts, bodily sensations, and emotions.

_____ 12. It's hard for me to find the words to describe what I'm thinking.

_____ 13. I am easily distracted.

_____ 14. I believe some of my thoughts are abnormal or bad and I shouldn't think that way.

_____ 15. I pay attention to sensations, such as the wind in my hair or sun on my face.

_____ 16. I have trouble thinking of the right words to express how I feel about things.

_____ 17. I make judgments about whether my thoughts are good or bad.

_____ 18. I find it difficult to stay focused on what's happening in the present.

_____ 19. When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it.

_____ 20. I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing.

_____ 21. In difficult situations, I can pause without immediately reacting.

_____ 22. When I have a sensation in my body, it's difficult for me to describe it because I can't find the right words.

_____ 23. It seems I am "running on automatic" without much awareness of what I'm doing.

_____ 24. When I have distressing thoughts or images, I feel calm soon after.

_____ 25. I tell myself that I shouldn't be thinking the way I'm thinking.

_____ 26. I notice the smells and aromas of things.

_____ 27. Even when I'm feeling terribly upset, I can find a way to put it into words.

_____ 28. I rush through activities without being really attentive to them.

_____ 29. When I have distressing thoughts or images I am able just to notice them without reacting.

_____ 30. I think some of my emotions are bad or inappropriate and I shouldn't feel them.

_____ 31. I notice visual elements in art or nature, such as colors, shapes, textures, or patterns of light and shadow.

_____ 32. My natural tendency is to put my experiences into words.

_____ 33. When I have distressing thoughts or images, I just notice them and let them go.

_____ 34. I do jobs or tasks automatically without being aware of what I'm doing.

_____ 35. When I have distressing thoughts or images, I judge myself as good or bad, depending on what the thought/image is about.

_____ 36 I pay attention to how my emotions affect my thoughts and behavior.

_____ 37. I can usually describe how I feel at the moment in considerable detail.

_____ 38. I find myself doing things without paying attention.

_____ 39. I disapprove of myself when I have irrational ideas.

Appendix B Mindful Attention Awareness Scale

DIRECTIONS: Please indicate how frequently you have the experience described in each of the following statements.

1	2	3	4	5	6
Almost Always	**Very often**	**Frequently**	**Sometimes**	**Rarely**	**Almost Never**

_____ 1. I could be experiencing some emotion and not be conscious of it until some time later.

_____ 2. I break or spill things because of carelessness, not paying attention, or thinking of something else.

_____ 3. I find it difficult to stay focused on what's happening in the present.

_____ 4. I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.

_____ 5. I tend not to notice feelings of physical tension or discomfort until they really grab my attention.

_____ 6. I forget a person's name almost as soon as I've been told it for the first time.

_____ 7. It seems I am "running on automatic" without much awareness of what I'm doing.

_____ 8. I rush through activities without being really attentive to them.

_____ 9. I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there.

_____ 10. I do jobs or tasks automatically, without being aware of what I'm doing.

_____ 11. I find myself listening to someone with one ear, doing something else at the same time.

_____ 12. I drive places on "automatic pilot" and then wonder why I went there.

_____ 13. I find myself preoccupied with the future or the past.

_____ 14. I find myself doing things without paying attention.

_____ 15. I snack without being aware that I'm eating.

Appendix C Perceived Stress Scale

DIRECTIONS: The questions in this scale ask you about your feelings and thought during THE LAST MONTH. In each case, please indicate your response based on the scale below, representing HOW OFTEN you felt or thought a certain way.

1	2	3	4	5
Never	**Almost Never**	**Sometimes**	**Fairly Often**	**Very Often**

_____ 1. In the last month, how often have you been upset because of something that happened unexpectedly?

_____ 2. In the last month, how often have you felt that you were unable to control the important things in your life?

_____ 3. In the last month, how often have you felt nervous and "stressed"?

_____ 4. In the last month, how often have you felt confident about your ability to handle your personal problems?

_____ 5. In the last month, how often have you felt that things were going your way?

_____ 6. In the last month, how often have you found that you could not cope with all the things that you had to do?

_____ 7. In the last month, how often have you been able to control irritations in your life?

_____ 8. In the last month, how often have you felt that you were on top of things?

_____ 9. In the last month, how often have you been angered because of things that were outside of your control?

_____ 10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?

Appendix D Empathy Construct Rating Scale

DIRECTIONS: Please rate how well each of the following items describes you, specifically how you are within clinical sessions, using the following scale:

1	2	3	4	5	6
Extremely like me	**Moderately like me**	**Like me**	**Unlike me**	**Moderately unlike me**	**Extremely unlike me**

_____ 1. Seems to understand another person's state of being.

_____ 2. Has no respect for the opinion of others.

_____ 3. Reacts negatively to those statements that seem to be against his/her values.

_____ 4. Soothes people during stressful situations.

_____ 5. Respects what others say, do, feel, and how they act.

_____ 6. Helps a person work through situations and problems/concerns.

_____ 7. Does not respect individual differences.

_____ 8. Is very critical of others.

_____ 9. Is tender, available, and friendly.

_____ 10. Places self in another person's shoes.

_____ 11. Understands the "human" situation.

_____ 12. Is negative, cold, and rejecting, all of which are communicated to another.

_____ 13. Is quick to identify another's errors.

_____ 14. Does not wait for a person to ask for help, but anticipates needs and offers assistance.

_____ 15. Is arrogant and consumed with feelings of pride and self-importance.

_____ 16. Shows consideration for a person's feelings and reactions.

_____ 17. Does not appreciate individual differences.

_____ 18. Imposes own ideas and attitudes on others.

_____ 19. Is comforting during periods of stress and uncertainty.

_____ 20. Understands the problems of others by putting herself/himself in their place.

_____ 21. Does not listen to what the other person is saying.

Appendix E Counselor Skills Personal Development Rating Form

DIRECTIONS: Please rate your perception of the CURRENT skill level of the counselor (your supervisee).

1	2	3	4	5	6	7
Unacceptable	**Way below average**	**Below average**	**Average**	**Above Average**	**Way above average**	**Outstanding**

_____ 1 The counselor's observed ability to communicate directly and honestly in his/her interaction with the client.

_____ 2 The counselor's observed use of clarification skills in responding to client statements.

_____ 3 The counselor's observed awareness of his/her own emotional states while interacting and communicating with the client.

_____ 4 The counselor's observed personal congruence between his/her own verbal and nonverbal behaviors in the session with the client.

_____ 5 The counselor's observed emotional sensitivity (empathy, not sympathy) toward the client's statements of feelings, problems, issues, conflicts, life situations, etc.

_____ 6 The counselor's observed use of paraphrasing and summarization skills in responding to client statements.

_____ 7 The counselor's observed use of feedback skills in responding to client statements.

_____ 8 The counselor's observed awareness of his/her own personal strengths and weaknesses while interacting and communicating with the client.

_____ 9 The counselor's observed use of attending and observational skills while responding to client statements.

_____ 10 The counselor's observed use of giving/providing directives in his/her responses to client statements.

_____ 11 The counselor's observed use of confrontation skills in responding to client statements.

_____ 12 The counselor's observed tolerance for differences between his/her perspectives (be they cultural, socioeconomic, socio-political, gender, sexual preference, race, age, ethnicity, etc.) and differing perspectives observed in or expressed by the client.

_____ 13 The counselor's observed use of advice/information and educational/instructional skills in his/her responses to client statements.

_____ 14 The counselor's observed awareness of his/her sexist, racist, ageist, and etc. beliefs, feelings, and behaviors while interacting and communicating with the client.

_____ 15 The counselor's observed use of interpretation skills in his/her responses to client statements.

_____ 16 The counselor's observed awareness of his/her own interpersonal influence on the client while interacting and communicating with the client.

_____ 17 The counselor's use of reflection of meaning and reflection of feelings skills while responding to client statements.

_____ 18 The counselor's observed awareness of his/her own general beliefs while responding to clients' statements.

_____ 19 The counselor's observed awareness of his/her own personal and familial developments in response to client statements.

_____ 20 The counselor's observed use of self-disclosure skills in responding to the client's statements.

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